



**An Exploration of What Contributes to Sustaining Adult-Child  
Interactions in an Early Years Forest School**

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Disclaimer: I certify that this piece of work is my own and has not previously been submitted or assessed for any other qualification.

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## Overarching abstract

The early years of a child's life are crucial for their development; within the UK there has been an increase in the care and educational provision provided for children under the age of five. The Early Years Foundation Stage (EYFS) was introduced in 2008 to provide a framework for consistent, high quality learning environments for children up to the age of five years.

Chapter one, provides a meta-ethnographic review of literature exploring what research suggests supports children's language and communication in the outdoor environment within the EYFS. Relationships, environmental influences and child-led exploration were highlighted as supporting children's language and communication within this environment. Adults appeared to be a pivotal aspect in each of these areas. In the studies analysed the main form of data collection was through observations of the children and practitioners in the outdoor environment with some informal conversations with staff. There appeared to be a lack of in depth understanding of what the staff themselves thought supported their interactions with children in the outdoor environment.

Chapter two (The Bridging Document) aims to link the meta-ethnography and the empirical research project, it explains my personal interest and motivation for carrying out this research. It considers my conceptual framework and the influence this has had on the way in which the empirical research was carried out.

Chapter three, (Empirical Research report), used a collaborative action research approach with early years staff during three of their Forest School sessions. The research explored the following question: Using a collaborative inquiry, what does staff dialogue reveal in relation to what might contribute to developing sustained shared thinking in a Forest School?

Within the analysis the following themes were constructed: the role of the adult, conducive environment, active learners and positive relationships. The research findings were placed within the context of existing research into sustained shared thinking, alongside theories of learning, interaction and environmental affordances. Implications for Educational Psychologist's and future research are discussed.

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# **Chapter 1: A Systematic Literature Review to Explore What Research suggests Supports Children's Language and Communication in the Outdoor Environment within the Early Years and Foundation stage**

## **Abstract**

This systematic literature review was developed in response to a request from a local Nursery. This meta-ethnographic review of qualitative literature sought to explore what research suggests supports children's language and communication in the outdoor environment within the EYFS. Through repeated reading of four relevant articles, relationships, environmental influences and child-led exploration were highlighted as supporting children's language and communication within this environment. The review highlighted that these were part of a complex interplay, with adults appearing to be the pivotal aspect in each of these areas. In the studies analysed the main form of data collection was through observations of the children and practitioners in the outdoor environment with some informal conversations with staff. There appeared to be a lack of in depth understanding of what the staff themselves thought supported their interactions with children in the outdoor environment.

## 1.1 Getting started

### 1.1.1 Introduction

The early years of a child's life are crucial for their development; within the UK there has been an increase in the care and educational provision for children under the age of five (Robinson & Dunsmuir, 2010). The Early Years and Foundation Stage (EYFS), first introduced in 2008, provides a framework for providing consistent and high quality learning environments for children up to the age of five. There have been repeated government initiatives and reviews focusing on good quality early education such as independent reports on the EYFS (Tickell, 2011), the Effective Provision of Pre-school Education (EPPE) project report (Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2004) and more recently the Study of Early Education and Development (SEED) (Callanan, Anderson, Haywood, Hudson, & Speight, 2017). The SEED study (Callanan et al., 2017) aimed to explore good practice amongst early years settings and the potential it has to improve child outcomes. They suggested that three broad themes emerged: tailoring practice to the needs of the children, skilled and experienced staff and an open and reflective culture.

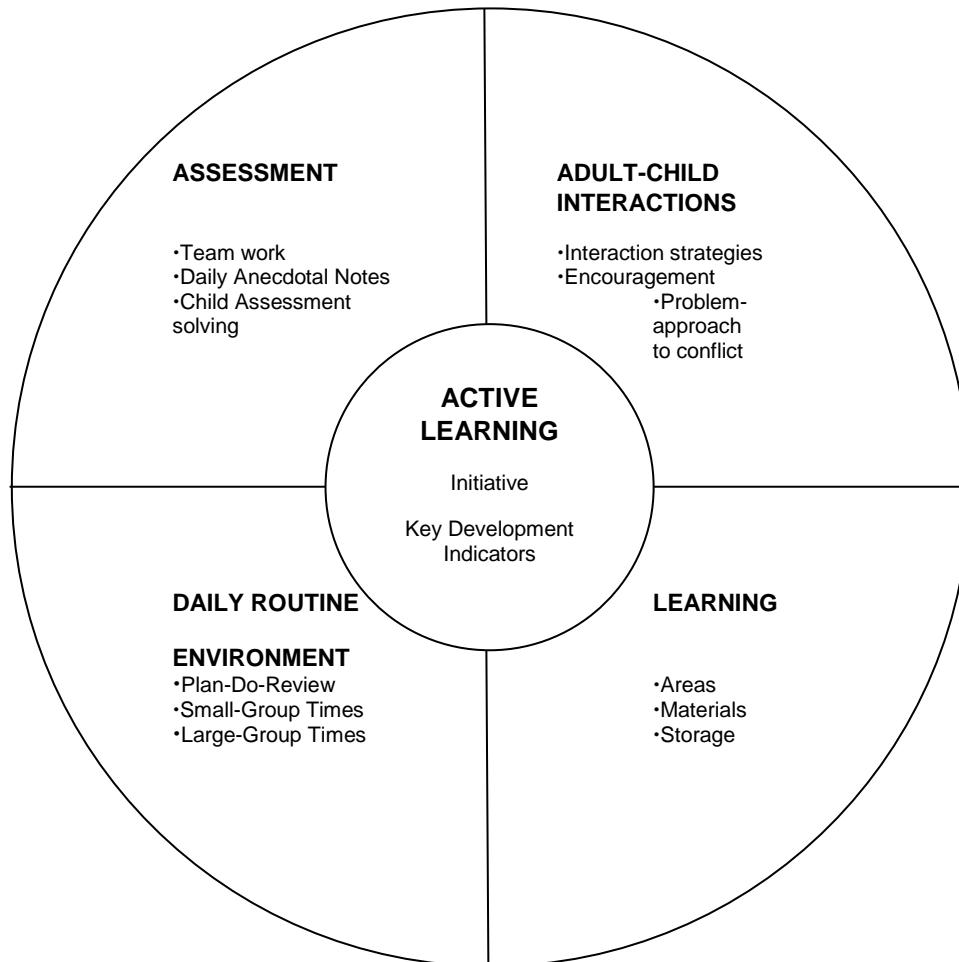
Within the latest statutory framework for the EYFS (2017, p. 5) it states that 'Every child deserves the best possible start in life and the support that enables them to fulfil their potential'. It details four overarching principles (p.6) that should shape practice within Early Years settings;

- every child is...unique...constantly learning and can be resilient, capable, confident and self-assured
- children learn to be strong and independent through positive relationships
- children learn and develop well in enabling environments...where their experiences respond to their individual needs...there is a strong partnership between practitioners and parents and/or carers
- children develop and learn in different ways...and at different rates

The systematic literature review was developed in response to a request from a Nursery. Through discussions with the Head Teacher interested in being involved in a research project, the enabling environments aspect of the EYFS was highlighted. Within the EYFS non-statutory guidance it states that 'children learn and develop well in enabling environments' (Moylett & Stewart, 2012, p. 2). They are claimed to offer; stimulating resources, rich learning opportunities and support for children to take

risks and explore (Moylett & Stewart, 2012, p. 2). Alongside the EYFS framework the Nursery follows the High Scope Curriculum. Figure 1 illustrates the principles underpinning the High Scope approach (Hohmann, Weikart, & Epstein, 2008, p. 6).

**Figure 1: Diagram illustrating the High Scope principles**



**1.1.2 Research into quality early years education**

Through discussions with the Nursery’s Head Teacher the concept of Sustained Shared Thinking (SST) was raised. Siraj-Blatchford, Sylva, Muttock, Gilden, and Bell (2002) carried out research into effective pedagogy in the early years and suggested that in education provisions rated as excellent, adults and children engaged in more SST. Siraj-Blatchford et al. (2002, p. p9) defined SST as

'An episode in which two or more individuals “work together” in an intellectual way to solve a problem, clarify a concept, evaluate activities, extend a narrative etc. Both parties must contribute to the thinking and it must develop and extend'.

The concept of SST reflects the High Scope Curriculum, in particular their focus on adult-child relationships and the need for encouragement, interaction strategies and a problem solving approach to conflict resolution (Hohmann et al., 2008). SST was deemed to be a pre-requisite to effective pedagogy in the early years (Siraj-Blatchford et al., 2002). SST was subsequently mentioned within EYFS statutory framework (Department for Children Schools and Families, 2008), the EYFS non-statutory guidance for schools (Moylett & Stewart, 2012) and most recently in a research report into Good Practice in Early Education commissioned by the Department for Education (Callanan et al., 2017). Callanan et al. (2017) highlighted the quality and nature of adult-child interactions as essential in developing children's language and communication skills.

Through engaging in active participatory learning it is suggested that 'having direct and immediate experiences and deriving meaning from them through reflection - young children construct knowledge that helps them make sense of their world' (Hohmann et al., 2008, p. 5). As part of the Nursery's focus on the learning environment the children have access to a Forest School.

The outdoor environment is considered an enabling environment due to the different opportunities it provides. For example Waters and Maynard (2010) found that there were elements in the natural environment which drew children's attention, and these elements 'stimulated questions and excitement p.478'. They also suggested the outdoor environment allowed the teachers to respond to the children's interests. Access to the Forest School mirrors the principles of both the High Scope curriculum and the EYFS.

### **1.1.3 Forest Schools**

Scandinavian approaches to play and learning outdoors was given the English name 'Forest School', by Williams-Siegfredsen (2011). The provision of a Forest School is spreading (O'Brien, 2009) and many of the underlying principles of Danish outdoor play and learning are reflected in UK Education systems and policies.

The seven pedagogical principles as outlined by Williams-Siegfredsen (2017, p. 12) are:

1. 'A holistic approach to children's learning and development
2. Each child is unique and competent
3. Children are active and interactive learners

4. Children need real-life, first-hand experiences
5. Children thrive in child-centred environments
6. Children need time to experiment and develop independent thinking
7. Learning comes from social interactions'

These principles are reflected within the EYFS (Department for Education, 2017) principles presented earlier. Both sets of principles suggest the need for child-centred environments, for adults to recognise the unique qualities of each child and the importance of social interactions to their learning.

A key difference to the Scandinavian 'Forest School', is that instead of nature being the main element of early years schooling, a UK Forest School takes place at a set time within the school day. A Forest School makes use of the natural topography of the landscape, with separate areas that are constructed, with specific uses in mind.

The Nursery staff I worked with were particularly interested in how the outdoor learning environment could support children's language and communication. Given the socio-economic background of many children who attend the Nursery this is an issue that was highlighted during our discussions. King and Saxton (2010) suggested that the contribution of early years to language development warrants attention due to the significant amount of time children spend in education provisions at a time when early language skills are being acquired.

Given the policies, literature and research context explored above it was deemed appropriate for a literature review to be carried out into children's language and communication in the outdoor environment. The sections below detail the approach that was used and the specific area I aimed to explore.

### ***1.1.3 Systematic review methodology***

Noblit and Hare (1988) developed a meta-ethnographic approach to systematic reviews that allows a synthesis of qualitative studies. A qualitative review was conducted due to the literature available in the research area, utilising a qualitative approach also fit with my conceptual framework (as outlined in 2.3). The purpose of a meta-ethnography is to compare and analyse texts resulting in a new interpretation being constructed. It was decided that a meta-ethnography would allow each study to be considered in depth, Noblit and Hare (1988, pp. 9-12) suggested it allows an interpretive understanding of social phenomena, reducing the accounts but also 'preserving the sense of the account through the selection of key metaphors and

organizers'. Noblit and Hare's approach was used as it provided a systematic framework which was easy to access as a novice researcher. Worked examples were also available to demonstrate how the meta-ethnography had been utilised. It was decided that a meta-ethnography would allow me to explore the following question: what does research suggests supports children's language and communication in the outdoor environment within the Early Years and Foundation stage?

Noblit and Hare (1988) outlined seven phases in a meta-ethnography that provided the framework for my systematic review.

**Table 1: Meta-ethnography phases (Noblit & Hare, 1988).**

1	Getting started
2	Deciding what is relevant to the initial interest
3	Reading the studies
4	Determining how the studies are related
5	Translating the studies into one another
6	Synthesising translations
7	Expressing the synthesis

Alongside these phases, Schutz's (1962) concept of first, second and third order constructs was used to support and clarify the phases. Table 2 illustrates how this was utilised.

**Table 2: Noblit and Hare (1988) phases supported by Schutz (1962), first, second and third order construct**

Phase	Construct	Explanation
3 Reading the studies	1st order constructs	This involves looking at metaphors that reflect the participants' understandings as reported by the authors.
4 Determining how the studies are related		
5 Translating the studies into one another	2nd order constructs	This involves interpreting the first order constructs.
6 Synthesising translations	3rd order constructs	This involves synthesising the first and second order constructs to develop a new interpretation.
7 Expressing the synthesis		

## 1.2 Deciding what is relevant to the initial interest

Noblit and Hare (1988, p. 27) suggested that this phase requires the author 'knowing who the audience for the synthesis is, what is credible and interesting to them, what accounts are available to address the audiences interest, and what your interests are in the effort' . Therefore, within this phase I considered my own interests alongside the needs of the Nursery staff. This phase involved me clarifying the focus of the review to develop a set of inclusion criteria, in order to locate relevant studies for inclusion in the synthesis. Table 3 reports the inclusion criteria which were followed throughout the process.

**Table 3: Inclusion criteria**

<b>Criteria</b>	<b>Justification</b>
Forest School or Outdoor learning environment	The focus of this review developed from a longstanding interest in Forest Schools. I value the ethos behind the approach and I am interested in what the outdoor environment provides for children. However I was aware that within the UK, Forest schools are only sometimes available to complement the existing EYFS curriculum, therefore wanted to widen the search to include other natural outdoor learning environments. This focus excludes single trips to outdoor education centres or school trips.
Early years Foundation Stage	Within the EYFS there is focus on the enabling environments provided by adults to support children's development and learning, therefore the EYFS will be a focus of the review.
Language and Communication	The Nursery I worked with for my research are interested in the language and communication used by children in the outdoor environment.
UK	More manageable consideration can be given to research focused in the UK. This also ties in with a focus on the EYFS.

### 1.2.1 Locating relevant studies

Once the focus for the meta-ethnography had been developed relevant studies needed locating. The electronic databases searched were EBSCO (Child Development and Adolescent Studies, Education Abstracts, Education Administration Abstracts, ERIC, Medline and the Teacher Reference Center), OVID (Psych Articles full text and Psych Info 1987-2016) and Science Direct. These searches were carried out between April and May 2016 with only peer reviewed journal articles considered.

The following terms were used to explore the available research:

**Table 4: Search terms**

outdoor learning OR outdoor play OR forest school OR outdoor education
AND child* OR early years foundation stage
AND language OR talk OR communication OR question* OR speech

The following number of peer-reviewed studies was identified:

- EBSCO 244
- OVID 45
- Science Direct 33

When exploring the literature I discovered the Journal of Education and Outdoor Learning and hand-searched the journal from 2001-2016 (v1-16) for additional studies that might be relevant to my interest and located two potentially relevant studies. Due to the large number of results I screened the article titles and discarded any that were clearly irrelevant. Next I searched the abstracts and applied the inclusion criteria outlined above and excluded irrelevant papers. I excluded based on the target population (e.g. focus on adolescents) and setting (e.g. articles describing one-off field trips or residential trips to outdoor centres, that were not within a natural outdoor environment and non-UK based studies).

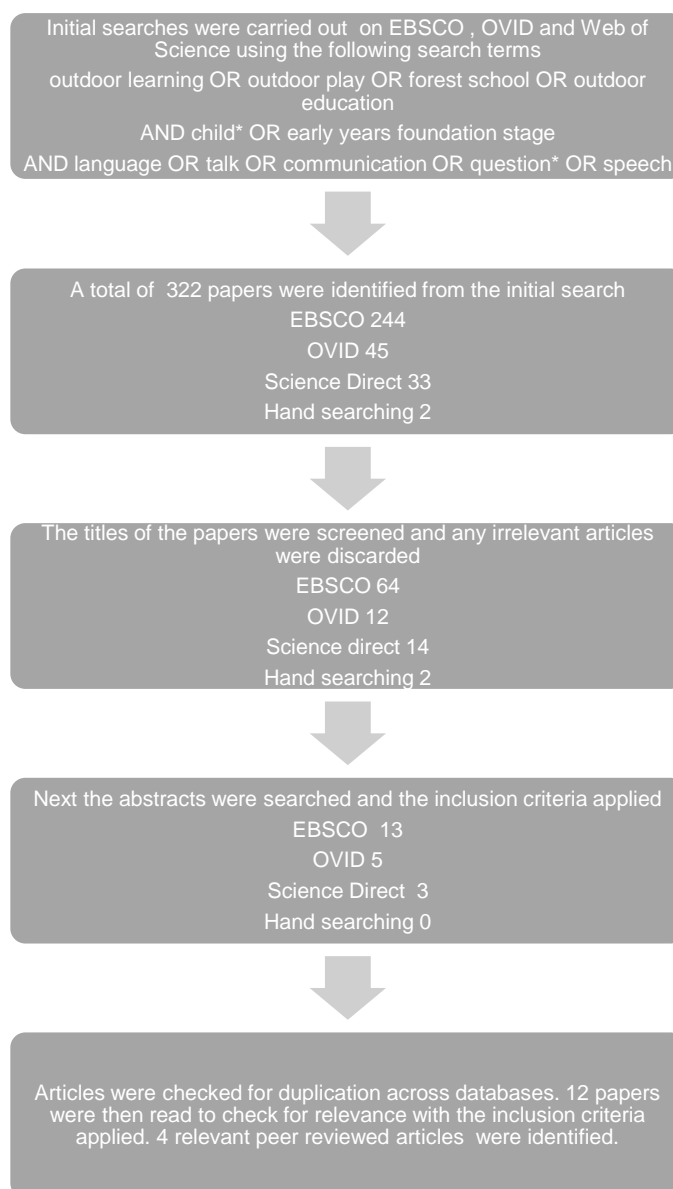
After removing duplicate articles, there remained four peer-reviewed studies.



**Table 5: Relevant studies**

Canning, N. (2010) The influence of the outdoor environment: den-making in three different contexts, <i>European Early Childhood Education Research Journal</i> , 18(4), 555-566.
O'Brien, L. (2009) Learning outdoors: the Forest School approach, <i>Education 3-13</i> , 37(1), 45-60.
Canning, N. (2013) 'Where's the bear? Over there!' - creative thinking in den making, <i>Early Child Development and Care</i> , 183(8), 1042-1053.
Waters, J. & Bateman, A. (2015) Revealing the interactional features of learning and teaching moments in outdoor activity, <i>European Early Childhood Education Research Journal</i> , 23(2), 264-276.

**Figure 2 Flow chart to demonstrate how the studies were located**



### **1.3 Reading the studies**

As Noblit and Hare (1988) acknowledge, this phase of the meta-ethnography is not as clear as previous phases. It is suggested that through repeated reading and noting of interpretive metaphors a synthesis of the papers will emerge. Long and Godfrey (2004) defined a qualitative study as one that 'uses qualitative methods in both the gathering and analysis of the data' and 'Its aim is to draw out the informants' understandings and perceptions as well as to explore the features of social settings and 'culture'. In order to explore each paper systematically in detail I used the evaluation tool developed by Long and Godfrey (2004) as a framework to organise my thinking. Long and Godfrey (2004, p. 185) describe the tool as focusing on 'both descriptive ("what was done") and evaluative ("how well it was done") elements'. Thus, it includes characteristics of the study (study type, sampling and setting) and how the study was done (rationale for the choice of setting, sample, data collection and analysis)". The evaluation for each of these papers is located in Table 6 below.

**Table 6: Evaluative overview of the relevant studies**

<b>Study</b>	<b>Purpose</b>	<b>Key Findings</b>	<b>Evaluative Summary</b>	<b>Setting Rationale</b>	<b>Appropriateness of sample</b>	<b>Adequacy of description of fieldwork</b>	<b>Adequate evidence to support analysis</b>
<p><b>Canning, N.(2013)</b>  <b>'Where's the bear? Over there!' - creative thinking in den making, <i>Early Child Development and Care</i>, 183(8), 1042-1053.</b>  <b>This paper focused on den making in the outdoor environment. It is a small ethnographic study which observed children's creative play in peer social</b></p>	<p>Aimed to explore creative thinking and imaginative responses generated through social play in the context of den making.</p> <p><b>Research question:</b>            How does den making support creative thinking in young children?</p> <p>Focus was placed upon conversations between children, the</p>	<p>A 'creative narrative' was developed and sustained across the 4 week period about a family of bears living in the woods. The story was adapted each time the children visited the woods.</p> <p>The study identified three key themes:</p> <ul style="list-style-type: none"> <li>• Children's play space and the outdoor environment.</li> <li>• Social interactions and children's communication.</li> <li>• Practitioner's response to children's ideas.</li> </ul> <p>It led the Early Years Practitioners to reflect on their practice in relation to how they</p>	<p>Clear statement that the research is based on a sociocultural theory considering children's developing social interactions and their cultural surroundings.</p> <p>The paper is indicative of a social constructionist stance.</p> <p>The methodology used is congruent with this stance.</p>	<p>Rural private day nursery on the border between England and Wales.</p> <p>Large outdoor space and access to a secure woodland with a stream.</p> <p>Data was collected during den making sessions</p>	<p>5 children (3 boys and 2 girls) who were present for all of the den making sessions. 8 children were present for the third session and between 5 and 7 were present at the other sessions.</p> <p>Children were aged 3-4 years old.</p> <p>Den making was an activity that the children regularly participated in and were aware of rules and regulations.</p> <p>Although the</p>	<p>A detailed explanation of ethical considerations regarding involving young children is included.</p> <p>Clear that non-participant observations were carried and recorded as field notes at the time of observation.</p> <p>The focus of these field notes was apparent.</p> <p>Informal conversations</p>	<p>Quotations are presented throughout the identified themes.</p> <p>Difficult to ascertain whether the evidence is adequate as it is not clear how the themes were developed through content analysis.</p> <p>The quotes could be questioned for accuracy due to the nature of taking field</p>

<p><b>groups and focused on the way in which the children explored the environment. The views of Early Years Practitioners were sought in relation to their views about the children's social interaction, engagement and responses.</b></p>	<p>way resources and the environment were used and interactions between the children and the Early Years practitioners.</p>	<p>can support children to communicate their preferences and ideas.</p>	<p>A small ethnographic study is used to explore children's social interactions and engagement in their environment.</p> <p>Content analysis was used to analyse the data.</p> <p>Quotations are presented throughout the identified themes.</p> <p>Difficult to ascertain whether the evidence is adequate as it is not clear how the themes were developed</p>	<p>lasting 2 hours a week across a 4 week period.</p>	<p>research also focuses on Early Years practitioner views it does not state how many practitioners were involved in the research.</p>	<p>with Early Years practitioners were recorded as field notes immediately after the discussion.</p> <p>Content analysis was used to analyse the data.</p>	<p>notes after the conversations had taken place.</p> <p>However the quotes that are presented throughout the paper are detailed and informative.</p>
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			through content analysis.				
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Study	Purpose	Key Findings	Evaluative Summary	Setting Rationale	Appropriateness of sample	Adequacy of description of fieldwork	Adequate evidence to support analysis
O'Brien, L(2009) Learning outdoors: the Forest School approach, <i>Education 3-13, 37(1), 45-60.</i>	To explore the role of the Forest School approach on children's development.	8 themes were identified. 6 were based on those developed in stage 1 of the research. <ul style="list-style-type: none"> <li>Increases self esteem and self confidence.</li> <li>Improves social skills.</li> <li>Contributes to the development of language and communication skills.</li> <li>Improves motivation and encourages concentration.</li> <li>Contributes to children's knowledge and understanding.</li> <li>Improves physical motor skills.</li> </ul>	A social constructivist view to learning is discussed in relation to the underpinning s and pedagogy of Forest School.  The methodological approach used was developed during 'phase 1' which was implemented in Wales, before being used in this piece of research. The approach is clearly outlined and described. The	Seven schools in England. It is referred to as phase 2 following previous work carried out with year 6 children in schools in Wales.  Each case study followed a variant of the Forest School approach	Three English case studies with 24 children from seven schools in Oxfordshire (3), Shropshire (2) and Worcestershire (2) were observed over an 8 month period in a Forest School. The children were aged 3.2-5.5, except for one group in Worcestershire that were aged 5-9.	A three stage process is outlined clearly and described as action research.  1. A workshop is carried out with practitioners to discuss Forest School activities and the impact this has on the children involved. 2. Data collection is undertaken on site. This is carried out by the practitioners through observations of the children in the Forest	Only three themes are explored within this paper, with reference being made to an earlier study which explores the other themes.  For each theme a summary box is provided and follows the same structure <i>Forest School is a place where... Changes</i>

		<p>And</p> <ul style="list-style-type: none"> <li>• New perspectives (from the practitioners seeing the children in a different environment.</li> <li>• Ripple effects beyond Forest School.</li> </ul> <p>Three themes were discussed in this paper. Social skills, motivation and concentration and new perspectives.</p>	<p>observational data was gathered and analysed with reference being made to the themes that emerged during stage 1 of the process. Limitations of the methodology are addressed within the paper. Explanation that it is a participatory research process therefore relevant to the needs and issues of a particular context. Unclear which of the case studies decided to use the</p>			<p>School. Self - appraisal templates are completed.</p> <p>Questionnaires can be used with teachers, parents and children to explore the impacts of Forest School.</p> <p>3. A reflection workshop to identify impact and learning points are identified for future practice. Limitations of the methodology are discussed.</p>	<p><i>that can occur include... This is often manifested by... Reference s are made to specific children within the results section.</i></p>
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			questionnaire s and who they decided to use them with. A quote is given from an Oxfordshire parent when discussing one of the themes.				
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Study	Purpose	Key Findings	Evaluative Summary	Setting Rationale	Appropriateness of sample	Adequacy of description of fieldwork	Adequate evidence to support analysis
<p><b>Canning, N (2010) The influence of the outdoor environment: den-making in three different contexts, <i>European Early Childhood Education Research Journal</i>, 18(4), 555-566.</b></p> <p><b>This paper focused on den making in the outdoor environment. The research was a small-scale non-participant observation of children aged 3-5 in the outdoor environment.</b></p>	<p><b>To see how children engaged</b> with den making materials in different outdoor environments and how early years practitioners involved themselves and supported the children.</p>	<p>Reported that children used the environment to fulfil their curiosity and motivation to play.</p> <p>It highlighted the importance of the relationship between the practitioners and children in determining how children responded to the environments in terms of making their own choices, confidence in the environment and their ability to problem solve.</p> <p>Relationships between children were highlighted and the impact their shared experience promoted communication</p>	<p>Advocates a child centred approach and listening to children and then analysing.</p> <p>Placed within the context of government policy and the requirements of the EYFS.</p> <p>Explicit in saying that the research adopted an interpretivist paradigm. The methodology and analysis used was appropriate. The quotes could be questioned for accuracy due to the nature of narrative observations and taking notes after the conversations had taken place. However a detailed analysis and discussion of</p>	<p>Three different outdoor contexts in early years settings in the UK.</p> <p>Considers the EYFS Framework and focuses on the principle of 'enabling environments'.</p> <p>Setting 1 - urban private day nursery with a courtyard space. Setting 2 - rural private day nursery with a woodland space. Setting 3 - childminder with public</p>	<p>A total of 12 children aged between 3 and 5 participated across all three settings. Setting 1 - 2 boys and 2 girls aged 5. Setting 2 - 5 boys aged between 3 and 4. Setting 3 - 3 children aged 3, 4 and 5.</p>	<p>It is clear consent was gained from parents and staff but this is brief and no further ethical considerations are mentioned.</p> <p>Non-participant narrative observations were carried out in each setting to collect data.</p> <p>It is noted that informal reactions from practitioners and children were recorded immediately after.</p> <p>Content</p>	<p>A detailed analysis and discussion of the findings is given.</p> <p>An interpretation of findings accompanied by direct quotes is provided alongside literature exploring similar concepts.</p> <p>The quotes could be questioned for accuracy due to the nature of narrative observations and taking notes after the conversations had taken</p>

		<p>and imagination.</p> <p>These were explored in the following themes:  Environmental influences  Children's choices  Imagination and creativity  And Relationships between children and practitioner.  It concluded that outdoor play offers flexible opportunities where children engage in creative and imaginative play, develop their communication skills and build relationships with other children and adults.</p>	<p>findings was given.</p>	<p>access to woodland.  The data was collected during a 2 hour period in each of the settings.</p>		<p>analysis was used to analyse the data.</p>	<p>place.</p>
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Study	Purpose	Key Findings	Evaluative Summary	Setting Rationale	Appropriateness of sample	Adequacy of description of fieldwork	Adequate evidence to support analysis
<p><b>Waters, J. &amp; Bateman, A (2015) Revealing the interactional features of learning and teaching moments in outdoor activity, <i>European Early Childhood Education Research Journal</i>, 23(2), 264-276. This study reports on findings from a thesis investigating child-initiated, child-adult interactions in early years educative</b></p>	<p><b>To report on the findings from secondary analysis of the original thesis data.</b></p> <p>The aim was to establish the conversation turns within the adult-child interactions to better understand how intersubjectivity was achieved.</p>	<p>The outdoor environment stimulated children's thinking and enquiry.</p> <p>It provided opportunities for children to initiate interactions to the teacher based on their interests. This was done through initiating 'wh' questions and referring to the outdoor environment.</p> <p>When a teacher actively engages in the topic presented by the child and</p>	<p>Research placed within literature focusing on intersubjectivity and refers to co-construction of knowledge indicative of a social constructionist viewpoint. It also refers to the original research being socio-culturally framed.</p> <p>The secondary analysis conducted in this paper is described and extracts from the conversation analysis are reported.</p>	<p>In the original study three classes of 4-7 year old children were observed in the indoor and natural outdoor environment .</p> <p>This paper focuses on extended interactions in the natural outdoor environment .</p>	<p>In the original study three classes of children aged 4-7 years were involved. The number of teachers involved in the study is not mentioned.</p> <p>For the secondary analysis episodes that were considered to demonstrate an extended interaction and could be viewed as sustained thinking were analysed. Therefore it is not clear how many children and adults were included in the secondary</p>	<p>The paper explains that in the original study interview and audio-visual data of interactions were analysed from 48 hours of observation of three classes of children aged 4-7 years over the course of one academic year. The type of analysis used is not mentioned.</p> <p>For the secondary analysis conducted in</p>	<p>Extracts of the transcripts of the analysed data are presented to demonstrate the different interactions between child and teacher.</p> <p>The findings are interpreted within the context of relevant literature.</p>

<p><b>settings in the UK. It is claimed the thesis developed understanding in three areas, the space, the child and the interaction.</b></p>		<p>interaction is sustained and co-construction of knowledge is achieved. When the teacher does not fully engage (perhaps due to distractions from others) the interactions are not sustained and children's knowledge is not developed.</p>			<p>analysis.</p>	<p>this paper conversation analysis is used. It explains the process of how this was carried out.</p> <p>The paper explains that consent was obtained for anonymised use of the data from the original research and that data is securely stored.</p>	
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During the process of evaluating the papers I noted down key interpretive metaphors as I read them. Further repeated reading of each of the studies added to this list. At this stage these key metaphors were the key themes or concepts as reported by the author(s) in each paper. This allowed me to move on to the fourth phase; determining how the studies are related.

#### **1.4 Determining how the studies are related**

In this phase my 'list of the key metaphors, phrases and/or concepts' was reviewed to determine the relationships between the studies (Noblit & Hare, 1988, p. 28). I used Britten et al's (2002) worked example of a meta-ethnography to guide me through this process. The list of key metaphors was reviewed to identify common and recurring concepts across the four papers.

#### **1.5 Translating the studies into one another**

Following Noblit and Hare (1988, p. 28) this phase involved comparing the key concepts and interactions from one account with the key concepts and interactions within the other accounts. These were then reduced into the most significant recurring concepts evident in each of the papers. These concepts are documented in Table 7. As suggested by Britten et al. (2002) the terminology used in the original papers is presented in an attempt to represent the original meanings and concepts from each paper. The Table demonstrates a move from the first order constructs to the second order constructs. Later in this paper, Table 8 (page 30) demonstrates the move from first order to third order constructs.

**Table 7: Most common and recurring concepts across the relevant papers**

<p><b>Studies</b></p> <p><b>Key Concepts</b></p>	<p><b>Canning, N.(2013)</b>  <b>'Where's the bear? Over there!' - creative thinking in den making, <i>Early Child Development and Care, 183(8), 1042-1053.</i></b></p>	<p><b>O'Brien, L(2009)</b>  <b>Learning outdoors: the Forest School approach, <i>Education 3-13, 37(1), 45-60.</i></b></p>	<p><b>Canning, N (2010)</b> The influence of the outdoor environment: den-making in three different contexts, <i>European Early Childhood Education Research Journal, 18(4), 555-566.</i></p>	<p><b>Waters, J. &amp; Bateman, A (2015)</b> Revealing the interactional features of learning and teaching moments in outdoor activity, <i>European Early Childhood Education Research Journal, 23(2), 264-276.</i></p>
<p><b>Relationships</b></p>	<p>Reference was made to early years staff extending and sustaining thinking.</p> <p>"The children's problem solving and just thinking through what they mean; to explain to other children has been extraordinary...their</p>	<p>Working with others to complete a task.</p> <p>Negotiation</p> <p>Awareness of the children of the impact of their action on others.</p> <p>Encouraged to be part of a team.</p>	<p>She stayed close to the children at all times...limited the opportunity for a sense of freedom with the play.</p> <p>Supported sustained shared thinking.</p> <p>"Where's that big stick gone? What were we</p>	<p>Staff designing their answers to extend the children's thinking.</p> <p>Sustained shared thinking.</p> <p>Intersubjectivity.</p> <p>Sustained interactions.</p>

	<p>language, the way they explain..."</p> <p>"Helping when they need help and reflecting on knowing when that moment is has been really beneficial"</p> <p>Relationships between the staff and children determined the way in which the children interacted with the environment.</p> <p>Play which extended and involved other children in the same imaginary world.</p> <p>Children built on each other's ideas to extend</p>	<p>Form new friendships.</p> <p>Relating positively to members of the group.</p> <p>It was suggested that children began to realise and ask when they needed help from others.</p> <p>Relationships change and develop.</p> <p>Children and staff gain a better understanding of each other.</p>	<p>going to use it for?".</p> <p>Sharing ideas.</p> <p>Engaged them in problem solving.</p> <p>Children built on each other's ideas to extend and sustain their play.</p> <p>The way in which the staff engaged with the children impacted on the children.</p> <p>Recognition by one member of staff that they had been too directive within the children's play.</p> <p>The children were</p>	<p>Staff recognising the child's interest in the outdoor environment.</p> <p>Fully engaging with the child, drawing upon their own content knowledge.</p> <p>Answer and expands upon the questions asked by the children.</p> <p>Demonstrating a shared interest.</p> <p>Staff can miss opportunities to extend and elaborate.</p> <p>Staff responding to the child using the phrase "I wonder" and offers the</p>
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	<p>and sustain their play.</p> <p>Staff encouraged them to problem solve and think creatively.</p> <p>Questioning</p> <p>Communicated to parents</p> <p>"...ensure my practice stayed child focused and I felt he [the child] communicated better his feelings about why he had kicked out"</p> <p>The staff prompted children to explain what they were doing and why at certain periods</p>		<p>familiar with the adult; demonstrating 'active conversation' and engaging in sustained shared thinking.</p> <p>Engaged the children in conversation in order to gain a better understanding of what they wanted to achieve.</p> <p>Adults offering a positive interaction.</p> <p>Purposeful conversation.</p>	<p>child the opportunity to think and contribute their own perspective.</p>
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	during the day.			
	Established secure relationships with the children.			
<b>Environmental influences</b>	<p>One member of staff commented on the natural environment developing the children's imagination and commented "Their language as well was delightful - James said "I can see my bear, he's got a blue coat.</p> <p>"They have used the environment and the resources"</p> <p>"the woodland area helps because we can</p>	<p>Questioning and curiosity that comes from the outdoor environment.</p> <p>Inspired through interacting with the outdoor environment.</p> <p>Inspired to ask questions and develop curiosity about the unfamiliar things found in the woodland environment.</p> <p>Provides opportunities to use their</p>	<p>Environment influences and directs play.</p> <p>Influenced their imaginative play.</p> <p>Children understood the limitations provided by their environment.</p> <p>Woodland provides a space for children to choose what they want to do.</p> <p>Using language to comment on things</p>	<p>Conversations initiated through features in the natural environment.</p> <p>Learning affordances available in the natural environment.</p> <p>Questions are asked by the children about the environment they are in e.g. as they walk through the trees "what was the biggest tree?"</p>

	<p>leave the materials there and it doesn't matter " they suggested that this served as a reminder when the children returned to sustain their story and creativity.</p> <p>It was suggested that the children found ways to use the environment to fulfil their own curiosity, motivation and creative thinking.</p> <p>Children used the natural resources to facilitate play with other children, in one instance they laid out sticks in front of a tree to create</p>	<p>imaginations.</p> <p>Talking about things that interest them in the environment, an example given was talking about the colour of flowers.</p> <p>"It encourages the development of curiosity, patience and observational skills, since the patterns and forms in a forest are not immediately obvious but take some seeking out".</p> <p>Sparks discussion; "Is it dead or real? Will it move? Is it a boy or girl?".</p>	<p>within the environment; "this is the biggest one!" (in reference to a stick).</p>	
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	<p>a 'ladder' they pretended to climb</p> <p>A rabbit hole became "a trap for tigers so they can't eat the bear".</p> <p>Children revisited and explored materials in different ways.</p> <p>Flexible to be used in different and imaginative ways.</p>	<p>Children behave and interact differently in a woodland.</p> <p>Change in vocabulary - one parent noticed their child was able to name a number of plants.</p> <p>Resources in the environment encourage children to work together.</p>		
<b>Child-led exploration</b>	<p>Children initiated conversations about things which interested them, these were sometimes facilitated by the early years staff.</p> <p>Engaging with children's interests and allowing</p>	<p>Initiate their own learning and play activities.</p> <p>Are able to focus and concentrate for longer periods of time on tasks and issues that are of interest to them.</p>	<p>The children adapted their play to something they found interesting.</p> <p>Allowing the children to experiment.</p> <p>Opportunities for the children to follow their</p>	<p>Children initiating the learning sequence.</p> <p>Reference is made to the children drawing the teachers attention back to the initial topic.</p> <p>Children initiating</p>

	<p>their curiosity and creativity to direct the nature and content of a play-based curriculum.</p> <p>Staff responded to the direction the children wanted to take the play, they suggested that it gave them an insight into the children's social, cognitive and motor skills.</p>	<p>Child-led and initiated learning is encouraged.</p> <p>Able to see what interests the children.</p>	<p>own agenda, this allowed their play to evolve.</p> <p>Children constructing rules.</p>	<p>through using 'wh' questions.</p> <p>Child initiating through summoning the teacher to something they have found interesting in the outdoor environment</p>
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Translating the studies emphasised relationships, environmental influences and child-led exploration as important concepts in supporting children's language and communication in the outdoor environment within the Early Years and Foundation stage. A descriptive translation of each of the identified key concepts follows to demonstrate my line of thinking.

### **1.5.1 Relationships**

Across the studies, children's relationship with adults was viewed as important. Canning (2013) reported that the relationships between adults and children determined the way in which the children interacted with the environment. Particular reference was made to staff extending and sustaining interactions. This was also evident in Canning (2010, p. 560): one example given was a member of staff asking "Where's that big stick gone? What were we going to use it for?". Canning (2010) suggested that familiarity with the adult had an impact on children's language and communication. It was suggested that when children became more familiar with adults they would demonstrate what was described as active conversation and be able to engage in sustained shared thinking. It was further suggested that adults engaged children in conversation in order to gain a greater understanding of what they wanted to achieve in the outdoor environment.

Waters and Bateman (2015) suggested that staff were designing their answers to purposely extend the thinking of the children. They would answer the children's questions and expand on them further. Successful episodes of a sustained interaction were suggested to be ones in which adults engaged in purposeful conversation (Canning, 2010) and demonstrate a shared interest (Waters & Bateman, 2015). Waters and Bateman (2015) suggested that if shared interest is not evident then interactions are not sustained. Canning (2013) observed staff encouraging children to problem solve and think creatively; also making reference to extending and sustaining interactions and thinking. In Waters and Bateman (2015) they observed staff responding to the children using the phrase "I wonder"; this offered the child the opportunity to think and to contribute their own perspective.

Whilst staff were observed to extend and develop children's language and communication it was also suggested that staff often missed opportunities to extend and elaborate (Waters & Bateman, 2015). In Canning (2010) one member of staff reported that they felt that staying too close to the children limited the opportunity for them to have freedom within their play. This highlighted the need for a balance

between adult-guided and child-led play. Another member of staff suggested that they had been too directive within the children's play, which could indicate that they were not extending and building on the children's interests.

Interaction with peers was mentioned across the studies as having an influence on children's use of language and their communication. In Canning (2013, p. 1048) one member of staff commented "The children's problem solving and just thinking through what they mean; to explain to other children has been extraordinary...their language, the way they explain...". Similarly, O'Brien (2009) suggested that children began to realise and ask when they needed help from others. In Canning (2013) children were described as establishing secure relationships with other children. This led to children increasingly building on each other's ideas to extend and sustain their play' thus allowing them to be in the 'same imaginary world' (Canning, 2013, p. 1049). O'Brien (2009) suggested that Forest School increased children's awareness of the impact of their actions on others, with the environment encouraging them to work as part of a team. Alongside children developing peer relationships in the outdoor environment, children's interactions with staff were also observed to develop and change over time and it was suggested that children and staff gain a better understanding of each other (O'Brien, 2009).

Waters and Bateman (2015) referred to intersubjectivity in the adult-child relationship in the outdoor environment. They considered this intersubjectivity to be having a shared understanding and purpose which is essential in supporting the co-construction of knowledge in the outdoor environment. This could be understood in terms of secondary intersubjectivity (Trevarthen & Aitken, 2001; Trevarthen & Hubley, 1978) in which adult and child develop and share a reciprocal understanding or experience of people and objects through their interactions. Waters and Bateman (2015) reported that early years staff were fully engaged with the children and drew upon their own content knowledge to extend their thinking. It was reported that the way in which early years staff engaged with the children had an impact on the children (Canning, 2010, 2013); one member of staff in Canning (2013, p. 1048) commenting "helping when they need help and reflecting on knowing when that moment is".

It was evident across all studies that relationships played a key role in supporting children's language and communication in the outdoor environment. This involved

adults extending and sustaining interactions, the development of adult and peer relationships and staff recognising and responding to children's interests.

### **1.5.2 Environmental influences**

The researchers and staff suggested that the natural environment triggers children's curiosity, thus inspiring them to ask questions about the objects they come across and initiate interactions with those around them. Waters and Bateman (2015, p. 271) reported that when walking through the woods one child asked "what was the biggest tree?". They suggested that the unfamiliarity of some objects in the outdoor environment led to this questioning. This was highlighted by O'Brien (2009, p. 53) where one child asked "Is it dead or real? Will it move? Is it a boy or girl?" Such questions sparked discussion and interactions with early years staff or the children's peers. It is interesting to note that unfamiliarity of objects in the environment is viewed as providing positive opportunities for the children. Rather than being something the children are scared of it is suggested that they embrace the unknown. It could be that the children's experiences in the environment are mediated and guided through their relationship with the adult. Perhaps providing children with a sense of safety with a familiar adult, it allows them to explore the natural environment with a sense of curiosity and confidence rather than being fearful of the environment.

Alongside inspiring questioning, a member of staff commented on one boy's imagination and language development in Canning (2013, p. 1047): "Their language as well was delightful - James said "I can see my bear, he's got a blue coat". This was in relation to a "Bear Hunt" story the children had developed and sustained during their time in the outdoor environment. To further highlight language development related to the outdoor environment, O'Brien (2009) reported one parent's comment that they had noticed a change in their child's vocabulary and ability to name a number of plants from Forest School. In O'Brien's (2009) study it was also reported that children were spontaneously talking about things that had interested them in the environment, such as the colour of flowers. Similarly Canning (2010, p. 562) reported that "one child focused his attentions on collecting sticks, commenting on the size and shape, "this is the biggest one!" as he struggled to carry it across to the half made den. Another child concentrated on collecting smaller sticks 'I'm going to make a bear trap!' he announced." Whilst Canning (2010) was demonstrating that the outdoor environment allowed the children to follow their own

agendas, O'Brien (2009) indicated that the resources in the environment encourage children to work together.

Canning (2010) suggested that the outdoor environment provides children with the opportunity to use their imaginations. This was further emphasised in Canning (2013) who reported that children found ways to use the environment in a way to meet their curiosity motivation and creative thinking. In addition to this O'Brien (2009, p. 52) suggested that this was due to the "patterns and forms in a forest are not immediately obvious but take some seeking out".

The natural resources available in the outdoor environment were also suggested to support the children's language and communication. In Canning (2013) natural resources were used to facilitate play between two children; in one instance they laid out sticks in front of a tree to create a 'ladder' they pretended to climb. When playing near a rabbit hole, one child explained it was "a trap for tigers so they can't eat the bear". This indicated the natural environment's ability to be used in many ways by the children. Canning (2013) also found that children revisited features and materials in the environment and used them in different ways. It was evident across all studies that the outdoor environment was flexible and able to be used in different and imaginative ways. Waters and Bateman (2015) referred to Gibson's (1979) theory on affordances and the materials available in the natural environment.

In Canning (2013, p. 1048), one member of early years staff explained that for them "the woodland area helps because we can leave the materials there and it doesn't matter ". They suggested that this served as a reminder when the children returned to sustain their story and creativity." O'Brien (2009) suggested that children behave and act differently in a woodland environment. This can perhaps be explained by Canning (2010) who indicated that the woodland environment provides the space for children to choose what they want to do; she also suggested that children understand the limitations provided by the environment they are in, with the environment influencing and directing play.

In summary, the outdoor environment is influential in developing children's language and communication skills. It highlighted that children's interactions with adults and peers are initiated through features of the environment, that the environment itself invites questioning and curiosity; this is particularly due to the resources flexibility and the different ways the children use them.



### **1.6.3 Child-led exploration**

Observations of children in the outdoor environment highlighted child-led exploration as a key feature in developing language and communication. Canning (2013) found that children would initiate conversations about things they found interesting, sometimes facilitated by the early years staff. Waters and Bateman (2015) found that children often initiated using 'wh' type questions with the staff. They also suggested that children would initiate conversations with staff by summoning them across to something they had found interesting within the environment. Canning (2013) suggested that it was important for adults to engage with children's interests, allowing their curiosity to direct the play. In responding to the direction the children wanted to take their play, early years staff suggested it gave them an insight into the children's social, cognitive and motor skills. O'Brien (2009) also recognised the importance of children initiating their own learning and play, and staff reported that child-led and initiated learning is encouraged. It was suggested that this allowed the early years staff to see what interested the children, providing them with opportunities to build on and extend their interactions. Similarly, Canning (2010) reported that in providing children with the opportunity to follow their own agenda, this allowed their play to evolve, with children often adapting their play to something they found interesting. O'Brien (2009) further emphasised the importance of children following their own interests; it was suggested that in following their interests the children were able to focus and concentrate for longer periods of time. Whilst adults supported and extended children's interactions Waters and Bateman (2015) also found that children would draw the teacher's attention back to the initial topic they were interested in.

To conclude, child-led exploration was viewed across all studies as an important mechanism in developing children's language and communication, both in relation to their immediate environment and in their interactions with adults. It was recognised that children initiated conversations about things that interested them, they would initiate and invite early years staff into their play and interactions and that it was important for children to be provided with the opportunity to develop and follow their own agenda.

## **1.6 Synthesising translations**

In this phase the first and second order constructs were synthesised in order to develop a new interpretation; the third order construct (Schutz, 1962). In Noblit and Hare's (1988) meta-ethnography description this phase is referred to as 'making a

whole into something more than the parts alone imply'. The three prominent key concepts that were evident across all the studies; relationships, environmental influences and child-led exploration were then used as a basis for developing a line of argument. Table 8 shows the development of first order to third order constructs.

**Table 8: Demonstrating the move from first order to third order constructs**

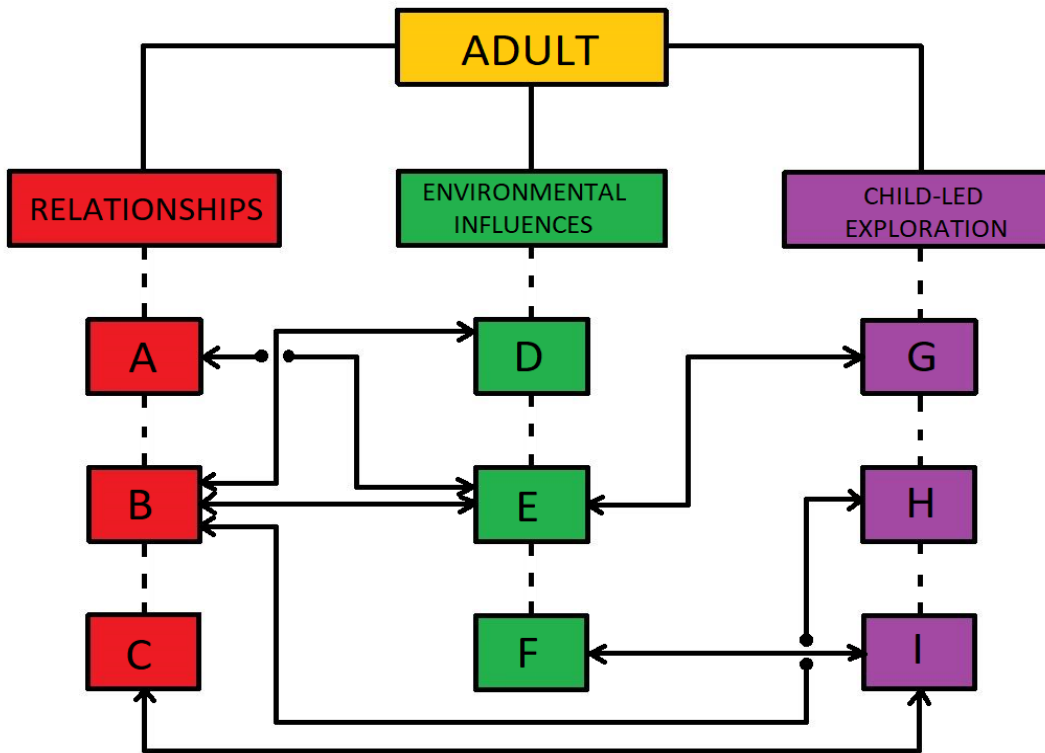
Key concept	Second order constructs	Third order construct
<b>Relationships</b>	(A) Early years staff extending and sustaining interactions (B) Relationships with adults and peers (C) Early years staff recognising and responding to children's interests	<p data-bbox="1091 707 1334 1648">(J) Early years staff play a pivotal role in influencing, sustaining and developing children's interactions within an outdoor learning environment. Staff notice and respond to children's initiations; with the relationship between adult, child and environment a complex interplay.</p>
<b>Environmental influences</b>	(D) Interactions between early years staff and children are initiated through features of the environment (E) The environment invites curiosity and questioning (F) Resources are flexible and can be used in many ways	
<b>Child-initiated exploration</b>	(G) Children initiated conversations about things that interested them (H) Children invited early years staff into their play (I) Children were provided with opportunities to follow their own agenda	

## **1.7 Expressing the synthesis**

This section demonstrates how the findings of the review address the research question: what does research suggest supports children's language and communication in the outdoor environment within the Early Years and Foundation stage?

Through my systematic interpretation of the literature, the meta-ethnography highlighted relationships, environmental influences and child-led exploration as the key concepts supporting children's language and communication in the outdoor environment. Mainly observational data along with some informal conversations with early years staff highlighted relationships in which adults were able to extend and sustain learning opportunities for the children were important. However it was also acknowledged that whilst staff were crucial in recognising and responding to children's interests they also needed to be able to judge when it was necessary to step back and allow children to explore the environment for themselves. Thus highlighting the complex nature of adult-child relationships in the learning environment. Allowing opportunities for children to follow their own agenda provided children with the ability to initiate interactions based upon their interests. The natural resources in the environment were deemed to be flexible, allowing them to be used in different ways by the children with the unfamiliarity of the outdoor environment also encouraging curiosity and questioning from the children. The way in which the adults responded to the children in the outdoor environment was pivotal in how children interacted with it, thus highlighting a dynamic interplay between adult, child and the environment (see Figure 3).

Figure 3: Illustrating the dynamic interplay between adult, child and the environment.



In the model 'Adults' represents the 3rd order constructs, with the arrows leading down to the 2nd order constructs to indicate the research's suggestion of the complexity of the adults' role in influencing, sustaining and developing children's interactions within an outdoor learning environment. The arrows between A and I demonstrate a relationship between the second order constructs that the adult guides. For example; research suggested that the (E) The environment invites curiosity and questioning and that (G) Children initiated conversations about things that interested them; adults played a role in engaging with children about their interests and extending and sustaining their interactions with the environment.

### 1.8 Limitations

It is acknowledged that there are some limitations within this meta-ethnographic review of the literature. With the literature review being carried out by a single researcher it was determined that greater in-depth consideration could be given to UK based studies. Therefore it is acknowledged that potentially relevant articles could have been discounted during the process. However due to the research project being based within the EYFS it was determined that this would be a relevant area to focus on. There is also the possibility that in using only peer reviewed articles there

could be an element of publication bias if the research fits with a particular agenda or position, however they are often acknowledged as having an element of quality control and therefore were used within this review. Due to the interpretative nature of a meta-ethnography it could be considered to have less rigor, however in following systematic process and in utilising Long and Godfrey's (2004) evaluative tool I have tried to be transparent in how I came to my interpretation of the literature.

## **1.9 Conclusion and implications for further research**

My systematic literature review highlighted relationships, environmental influences and child-led exploration as supporting children's language and communication within the outdoor learning environment. However the review also highlighted that these are part of a complex interplay. Adults appeared to be the pivotal aspect in each of these areas. In the studies analysed the main form of data collection was through observations of the children and practitioners in the outdoor environment plus some informal conversations with the early years staff. There appeared to be a lack of in depth understanding of what the staff themselves thought supported their interactions with children in the outdoor environment.

In my empirical research I therefore hoped that working with early years staff in the Nursery using an action research model would provide a positive approach in understanding what is working within their context to extend and sustain interactions with children in their Forest School. As mentioned earlier, the Nursery follow the High Scope approach; central to this approach is a cycle of plan-do-review focusing on the needs of the children. It was my intention to introduce this action research as a plan-do-review process of the early years staff practice.

The next chapter will aim to demonstrate my motivation for carrying out my research within an early years Forest School environment and I will consider my conceptual framework, which has influenced the way in which the empirical research was carried out.

## **Chapter 2: Bridging document**

### **2.1 Introduction**

This chapter will explain my personal interest and motivation for carrying out this piece of research. I will consider my conceptual framework and the influence this has had on the way in which the empirical research was carried out.

When considering my progress across the doctoral training programme, the level and depth of reflexivity that I have engaged with in my professional practice has been an area of important development. Willig (2013) discussed reflexivity in terms of research and suggested there are two types of reflexivity; personal and epistemological. Personal reflexivity includes reflection upon 'values, experiences, interests, beliefs, political commitments, wider aims in life and social identities', whilst epistemological reflexivity 'encourages us to reflect upon the assumptions (about the world, about knowledge) that we have made in the course of the research' (Willig, 2013, p. 10). Furthermore, Braun and Clarke (2013) suggested reflexivity is an essential component of good quality qualitative research.

Parker (2013) indicated that it is important for us to understand and clarify our view of the world and consider how this shapes what we do in both professional practice and research.

### **2.2 My motivations**

When considering my motivations for carrying out this research, I had several thoughts relating to my own interests, experiences gained during my doctoral training and my systematic interpretation of the literature.

Before embarking on this journey to become an Educational Psychologist much of my spare time was spent in the outdoors; for example hiking up a mountain, camping across Europe or simply a walk in the local area. My view is that the outdoors provides ongoing learning through adventure, exploration and new opportunities, and this has had a positive impact on my own wellbeing. For my first assignment when I started the doctoral training I was given the broad topic of learning and the social environment. Due to my personal interests I chose to focus on play in the outdoor learning environment.

Here I first explored the concept of Forest Schools and Scandinavian origins. Through reading I discovered that compulsory school age in Scandinavian countries is 6-7 years of age in comparison to 5 years in the UK.

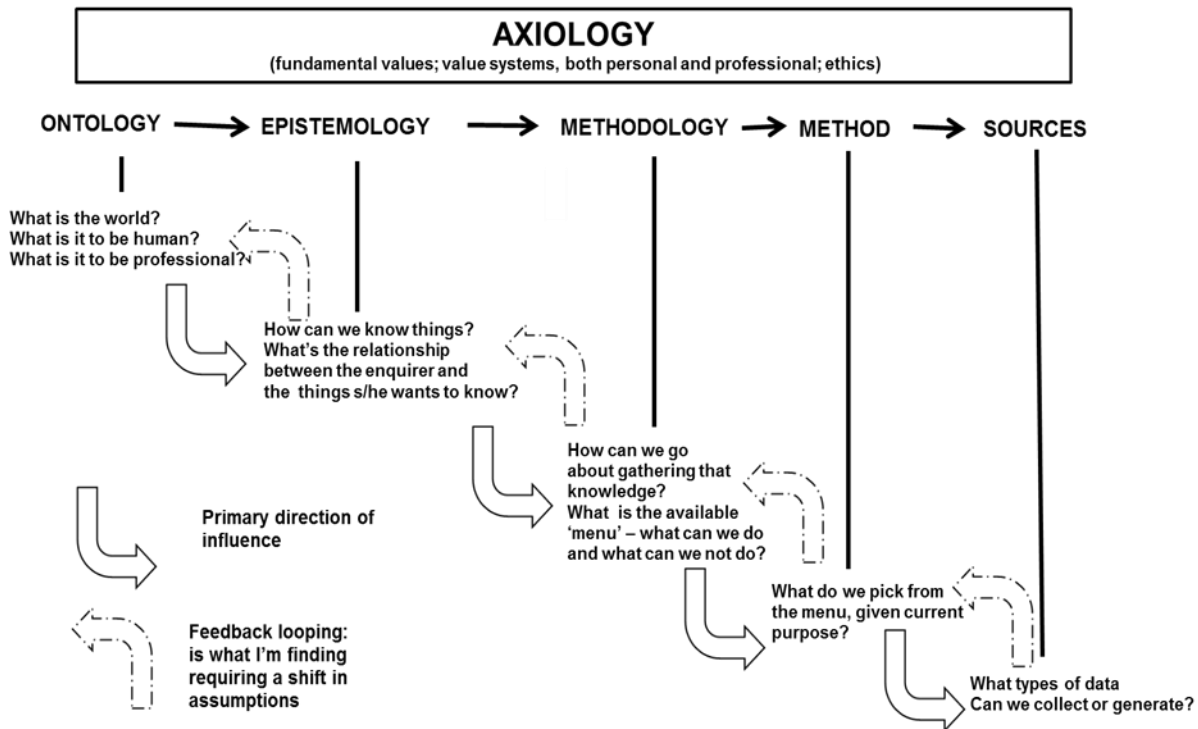
I have had many conversations with school staff about children's readiness for education. Informal discussions with staff have revealed many children struggling with what staff have described as a formal learning environment. Whilst children have the opportunity for play outdoors, it is not always viewed as an opportunity for learning. In a Forest School environment a key principle is that learning comes from social interactions (Williams-Sieghfredsen, 2017). My systematic literature review highlighted relationships, environmental influences and child-led exploration as supporting children's language and communication within the outdoor learning environment. With adults appearing to play a pivotal role in this process, adult-child interactions became the focus of the research.

Whilst originally the focus of the research was to be exploring staff views on maths development this changed as the research developed. This will be explained further when I discuss my conceptual framework.

### **2.3 My conceptual framework**

This next section aims to explore my developing thinking in relation to my view of the world. In order to do this the following commentary is guided by Parker's (2013) model (see Figure 4), which was developed from the work of Grix (2002) and Hay (2002).

**Figure 4: Conceptual framework Parker (2013)**



### **2.3.1 Axiology**

As outlined in Figure 3, axiology is about our fundamental values. In my professional practice it is important for me to work collaboratively with people rather than enacting something upon them. Therefore I wanted to reflect this in my research. Whilst the research had to be completed as a requirement for the course, I wanted the research to be meaningful in some way to the staff taking part. I hold the view that each individual has their own understanding and perspectives of a given situation. It has been suggested that through language and interaction with others, versions of knowledge are constructed (Burr, 2015; Willig, 2013). Therefore it was important for me to listen to staff views and concerns and allow this to shape the research.

### **2.3.2 Ethical considerations**

Prior to conducting the empirical research full ethical approval was obtained from Newcastle University. Both staff and parents received information sheets and informed consent was obtained. Parents were informed they could withdraw their child's participation in the filming on the day and were informed of the dates by Nursery staff. It was important that ethical considerations were made throughout my research project and did not cease after obtaining ethical approval and consent.

The Early Years staff acted as gatekeepers for the children's participation in the research. Alderson (2004) warns that children may find it difficult to tell an adult that



they no longer want to participate. Due to the age of the children it was especially important that the staff and I were attuned to the children's presentation during the research. It was important that the children did not have to participate if they felt uncomfortable being filmed. The staff and I also made sensible decisions on what was appropriate to film; filming was stopped on one occasion when a conversation with a child took an unexpected direction that might have had safeguarding implications. This was in line with guidance from The British Psychological Society (2010) Code of Human research ethics which drew attention to monitoring the assent of the child.

As an outsider to the Nursery I visited on several occasions to be introduced to the children with the intention of them becoming more comfortable with my presence. This included visiting them inside the Nursery and in their Forest School. I followed their routine in helping them prepare for Forest School, this included getting their outdoor clothing and footwear ready. I observed and participated in the activities in Forest School.

As a researcher it was important for me not to distance myself from the context I was working within. Whilst I was in the position of researcher I wanted to reduce any power dynamics to encourage collaborative working.

I met with the staff on two occasions prior to the start of filming to discuss and negotiate the format of the research. In the first meeting an overview of earlier discussions that had taken place between the Nursery's Head Teacher and I was given and staff had the opportunity to ask any questions. It was at this point it was decided that focusing the research solely on maths development would not be appropriate as the staff thought this had the potential to change their natural interactions within the outdoor environment. It was important to them that the research would be a positive experience that could focus on what was going well within the Forest School environment.

The second meeting I was invited to attend was their morning plan-do-review meeting; the staff thought it would help them feel comfortable talking in my presence with a Dictaphone recording the conversation to reflect the process of the research design. (This will be discussed in more detail in the Methods section of this bridging document). A week before filming began I went to the Nursery and was introduced to the parents of the children who were participating in the research, providing them

with the opportunity to know who was working with their children and to answer any questions. This was to ensure valid informed consent been achieved (The British Psychological Society, 2010).

### **2.3.3 Ontology**

Ontology is concerned with what the world is and my view on what it is to be human. My thoughts on this have been an iterative process throughout this research and compounded my view that it is not something that can be simply categorised.

As humans we experience things in the world and these can be understood through our perceptions, interpretations and constructions with others. I believe the context of a situation to be important, with a reality being constructed by individuals within that context.

This was an important consideration for the research project. I was interested in what the staff would notice about their interactions with the children in the Forest School; however as a collaborative action research design was adopted it was important to acknowledge that my involvement would also be an influencing factor in the co-construction of knowledge. Burr (2015) suggests that knowledge is constructed between people through our social interactions.

### **2.3.4 Epistemology**

Epistemology is concerned with how we come to know about things in the world. I believe that meaning is derived from our interactions with the world. Burr (2015) suggests that knowledge can be constructed through the interactions between people and the dialogue that occurs.

This has implications for the outcome of the research. I acknowledge that I will be constructing themes from the dialogue between staff; therefore the findings presented will be my construction of the Early Years staff reality.

### **2.3.5 Methodology**

Methodology is described by Parker (2013) as the underlying thinking and planning about our work. It focuses on how we can gather knowledge from and in the world taking into account our ontology and epistemology. A qualitative methodology was adopted for this research: Willig (2013), wrote that qualitative researchers are interested in meaning and how people make sense of the world and the events they experience in it. In this piece of research I wanted to provide staff with a space to

engage in dialogue with each other to create knowledge rather than acting as an observer and interpreter to their interactions.

### **2.3.6 Method**

This section will document the sequential process undertaken for this piece of research, alongside reflecting upon why I made the choices I did.

From discussions with the Nursery Head Teacher it was highlighted that they wanted the research to provide an element of professional development for staff, for it to be a positive experience and that all staff could be given the opportunity to participate. Using this information and through considerations of my axiological (i.e. ethicality), ontological, epistemological and methodological position we decided that an action research design would be appropriate. Burbank and Kauchak (2003) suggested that a collaborative action research design can provide a mechanism for professional development through combining groups of teachers in the design and implementation of projects. They also suggested that action research provides opportunities for structured dialogue to take place, thus encouraging reflection on practice. Action research was described by Reason and Bradbury (2001, p. 1) as

'...a participatory, democratic, process concerned with developing practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory worldview it seeks to bring together action and reflection, theory and practice in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of persons and their communities'.

Baumfield, Hall, and Wall (2008) described the process of action research as cycles, which complement the plan-do-review process, which underpins teacher practice. The Nursery's implementation of the High Scope Curriculum meant that there was an allocated time in which the action research project could be carried out. This might have made the research process easier to embed into their practice.

Van der Riet (2008) argued that participatory research approaches enhance validity due to addressing the participative, social and relational nature of human actions.

This action research project involved using video to record staff during their interactions with children in the Forest School. I had considered using an approach such as Video Interaction Guidance (VIG Kennedy, Landor, and Todd (2011)). This is

an intervention where people are guided to reflect on video footage of successful moments of interaction in a process which moves towards better relationship with others (Kennedy, 2011). However, since the focus of the research was not on promoting attuned interactions I decided to use video as a tool to provide a visual representation for the staff to consider. Van der Riet (2008) suggested visual representations provide a shared reference point for discussion and can be less confrontational than asking direct questions. Furthermore it has been argued that using visual methods has the potential to provide space for dialogue (Van der Riet, 2008). Therefore the principles of VIG (Kennedy, 2011, see Table 9 for a list of principles alongside some examples) were used to guide the review process rather than using VIG as an intervention.

**Table 9: Principles of attuned interactions and guidance**

Being attentive	<ul style="list-style-type: none"> <li>• Looking interested with a friendly posture</li> <li>• Giving time and space for the other</li> </ul>
Encouraging initiatives	<ul style="list-style-type: none"> <li>• Waiting</li> <li>• Listening actively</li> </ul>
Receiving initiatives	<ul style="list-style-type: none"> <li>• Receiving with body language</li> <li>• Receiving what the other is saying or doing with words</li> </ul>
Developing attuned interactions	<ul style="list-style-type: none"> <li>• Having fun</li> <li>• Giving and taking short turns</li> </ul>
Guiding	<ul style="list-style-type: none"> <li>• Scaffolding</li> <li>• Giving information when needed</li> </ul>
Deepening discussion	<ul style="list-style-type: none"> <li>• Collaborative discussion and problem solving</li> <li>• Reaching new shared understandings</li> </ul>

I selected short clips of successful moments of interaction between the staff and children to be discussed in review sessions as a group and like VIG I hoped it would be a positive and empowering experience. I aimed to do this by positioning myself as a guide to the research process rather than being directive. The final cycle of filming, selecting the clips and the review session was led by the staff, allowing them to collaborate in each part of the research process. It was hoped that it would also

provide them with a framework for reflective practice after my involvement in the research process ended.

A focus group was held after the cycles of filming and review were finished. This was to allow the staff to discuss and share anything they might have felt they did not have the opportunity to discuss during the review sessions and to consider how they might move forward. I had also noticed during the review sessions that staff engaged in dialogue about the use of video and I was interested in their construction of this. Kamberelis and Dimitriadis (2013) suggested focus groups can be used to provide a space for dialogue to support the construction of knowledge. Free flowing focus groups can also lead to a sense of empowerment by providing the opportunity for participants to own the space (Braun & Clarke, 2013; Kamberelis & Dimitriadis, 2013). Kamberelis and Dimitriadis (2013) suggested focus groups can provide three functions, pedagogical, political and empirical/enquiry. They suggested these functions can occur simultaneously but the extent to which they are visible is dependent upon the perspective of the researcher. My research aligns with a pedagogical agenda in transforming practice and thinking through the facilitation of dialogue using collaborative action research.

### **2.3.7 Analysis**

A number of qualitative approaches to analysis was explored such as Interpretative Phenomenological Analysis, Grounded Theory and Discourse Analysis; however I concluded that Thematic Analysis would be the most appropriate method available.

Thematic Analysis allows the construction of themes and patterns of meaning across a set of data; it is deemed a flexible approach that can be adopted across conceptual frameworks (Braun & Clarke, 2013). Thematic analysis can be carried out inductively or through a theoretical lens. An inductive approach aims to generate analysis from the data whereas in a theoretical approach analysis is guided by existing theory and concepts (Braun & Clarke, 2013).

The current research was to explore staff dialogue in relation to what might contribute to developing sustained shared thinking (SST) in a Forest School. Siraj-Blatchford et al. (2002, p. p9) defined SST as

'An episode in which two or more individuals "work together" in an intellectual way to solve a problem, clarify a concept, evaluate

activities, extend a narrative etc. Both parties must contribute to the thinking and it must develop and extend'.

Staff watched moments of what could be termed SST and engaged in dialogue about what they observed. The Dictaphone recordings of staff dialogue were analysed with SST as a guiding model. I constructed themes based on complete coding of the data set.

Braun and Clarke (2013) suggested a latent or semantic approach to coding can be adopted. A latent approach considers the underlying assumptions and ideas within the data, whereas a semantic approach is based on the surface level meaning of the data. However they also acknowledged that there is not a distinct separation between semantic and latent with some codes having elements of both. As a collaborative action research cycle was adopted and as I was interested in the staff's construction of SST a latent approach was deemed appropriate. Whilst the use of the model alongside collaborative action research could be viewed as contradictory SST was a construct adopted by the staff in the Nursery.

### **2.3.8 Sources**

This relates to what types of data sources I can access given the research focus. My underpinning conceptual frameworks and the method used will provide a view of staff perspectives of what might contribute to SST in their Forest School environment. It is acknowledged that the findings presented in the research will be my perceived understanding based on my interpretation and construction of the data.

### **2.3.9 Reflexivity**

The process of carrying out a collaborative research project provided both challenges and opportunities. The change in focus to SST led to feelings of uncertainty in regards to the direction of the research, and at times I was overwhelmed with the amount of data that had been generated. This was partly due to following an interest; as mentioned previously I noticed that staff engaged in dialogue about the use of video and I was interested in their construction of this. However due to the word limit constraints of this project I had to make the decision not to present these findings (see [Appendix A](#) for thematic map) and this might have offered another avenue of research, but one I did not pursue. Cook (2009, p. 4) argued that when carrying out action research both novice and experienced researchers can 'find themselves in a mess'. However she also argued that this 'mess' serves a purpose and can lead to a

new construction of knowledge. Personally I found using a collaborative action research design to be a positive experience. I perceived the staff to be enthusiastic about the process and they suggested their own ways to extend the research on beyond my involvement.

## **Chapter 3: An Exploration of What Contributes to Sustaining Adult-Child Interactions in an Early Years Forest School**

### **Abstract**

Pedagogy recognises how children learn and develop during their early years; it is not only about what is taught but how learning is facilitated through adult-child interactions. Following research into effective pedagogy in the early years, the concept of sustained shared thinking was developed. Subsequently sustained shared thinking has been recommended within UK early years education policies and is a familiar concept in the participating Nursery. This research project used a collaborative action research approach with early years staff during three of their Forest School sessions to explore: Using a collaborative inquiry, what does staff dialogue reveal in relation to what might contribute to developing sustained shared thinking in a Forest School?

Within the analysis the following themes were constructed: the role of the adult, conducive environment, active learners and positive relationships. The research findings were placed within the context of existing research into sustained shared thinking, alongside theories of learning, interaction and environmental affordances. Implications for Educational Psychologist's and future research are discussed.



## **3.1 Introduction**

### **3.1.1 Policy in Education**

Within government reports, policies and legislation there is a consensus that early years education is crucial (Callanan et al., 2017; Department for Education, 2017; Ofsted, 2015, 2016; Sylva et al., 2004; Tickell, 2011). The annual Ofsted (2016) report by Her Majesty's Chief Inspector of Education, Children's Services and Skills reported that good early years education is crucial to longer-term academic success. In this report it was also noted that this was particularly the case for children from low-income backgrounds.

Neaum (2016) argued that if a shared understanding of the importance of the early years exists this should be evident within policy and enacted in practice. Additionally, Neaum suggested a dichotomy exists between children's level of development and the focus within early years education. She argued that the early years curriculum is outcome driven, focusing on formal skills to prepare for the next stage of education. From this it could be interpreted that effective ways to support young children's development are needed.

### **3.1.2 Pedagogy and curriculum**

The concept of pedagogy in UK early years policy arises largely from the work of Siraj-Blatchford et al. (2002) who carried out research into effective early years pedagogy. Wall, Litjens, and Taguma's (2015) international comparative study into early childhood pedagogy, education and care for the Department of Education indicated that whilst pedagogy recognises how children learn and develop during their early years it is not only about what is taught but how learning is facilitated through adult-child interactions. Furthermore they refer to Siraj-Blatchford et al's (2002, p. 27) definition of pedagogy as a:

'set of instructional techniques and strategies which enable learning to take place and provide opportunities for the acquisition of knowledge, skills, attitudes and dispositions within a particular social and material context. It refers to the interactive process between teacher and learner and to the learning environment'

Siraj-Blatchford et al. (2002) based their definition on the work of Gage (1985) who argued that teaching should have a scientific basis. Gage suggested that teachers

apply their knowledge creatively to their understanding of an individual based upon their needs and strengths. Wall et al. (2015) suggested that pedagogy needs to be child-centred, developmentally appropriate and focused on play-based learning, whilst recognising a variety of pedagogical practices are adopted within the UK. In Siraj-Blatchford et al's (2002, p. 10) research it was argued that an effective pedagogy was one which combines instructive learning opportunities alongside child-initiated play. Whilst using the term instructive they suggested that this did not mean adults dominating learning but interacting with children in a way that would encourage and promote sustained-shared thinking (SST). Furthermore they noted that such interactions are not always observed in practice. However this is only based upon observations of adult-child interactions in the early years setting which participated in their research.

In the participating Nursery, a High Scope Curriculum is implemented (Hohmann et al., 2008). The pedagogical underpinnings of this approach were originally based on the work of Piaget (1969) and the notion of children moving through stages of development. As a result of ongoing developmental research the principles of High Scope reflect the work of Vygotsky (1980) and the idea that development occurs within socio-cultural settings where adults can scaffold children's learning. The High Scope Curriculum places an emphasis on learning through interactions (Hohmann et al., 2008) with adults as supporters of children as active learners. Hohmann et al. (2008) describe the High Scope Curriculum as a cognitive-developmental model, viewing learning as a process of developmental change as a result of these interactions. The term active participatory learning is used within the High Scope Curriculum; this is the concept that through:

'having direct and immediate experiences and deriving meaning from them through reflection - young children construct knowledge that helps them make sense of their world' (Hohmann et al., 2008, p. 5).

Within the High Scope Curriculum a strong emphasis is placed on the learning environment, with the outside being viewed as a setting for learning. Within the Nursery a Forest School approach is adopted alongside the High Scope curriculum (see 1.2.2 for further detail on the Forest School approach).

### **3.1.3 Sustained Shared Thinking**

SST was first identified through Siraj Blatchford et al's (2002) qualitative analysis of effective early years pedagogy. It appeared to comprise of questioning, telling, demonstrating and dialogue. Siraj-Blatchford et al. (2002, p. 9) suggested high cognitive outcomes were associated with SST and the following definition was developed:

'An episode in which two or more individuals “work together” in an intellectual way to solve a problem, clarify a concept, evaluate activities, extend a narrative etc. Both parties must contribute to the thinking and it must develop and extend'.

Siraj-Blatchford (2008) later suggested that SST could be viewed as a pedagogy in itself due to it being something adults consciously do to support and engage in children's learning. However, Siraj-Blatchford (2008) also suggested that SST contained curriculum content and it was the adults' role to co-construct the curriculum with the child. Siraj-Blatchford and Manni (2008, p. 15) refer to support provided to practitioners which outlines SST to mean:

- 'adults are aware of the children's interests and understandings and the adults and children work together to develop an idea or skill;
- in the most effective settings practitioners support and challenge children's thinking by getting involved in the thinking process with them;
- there are positive trusting relationships between adults and children;
- the adults show genuine interest, offer encouragement, clarify ideas and ask open questions which supports and extends children's thinking and helps them to make connections in learning'.

The concept of SST has been drawn on within UK early years education policies (Callanan et al., 2017; Department for Children Schools and Families, 2008; Moylett & Stewart, 2012), despite the concept deriving from one research project into effective pedagogy.

Purdon (2016) suggested that practitioners are not always clear about the concept of SST and how it looks in practice. She proposed the idea that SST incorporates a

number of different themes such as: thinking skills, language development, the role of the adult and child. Purdon (2016) used a mixed methods design to explore practitioners' perceptions of SST and suggested further research from practitioners in other nurseries was needed.

### ***3.1.4 Use of video in professional development***

As discussed in section 2.3.6, Van der Riet (2008) suggested visual representations can provide a shared reference point for discussion and can be less confrontational than asking direct questions. Van der Riet also suggested that visual methods have the potential to provide space for dialogue. Alongside this, research has suggested watching videos of practice has the potential to support and encourage reflective conversation amongst professionals (Fukkink, Trienekens, & Kramer, 2011; Gamoran Sherin & van Es, 2008; Geiger, Muir, & Lamb, 2016; Lefstein & Snell, 2013; Rosaen, Lundeberg, Cooper, Fritzen, & Terpstra, 2008).

Fukkink et al's (2011) meta-analysis found that video feedback supported the development of interaction skills of a range of professionals. They suggested that professionals viewing themselves on video are able to develop their verbal, non-verbal and paralingual aspects of communication. Rosaen et al. (2008) explored the way in which video might support teachers to reflect on their practice, compared to memory-based written reflection. They found that reflecting on video facilitated specific and detailed noticing, which they suggest offers opportunities for promoting teacher growth. They highlighted technology's ability to isolate specific clips for re-watching them, providing the teachers with opportunities to notice things they had originally missed. This supported the decision to use video within the current research as a tool to encourage dialogue and reflection between staff.

## **3.2 The Study**

This small scale qualitative study used a collaborative action research design (see section 2.3.6 for further information on this approach) with staff in an early years Forest School. The following research question was explored: Using a collaborative inquiry, what does staff dialogue reveal in relation to what might contribute to developing sustained shared thinking in a Forest School?

### 3.3 Method

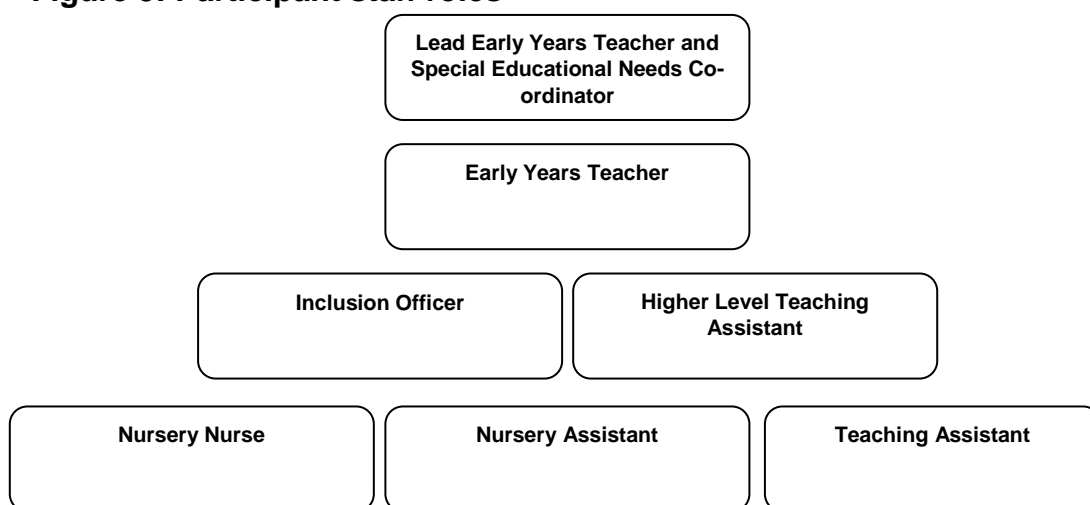
#### 3.3.1 Setting

The research took place in a Nursery in the North East of England. The Nursery follows a High Scope curriculum which has an emphasis on active participatory learning. The Nursery has an on-site Forest School where the research took place. The Forest School included the following areas: Bark Hill, Mud Kitchen, Bug Palace, Tunnels and Stepping stones (see [Appendix B](#) for photographs). Each area is set up to allow children to use and explore elements of the natural environment. Additional materials are provided in some of the areas; for example a water butt in the mud kitchen, and trowels on Bark Hill. Children are encouraged to use both the natural and man-made materials flexibly and creatively.

#### 3.3.2 Participants

Seven members of early years staff participated in the research, each with a different role in the Nursery (see Figure 5).

**Figure 5: Participant staff roles**

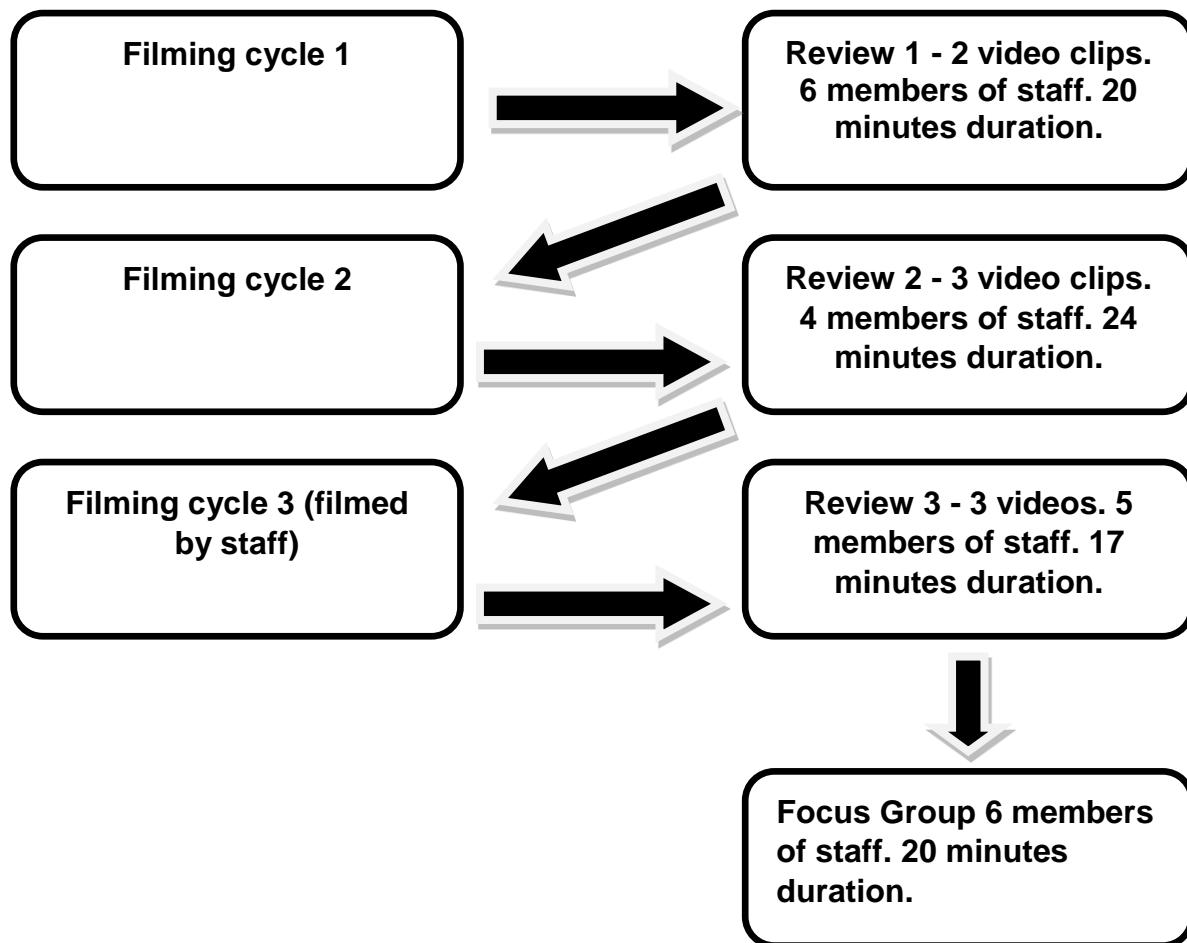


For each of the Forest School sessions 49 children aged 3 and 4 years old participated.

#### 3.3.3 Design

Mirroring the Nursery's active participatory learning ethos, a collaborative action research approach was adopted with the staff. A detailed justification for this approach can be found in 2.3.6. Three cycles of filming and review were carried out followed by a Focus Group (see Figure 6).

**Figure 6: Action Research Process**



For filming it was agreed I would act as an observer to the interactions between the staff and the children; in keeping with their usual Forest School sessions. However whilst I have tried to position myself as an insider-outsider researcher (Hellowell, 2006) it is acknowledged that my presence will have impacted on the interactions in Forest School.

Hellowell (2006), argued that researchers are neither completely insiders nor outsiders to their research and can move along a continuum throughout the research process. Milligan (2016, p. 241), suggested that an insider-outsider perspective can 'dissolve boundaries between the "researcher" and the "researched"'. I have referred to myself as an insider-outsider in the research process due to the steps taken to familiarise myself with the staff and the children prior to conducting the research. Therefore whilst I had an insider perspective in that I had an understanding and experience of the context , I was an outsider due to not being a member of staff and bringing knowledge, theory and my own perspective to the research.

I guided the first two filming cycles and review sessions. I selected short video clips of moments of what could be termed SST, and used the principles of attuned interaction and guidance (Kennedy, 2011) as a framework to encourage reflective dialogue (see [2.3.6](#) for further detail). During each review the clips were looked at several times to allow the staff to comment on their interactions with the children. Filming cycle 3 and review 3 were led by the staff using the same process. I offered to support the staff in selecting the video clips for review but the staff arranged between themselves who would record the footage and select the clips. One member of staff then led the final review session. Across the three cycles my contribution lessened as staff took the lead on the discussions. The length of the review sessions and Focus Group was flexible, dependent upon our dialogue.

## **Procedure**

**Table 10: Procedure**

April 2016 - December 2016

1. A Nursery Head Teacher expressed interest in research being carried out in their Nursery.
2. A meeting was held with the Head Teacher to discuss their needs and to negotiate the research.
3. An initial meeting was held with the staff in the Nursery to discuss ideas and to answer any questions.
4. Ethical approval was sought and granted by Newcastle University.
5. An information meeting was held with staff to discuss the research and to distribute information sheets and consent forms (see Appendix C)
6. Staff distributed information sheets and consent forms to parents (see Appendix D).
7. Written consent was obtained from all participants.
8. I was introduced to the children and observed and participated in the Forest School sessions.
9. Informally introduced to parents providing them with the opportunity to know who was working with their children and to answer any questions.
10. Filming cycles took place in the Forest School followed by review meetings recorded using a Dictaphone.
11. A focus group was held and recorded using a Dictaphone.
12. All video and voice recordings were stored on a secure computer.
13. The voice recordings were transcribed verbatim by an external transcription service registered with the Data Protection Act.

### **3.4 Data analysis**

In order to answer the question 'Using a collaborative inquiry: what does staff dialogue reveal in relation to what might contribute to developing sustained shared thinking in a Forest School?' the transcripts were analysed using the concept of SST to guide the thematic analysis. As previously mentioned, thematic analysis can be carried out inductively or through a theoretical lens. An inductive approach aims to generate analysis from the data whereas in a theoretical approach analysis is guided by existing theory and concepts (Braun & Clarke, 2013). In the current research staff watched moments of what could be termed SST and engaged in dialogue about what they observed. The Dictaphone recordings of staff dialogue were analysed with SST as a guiding model.

Given interest in the staff perspectives the data was fully coded using a latent approach Braun and Clarke (2013) (see appendix E for an extract of a coded transcript). A latent approach considers the underlying assumptions and ideas within the data, whereas the alternative semantic approach focuses on the surface level meaning of the data. Braun and Clarke (2013) acknowledged that there is not a distinct separation between semantic and latent with some codes having elements of both. I systematically went through the data set and highlighted anything that fit within existing understandings of SST along with highlighting data that potentially answered the research question. The process used to analyse the data is detailed in Table 11 following Braun and Clarke (2013, p. 202).



**Table 11: Stages of coding and analysis**

<b>Stage</b>	<b>Description</b>	<b>Process</b>
1	Transcription	With all recordings completed they were sent to an external transcription service to be transcribed. Once transcripts had been returned I checked them against the original recordings for accuracy. Several changes were made at this point, due to errors that had been made as a result of local dialect. Due to my active role in the research I was also able to understand particular words in relation to the videos the staff were commenting on.
2	Reading and familiarisation; taking note of items of potential interest	At this stage I already thought I was familiar with the data due to my role in the research and through checking the transcriptions for accuracy. However, at this point I tried to view each set of data from a fresh perspective and engage at a deeper level with the data. At this point I made notes of potential areas of interest and meaning.
3	Coding - complete; across entire dataset	The next stage was to begin coding across the whole data set. This involved systematically going through the data, highlighting and listing potential codes for each of the reviews and focus group for the research question. Care was taken to ensure each code was unique and at this stage some codes were merged with others.
4	Searching for themes	The codes were constructed into potential themes. I created visual maps by hand; this allowed a fluid and iterative process to take place. Early visual representations of themes and subthemes were created.
5	Reviewing themes (producing a map of the provisional themes and subthemes, and relationships between them - aka the 'thematic map')	The themes and subthemes were revisited and refined. Electronic thematic maps were created.
6	Defining and naming themes	At this stage the themes were reviewed to check for their coherence with the data and that the theme names captured the meaning of the data.
7	Writing - finalising analysis	The themes were presented in a logical and interconnected manner to demonstrate my interpretation and construction of the data.

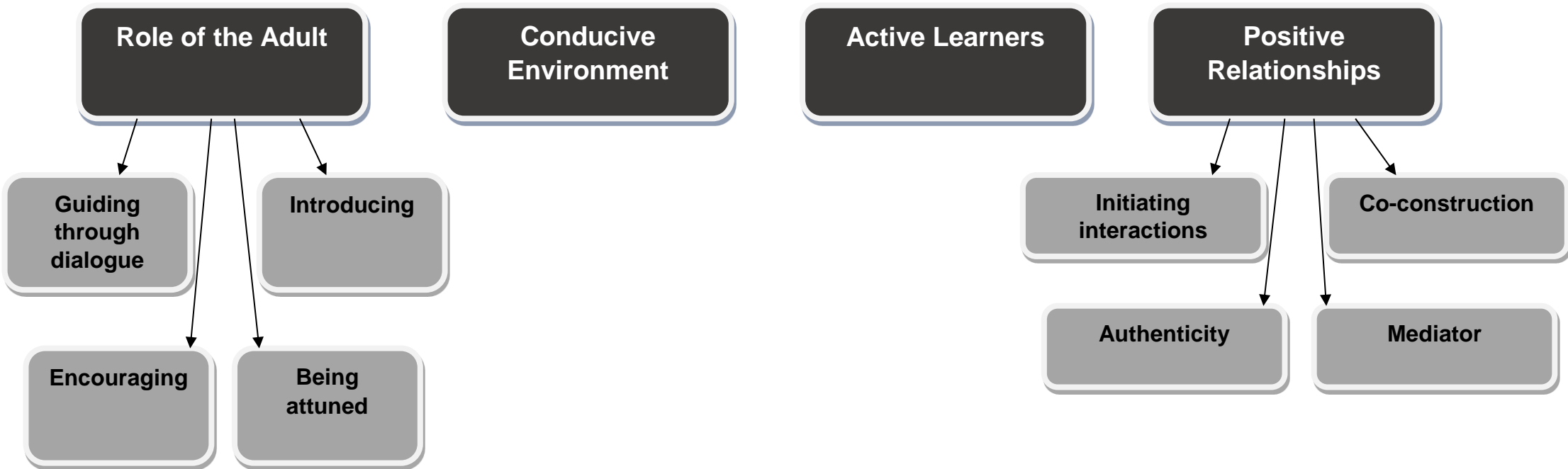
### **3.5 Findings**

Following these stages of coding and analysis, four themes were constructed in relation to the research question:

Using a collaborative inquiry, what does staff dialogue reveal in relation to what might contribute to developing sustained shared thinking in a Forest School?

A visual representation of the themes along with their subthemes is presented in Figure 6 below.

Figure 7: Thematic Map 1 (Dark grey = themes; Light grey = subthemes)



A description of each of these themes and the corresponding subthemes will be presented with direct quotes from the transcripts used to exemplify staff dialogue.

### **3.5.1 Theme 1: Role of the Adult**

This theme encapsulates the construction of the role of the adult during episodes of SST with the children. Four subthemes were constructed within this theme.

#### **1a. Guiding through dialogue**

This subtheme explores how interactions with the children were guided through dialogue. One way this occurred was staff guiding with questioning rather than providing children with the answers:

*"It's just opening questioning...loads of opening questions"*

and

*"...open ended questions that develops the children's sort of curiosity and engagement".*

Children were also provided with choices and given suggestions from the adults:

*"is it smaller or bigger?"*

and

*"...well would that one dig with the compost?".*

It was important that children were also given the opportunity to explore and make their own suggestions:

*"...you didn't correct them for anything"*

*"And you didn't say well actually it's...".*

Staff recognised that they provided clarification and direction if they thought children needed it:

*"saying that it worked but sort of reiterating what it is aiming to do if it did work"*

and

*"And you were directing him 'cos obviously he was a bit lost".*

Acknowledging possibilities with the children was also recognised as important when sustaining interactions with the children:

*"...and acknowledging...'cos you know it's not a butterfly...but you still acknowledge that that's possible"*

### **1b. Encouraging**

Staff offered encouragement to children during periods of SST. One way this was done was through staff getting children involved in the activities within Forest School:  
*"Do you want to have a look as well?"*

Alongside sustained adult-child interactions, the staff also encouraged interactions between the children by drawing attention to peers:

*"...that's probably good that [adult] done that, like said what the other children are saying, 'cos she's very much like goes for an adult rather than talks to other children".*

In addition adults encouraged children to engage in problem solving and encouraged thinking:

*"...a key thing is you give him loads of time...rather than say answering for him...you know as adults we're quite quick to say, look it's smaller, isn't it?"*

and

*"You were actually saying out loud what it was you were thinking and that got them thinking as well".*

The staff were able to encourage and develop the children's thinking without directing the children to the 'correct answer'.

### **1c. Being attuned**

In episodes of SST staff identified the different ways they were attuned to the children. They spoke about the importance of knowing the children, which in turn allowed them to build on their prior knowledge:

*"And building on prior knowledge because you knew that they would know what was in there and knew what the children were aware of"*

and

*"...[child] language is not going so well, so I always repeat back to him..."*

This familiarity with the children also led a member of staff to comment, *"...don't even realise what he is saying, but I think I would have at the time"*. Watching the video back the member of staff could not understand what the child was trying to communicate, this highlighted the importance of being in the moment with the child and having shared understanding within that context.

Staff commented on ways in which they were able to interact with more than one child at a time to extend the interaction:

*"you were kind of able to manage and interact with both of them whilst both being included".*

Alongside dialogue with the children, staff placed value on the use of their body language and gesture:

*"It wasn't just using the language, you were also kind of showing visually what it was..."*

There were instances where staff spoke about being physically at the children's height level,

*"I like how you're on their level and you look interested in what they're doing, and then everyone's coming over".*

Furthermore, providing children with space for exploration was captured in this comment:

*"a key thing is you give him loads of time...rather than say answering for him...you know as adults we're quite quick to say, look it's smaller, isn't it?".*

#### **1d. Introducing**

Staff spoke about a number of ways in which they introduced something to the children during periods of SST. In particular, language relevant to the curriculum was mentioned:

*"Mathematical language...it's giving a question, is it smaller or bigger? Even though you've already established you knows it's smaller"*

*and*

*"Getting the mathematical language in with full and empty"*

Staff also spoke about how they introduced new language to develop children's understanding and suggested ways in which this was achieved:

*"She's doing the sounds, isn't she like the phonic sounds drip, drip, drip"*

*and*

*"But then you've modelled it"*

Staff also provided commentaries to the children during their interactions:

*"she's telling the other children what the other children are saying."*

To summarise, my data analysis constructed the Role of the Adult as contributing to SST. Staff dialogue highlighted that staff noticed different ways in which they could have an influential role in the learning process with the children in the Forest School.

### **3.5.2 Theme 2: Conducive environment**

The Forest School was viewed as a conducive learning environment which supported the development of SST. This is encapsulated in this quote:

*"I just think that the environment lends itself, so much curiosity really, isn't it that both of you had loads of open ended questions that develops the children's sort of curiosity and engagement".*

Staff also spoke about the children demonstrating a greater level of focus in Forest School:

*"I know I find that when we're in Forest School, especially the morning, that they're a lot more focused than indoor in the nursery"*

This led to another member of staff commenting,

*"engagement for long periods of time...they seem to stay longer"*

and

*"a bit more sustained".*

It was suggested that this could be due to less transition occurring in the outdoor environment; allowing the children to be more sustained in their interactions.

When viewing another video clip, the staff discussed one boy's curiosity whilst playing on Bark Hill:

*A: "And that's like his curiosity...if you think about how far it will go down"*

*B: "I was quite bothered myself. I was thinking how far does it go down, I didn't know what it was"*

In this instance the environment led to the interaction being sustained through the curiosity it provided. Both the staff and the child were focused on the same element of the environment and worked together to discover what was in the ground.

### **3.5.3 Theme 3: Active learners**

When watching the video clips staff commented on the active role the children had in their learning which might have contributed to SST. They discussed children imitating staff in their interactions:

A: *"Then it's quite quiet, but I could hear one of the boys I think at the front, and they said drip drip"*

B: *"They're copying her".*

The staff also commented on the children's having a deep level of engagement:

A: *"in ours he was so focused on that...on that little fire and he got right into it, like keeping it warm"*

B: *"he was so interested in it and absorbed in it"*

The children were observed to build on earlier play and knowledge to extend and sustain the interaction as demonstrated in the discussion below:

A: *"That might have been something to do...it was around Guy Fawkes"*

B: *"Yeah it was"*

A: *"...he might have seen the guy on a bonfire or something"*

B: *"Well the fire come from because [child] before that was doing fireworks, was using the bark to [set] fireworks off...so that could have been off that...Yeah, cos then he says about how it's really hot, and then I said how do I put it out"*

In watching their interactions on video staff were able to consider why the children were demonstrating a deep level of engagement with the environment, and the impact previous knowledge and experience might be contributing to the sustained interaction. The staff suggested that the children offered "elaborate thinking" in their interactions with staff and demonstrated their understanding through their actions. This is exemplified in the exchange below between several members of staff:

A: *"I think by knocking on it as well"*

B: *"Giving like a sound back"*

C: *"So it kind of shows that he's..."*

B: *"Registering what she's saying"*

Staff

#### **3.5.4 Theme 4: Positive relationships**

Establishing positive relationships was constructed as an important contributor to SST. This theme consists of four subthemes.

##### ***Initiating interactions***

Within the data there were several references to interactions being initiated in the Forest School.



Staff commented on moments where the children were seeking adult interaction:

*A: "...he had his magnifying glass in his hand and he came over with it"*

*B: "And he was seeking adults before wasn't he? Because he was coming to you...wanting that support which was quite interesting".*

One-to-one adult child interactions often led to more children joining as this indicates:

*"...so we started off with [child] and [child] there, and then watching it and [child] and [child] comes to join, and somebody else comes to join, just from doing that small- that very small interaction".*

This also highlights how in watching the video, staff noticed more children would join in following the initial interaction.

Through staff dialogue it appeared there was a number of ways in which the staff initiated interactions with the children. When watching one video clip a member of staff commented on the way in which the adults created curiosity:

*"I think you're trying to create that curiosity first, look at the eggs, and then you start to say what do you think they are?".*

Staff also spoke about joining in with the children's imaginative play:

*"Yeah, for the baddies and then I said, oh you've got the baddy".*

In constructing this subtheme it appeared that both staff and children need to create opportunities for interaction. Adults and children being able to find creative ways of initiating interactions could be a contributing factor to developing episodes of SST.

### ***Authenticity***

When constructing the theme on positive relationships the authenticity of the interaction between the adults and children was highlighted.

Staff showed genuine interest in what the children were doing such as in the interaction previously described at Bark Hill in the conducive learning

environment theme. Following a different video clip this dialogue took place between staff:

*A: "I was interested myself. I was totally like well if it's not ice, what on earth is it, what creature has it come from?"*

*B: "...it was obviously off some sort of creature, but we don't know what it was"*

*C: "Have to have a look tomorrow and see if it's still there".*

This exchange also demonstrated the staff's ability to recognise their own lack of knowledge during their interaction with the children. This led to problem solving between the adult and children as they worked together to discuss what the substance in the environment was.

This links to the next subtheme: co-construction.

### **Co-construction**

The staff identified times when they worked together with the children to experiment, problem solve or share ideas:

*"We couldn't work out what it was"*

*"I thought it was ice and when I picked it up was like, oh jelly"*

*"And by doing that problem solving, it's encouraging them to do it in the future, isn't it?"*

### **Mediator**

There were occasions when the need for staff to act as a mediator to encourage positive relationships was discussed:

*"Then that could have started something off 'cos they were - looked like they were going to have an argument. He was like pushing her away, so you kind of saved that".*

Whilst moments of conflict could have been perceived as a barrier to SST, the staff focused on adults supporting the children in conflict resolution which led them to test out ideas and come to a shared understanding. Staff suggested adult mediation supported the children in developing their problem solving skills through modelling.

## **3.6 Discussion**

The current study aimed to explore ' Using a collaborative inquiry, what does staff dialogue reveal in relation to what might contribute to developing sustained shared thinking in a Forest School?' This next section will discuss the research findings in the context of existing literature on SST and further relevant literature to enhance understanding of the themes.

The 'Role of the Adult' theme was considered a contributing factor to SST. Mirroring previous writing on SST (Purdon, 2016; Siraj-Blatchford et al., 2002; Siraj-Blatchford & Manni, 2008) staff spoke of ways in which they could sustain shared thinking

through questioning, providing choices, offering suggestions, offering clarification, providing direction and acknowledging possibilities. In the current study this was conceptualised as adults guiding the children through dialogue as opposed to being instructive. I believed that the staff were finding ways to make the interaction a shared experience, with staff encouraging problem solving and thinking.

As previously suggested by Purdon (2016) the work of Vygotsky (1980) and the concept of the Zone of Proximal Development (ZPD) links with SST. From a social learning theory perspective, children develop their thinking and reasoning skills through social interactions with others. Vygotsky suggested there is a ZPD in which learning takes place, lying between the child's actual performance as determined by independent problem solving and their potential level under adult guidance or from more capable peers. Wood, Bruner, and Ross (1976, p. 90) suggested that adults can provide scaffolding to enable a child to complete a task or solve a problem they would have been unable to achieve independently. Scaffolding requires adults to 'control' parts of the tasks to allow the child to complete the task successfully. Wood et al suggested scaffolding can lead to development of competency at a quicker rate than they would have unassisted. Siraj-Blatchford and Sylva (2004) suggested that it is important for adults to have an understanding of children's social, cultural and cognitive abilities in order to build on children's knowledge and the knowledge they are capable of gaining. Purdon (2016) argued that adults play a key role in knowing the child and using SST to support them in developing their knowledge and understanding. It is worth noting that within the current study staff also acknowledged the children as 'active learners', noticing when they were building on earlier play in order to extend and sustain their interactions.

Within the current study, knowing the children and building on prior knowledge was encapsulated as 'being attuned' to the children. When considering the ways in which adults become attuned to the children this could be understood through the concept of interactions. This also links with another theme within the current research of 'Positive relationships'. Within this theme staff spoke about interactions between adult and child and the authenticity of their interactions. A possible theory to understand the apparent importance of these interactions could be Trevarthen and Aitken's (2001) notion of intersubjectivity. This suggests that adult and child develop and share a reciprocal understanding or experience of people and objects through their interactions. The interactions involve each individual paying attention to and

anticipating the other's reaction. Trevarthen's theory of intersubjectivity is closely linked to the Principles of Attunement (Kennedy, 2011), therefore it could be argued that staff might have noticed these more due to the review process being guided by these principles. However, staff did not merely list the principles; they provided detail about what they had seen in the adult-child interactions with the staff building on each other's dialogue during the review sessions.

Fundamental to the concept of intersubjectivity is the importance that is placed on both people in the interaction (Trevarthen, 2009). Staff in the current study spoke about the different ways in which both adult and child found different ways to initiate interactions and to work together to problem solve or share ideas within periods of SST. Rogoff (1990) also emphasised sharing experiences and the importance of meanings created through interactions. Additionally Rogoff (2003) held the view that children learned through sociocultural activities within their communities.

In the current study staff dialogue suggested that a 'Conducive environment' might contribute to SST and to my knowledge this has not been included in previous definitions of SST. Staff spoke about the Forest School environment fostering curiosity and engagement. The opportunities the environment provides were described by Gibson (1979) as 'affordances'. Whilst a complex concept, this can be distilled to the notion that the differing topography of the landscape can offer and provide something to children. In a Norwegian study, Fjørtoft and Sageie (2000) found that a natural play environment (within a small forest) offered a diverse landscape, which allowed the children to use the environment in a multitude of ways. Following this research, Fjørtoft (2001) described different types of play that could occur as a result of the natural environment the children were in. She suggested that shrubbery provided opportunities for social and imaginative play, as children were able to construct dens and play 'house'. Open woodland also gave children the opportunity to run and explore the natural environment freely. In Purdon (2016, p. 8) staff were asked about the best contexts for developing SST, with three focus groups suggesting that 'outside, learning from nature' was an effective context. Other groups within the study made other suggestions such as somewhere quiet, somewhere the children felt comfortable and places where staff were available. However SST and the outdoor environment could be an area which warrants further exploration.

### **3.7 Implications for Educational Psychologist's practice and future research**

This study was developed due to the needs and context of a Nursery in the North-East of England. It is recognised that the findings are reflective of my perceived understanding of the staff dialogue during the small scale collaborative action research, though it might provide the foundation for further thinking about the role of Educational Psychologists and research.

The Scottish Executive (2002) review suggested that Educational Psychologists work across three levels; with the individual child and family, with the school or alternative education provision and at a local authority level. Across these three levels Educational Psychologists can carry out consultation, assessment, intervention, training and research. Farrell et al. (2006) suggested that in working across these areas Educational Psychologists can support and contribute to positive outcomes for children. Furthermore during a review of Educational Psychology training, the National College for Teaching and Leadership (2016) recognised the diverse environments Educational Psychologists are working within and their contribution at a systemic and organisational level.

The current research study demonstrates an opportunity to develop small scale research projects to work on issues that are significant and of value to the staff and children in the specific context. Using a collaborative action research approach allowed the staff to be involved in the research process, leading to them developing their own next steps for future research. Through dialogue during the action research cycles staff indicated that the process had offered them new perspectives of themselves, the children and the environment they were working in. The staff suggested using the same research design to explore their interactions in the inside environment to see whether any changes needed to be made to support the children's learning and development. As previously mentioned it was not within the scope of this report to explore the staff's construction of the use of video, therefore this could be an appropriate avenue for future research.

Furthermore, the current research might highlight a role for Educational Psychologists in supporting Early Years practice. The findings could contribute to a framework to engage in dialogue with staff about children's social and cognitive development.

### **3.8 Limitations**

Whilst it could be considered a limitation that the research design drew on positive psychology (Seligman & Csikszentmihalyi, 2000) and did not consider any challenges to SST developing, this might have contributed the high level of engagement and enthusiasm in the research as the staff shared that they did not feel threatened. Further consideration could have been given to staff's understanding and use of the concept of SST. An extra cycle could have been used within the action research process to engage in dialogue with staff, to explore their construction of SST with the idea of developing a shared understanding at the start of the research project.

### **3.9 Conclusion**

Due to SST's prominence in Early Years policy and pedagogy this was deemed to be an appropriate area to research. This also tied in with the Nursery's interest of finding effective ways of supporting children's learning and development in the outdoor environment.

This collaborative action research project followed a pedagogical agenda, encouraging transformation of practice and thinking through dialogue. It aimed to do this through the use of video as a tool for staff to reflect on moments of SST and stimulate dialogue between them. Findings suggested that the role of the adult, a conducive learning environment, children as active learners and positive relationships all contributed to the development of SST within the Forest School environment. The research findings support and build upon existing understanding of SST and also placed greater emphasis on children as active learners and highlighted the importance of a conducive learning environment. Findings were placed within the context of existing research into SST alongside theories of learning, interaction and environmental affordances. Using a collaborative action research design including the use of video demonstrates an effective way for Educational Psychologists to work with settings and schools and can provide a framework for staff development through supporting collaborative idea generation, which in turn can enable practice development independent of the research project.

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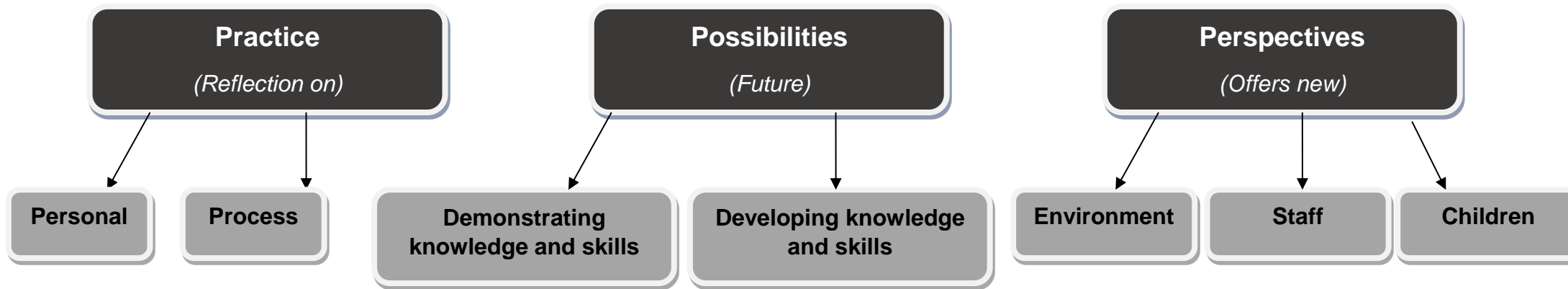
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## Appendices

### Appendix A - Thematic map

Thematic map: Dark grey themes, light grey subthemes



## Appendix B -Forest School

### Bug Palace



### Mud Kitchen



## Tunnels



## **Appendix C - Staff Information Sheet and Consent Form**

### **Information Sheet**

Dear staff team member

I am a Trainee Educational Psychologist with Newcastle University, working in South Tyneside Educational Psychology Service. I am currently conducting research to explore how staff in an early years setting can support children's mathematical development in an outdoor learning environment. I hope to work with staff to reflect on their practice and build on their strengths.

Please read the following information, and consider whether you would like to take part in this research.

#### **What does the research involve?**

The research will involve filming staff working with children in the Forest School. This will be followed by further cycles of video filming and dialogue with staff. You will then have the opportunity to put your ideas into practice. This will be repeated a number of times. During any meetings we have, the conversations will be recorded using a Dictaphone and later transcribed for data analysis.

At a later date I will revisit the nursery to provide feedback about the findings of my research. The findings will be given to parents/carers in a letter. You will be given my contact details and invited to discuss with me any questions or concerns you may have.

#### **What will happen to the data collected?**

Findings from the research project will be shared with the nursery and all research participants. It may also be shared with other interested parties, for example Educational Psychologists, other nurseries or schools or South Tyneside Council employees.

The video footage collected will be viewed by me, participants involved in the research and my university supervisor. Names will not be included on transcripts made from recordings of discussions and no identifiable information will be included in the research paper. Transcripts and recordings will be shared only with my university, and those employed to transcribe the data. The video and audio recording will be stored securely.

Any personal information (i.e. from consent forms or information from the discussions) will be kept securely and either locked away or password protected. Recorded data and transcripts will be held in accordance with university guidelines and destroyed after 10 years upon completion of the research.

#### **Do I have to take part?**

Participation in the research is entirely voluntary and you can withdraw without having to give a reason. It should be noted that you are only able to withdraw prior to filming. You are able to withdraw from the discussion at any point.

If you decide to withdraw from the research please either let Mrs Judith Reay, Head Teacher know or contact me on the details below.

**If I require further information who should I contact?**

For more information please contact me on 0191 4246030 or at J.Moody2@newcastle.ac.uk. My work is being supervised by Dr Richard Parker, Educational Psychologist and Tutor at Newcastle University. If you have any questions or concerns about the project please contact him on richard.parker@ncl.ac.uk or 0191 2083471.

If you are happy to be involved with this research please complete the attached consent form and return it to Mrs Judith Reay.

Many Thanks,

Jolie Moody

Trainee Educational Psychologist.



## STAFF CONSENT FORM

Please read the following statements and place a tick in each box if you agree with the statement.

I have read and understood the information sheet.

I am happy to participate in all aspects of the research.

I understand that I do not have to take part in the research and that I am free to drop out without giving a reason. I understand that I am only able to withdraw

before the filming has started but can withdraw from the discussion at any point.

**Name:**

**Signed:** \_\_\_\_\_

**Date:** \_\_\_\_\_

*All confidential information will be securely stored, and destroyed after 10 years upon of completion of the research.*

## **Appendix D - Parent Information Sheet and Consent form**

Information sheet

Dear parent/carer,

I am a Trainee Educational Psychologist with Newcastle University, working in South Tyneside Educational Psychology Service. I am currently carrying out research exploring how staff in an early years setting can support children's mathematical development in an outdoor learning environment.

Please read the following information, and think about whether you would like your child to take part in this research.

### **What does the research involve?**

I plan to film staff working with children in the Forest School and will use the video footage to discuss with staff how they can develop children's learning.

### **What will happen to the data collected?**

The findings will then be shared with the nursery. I will share the findings in a letter to parents. You will be given my contact details and given the opportunity to discuss with me any questions you may have about the findings.

The findings may also be shared with other interested parties, for example Educational Psychologists, other nurseries or schools or South Tyneside Council employees.

The video footage will be viewed by me, the staff in the nursery and my university supervisors. Names will not be included on any written documents and no identifiable information will be included in the research paper. Any written information and recordings will be shared only with my university, and those employed to look at the data.

Any personal information (i.e. from consent forms or information from the discussions) will be kept securely and either locked away or password protected. Recorded data and written information will be held in accordance with university guidelines and destroyed after 10 years upon completion of the research.

### **Does my child have to take part?**

Taking part is entirely voluntary. You will be told the dates of filming and you can withdraw your child from the filming at any point prior to filming. It will not be possible to withdraw once the filming has begun. You need not provide a reason for withdrawing your child from filming. If a child does not want to appear on the film on the days when I visit the nursery I will not film him/her.

If you decide to withdraw your child please either let Mrs Judith Reay, Head Teacher know or contact me on the details below.

### **If I require further information who should I contact?**

For more information please contact me on 0191 4246030 or at J.Moody2@newcastle.ac.uk. My work is being supervised by Dr Richard Parker, Educational Psychologist and Tutor at Newcastle University. If you have any questions or concerns about the project please contact him on richard.parker@ncl.ac.uk or 0191 2083471.

If you are happy for your child to be involved with this research please complete the attached consent form and return it to Mrs Judith Reay.

Many Thanks,

Jolie Moody

Trainee Educational Psychologist.



## PARENT CONSENT FORM

Please read the following statements and place a tick in each box if you agree with the statement.

I have read and understood the information sheet.

I understand that there is a possibility my child will be filmed and I am happy for this to happen

I understand that my child does not have to take part in the research and that he/she is

free to drop out at any point prior to filming.

**Name of child (please print):**

**Signed:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Relationship to child:** \_\_\_\_\_

\_\_\_\_\_

**Phone number:**

**Address:**

*All confidential information will be securely stored, and destroyed after 10 years upon of completion of the research.*

## Appendix E - Coded Transcript

PRIVATE AND CONFIDENTIAL

- 1 Respondent I can't remember.
- 2 Respondent Grace might have heard what was going on and just...
- 3 Respondent She just kind of [cross talk 14:29]. *Other Children joining*
- 4 Respondent ...I want- I want see that and went over.  
Video clip.
- 5 Respondent Do you want to have a look as well, so you obviously acknowledged what was  
6 happening, and you were bringing her over. So it was like...  
Video clip. *Encouraging involvement*
- 7 Respondent I like that how you know they're snail eggs...
- 8 Respondent Oh no, I didn't know. I was generally quite confused of what they were. So I  
9 just thought well I'll go with the flow then. *Environment encourages/creates Adult recognizing curiosity own lack of knowledge*
- 10 Respondent I thought you were going over and saying I don't know what this is. *Joint exploration between children and adult.*
- 11 Respondent No, I really didn't know.
- 12 Respondent Oh right [laughter].
- 13 Respondent Well if it's the same log I was at I had lifted that log earlier and there was a s- a  
14 slug there.
- 15 Respondent Right, snails or slugs [cross talk 15:22].
- 16 Respondent No, I was like I'll let the children decide. *Opening up the discussion*
- 17 Respondent Well it's quite nice that you opened it up anyway.
- 18 Respondent And you were asking her what she thought.
- 19 Respondent Yeah, and acknowledging no mat- cos you know it's not a butterfly. It's not  
20 gonna- but you still acknowledge that that's possible.
- 21 Respondent Yeah. *Acknowledging possibilities*
- 22 Respondent [Inaudible 15:38].
- 23 Interviewer And even just the body language between both of you there, both turned

- 1.8.2 Introducing something to child
- 1.8.4 Not giving the answer
- 1.8.6 Creating curiosity
- 1.8.7 Building on reaction
- 1.8.11 <sup>Children initiating</sup> Interactions between children
- 1.8.13-15 Resolving conflict Adult as a Working together Mediator
- 1.8.16 Engaged/absorbed in learning
- 1.9.2 Other children joining
- 1.9.5 Encouraging involvement
- 1.9.8-9 Adult recognizing own lack of knowledge  
Joint exploration between children & adult  
Environment encourages/creates curiosity.
- 1.9.16-17 Opening up the discussion
- 1.9.20 Acknowledging possibilities
- 1.10.3, 9, 11 Child initiating response from peer
- 1.10.5 Environment encourages curiosity
- 1.10.6-7 Open questioning develops curiosity and engagement
- 1.10.8-9 Child seeking adult interaction
- 1.10.17 Shared attention with adult/children
- 1.11.12 Children working/playing together  
15, 16 ~~with~~ <sup>with</sup> adult mediation  
17
- 1.11.18 Children appear focused
- 1.11.22-23 In a Forest School more focused than indoors
- 1.11.26-28 Engaged for longer in one area
- 1.12.1 Sustained in the outdoor environment
- 1.12.3 Less transition outdoors
- 1.12.3 Appropriate clothing allows adults to get closer to the children's level.