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**Power, agency and diversity in pre-school children's multimodal  
performance repertoires:  
A critical exploration of children's social interaction strategies in a  
group setting.**

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*Dedicated to all early years practitioners, wherever you are, whatever your sector.*

*Thank you for your dedication to the children and their families.*

*The days are long but the years are short.*

*The days last forever, covered in flour, food and unmentionables. Paid for in smiles and magic moments of awe and wonder.*

*You inspire me and millions of children.*

*You are the giant's shoulders.*

*I see you.*

## Abstract

This thesis presents a case-study of four children within a pre-school setting, based in an area of high disadvantage in the north of England. The study explores the nature of children's social interaction strategies alongside peers and adults via a quasi-naturalistic case study, with ethnographic influence.

Children's interactions were observed and recorded using audio-visual methods, capturing interactions between children and adults within a mixed-aged group. The study spanned six half terms, over two academic years, to create the opportunity to observe as the cohort of older children left for school. Adopting a sociocultural position with an interpretivist perspective, a wide and broad view of communication was adopted, using a holistic multimodal interpretation, to gather cultural and contextual data around social interactions. Considering children as participants in a group dynamic, the theoretical lens of Legitimate Peripheral Participation (LPP) from Situated Learning Theory (Lave & Wenger, 1991) was adopted.

The findings suggest that children adopt multimodal performance repertoires that change over time to meet the demands of the audience, notably so between peers and adults. Children engaged in speech as their main strategy with adults, whilst with their peers adopted a much broader selection of modes in their performance repertoires. The findings extend the notion of LPP beyond a defined journey from newcomer to expert participant, towards a complex and dynamic expansion of participation through which children add to their repertoires and use their power and agency to influence their varying position between interactions.

This study recommends that policymakers and practitioners acknowledge, value and reflect diversity in children's communication strategies to recognise and embrace children's multimodal performance repertoires when considering, assessing and supporting emerging social interaction strategies.

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### Vignettes

#### **Dan**

*Carboard Tube Arms (0:07:23-0:09:32)*

*Group Time (0:24:01-0:35:06)*

*Parallel Reading (0:40:34 – 0:51:37)*

*Puppets (1:14:46 – 1:15:03)*

*Wincey Spiders (1:29:45-1:41:11)*

*Chariot (1:51:28 – 1:56:23)*

*Speaking with Paint (2:19:18 – 2:21:24)*

*“Next customer please” (2:22:46 – 2:30:56)*

*The Squid and the Keyboard (2:36:31 – 2:36:50)*

*A Line of Animals (2:38:43 – 2:40:04)*

*D Got Pushed (2:45:15 – 2:47:58)*

#### **Leo**

*Lego table (0:00:09 – 0:03:40)*

*How many people does it take to remove your shoes? (0:06:29 – 0:15:09)*

*A handful of Sparkles (0:24:24 - 0:26:01)*

*Magnifying Clatter (1:04:52 – 1:05:54)*

*A Harmonica Chat (1:10:55 – 1:13:27)*

*White Hat (1:20:03 – 1:20:26)*

*Look Over Your Shoulder (1:20:27 – 1:20:45)*

*Knocking Bottles Off (1:20:46 – 1:21:01)*

*Look What I Found (1:31:13 – 1:31:29)*

#### **Ben**

*Come and Play Dinosaurs (0:09:03 – 0:11:23)*

*Waste Pipe Gun (0:18:00 – 0:19:27)*

*Convincing Death (0:27:11 – 0:29:05)*

*Look at my Finger (0:41:37 - 0:44:07)*

*I want a go (0:44:08 - 0:45:40)*

*Chuckling Tinsel (1:08:37 – 1:10:10)*

*Tinsel Spiders (1:10:11 – 1:11:56)*

*Pipe Guns Again (1:13:51 – 1:15:09)*

*Tidying up for 100 (1:27:37 – 1:29:59)*

*This is how we make ice-cream (1:33:14 – 1:34:47)*

*I’m the biggest (1:36:46 – 1:37:58)*

#### **Alice**

*Under the Car (0:07:50 – 0:08:10)*

*I'm in the car (0:09:25 – 0:10:37)*  
*The Precious Pot of Sand (0:21:39 – 0:25:34)*  
*Carwash Cones 0:31:09 – 0:32:14*  
*With and Without Adults (0:51:35 – 0:52:17) Part 1 (without adults)*  
*With and Without Adults (0:52:18 – 0:53:15) Part 2 (with adults)*  
*Wrapping Instructions (1:03:01 – 1:06:03)*  
*Nativity Songs (1:06:04 – 1:10:28)*  
*I'm Gonna Draw (1:10:29 – 1:11:40)*  
*Don't Run With Scissors (1:27:17 – 1:28:16)*  
*Get off the road! Part 3 (1:33:26 – 1:34:28)*  
*I'm the boss of the jigsaw (1:41:09 – 1:43:32)*  
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## List of Abbreviations

DfE	– Department for Education
DfEE	– Department for Education and Employment
DfES	– Department for Education and Skills
DTI	– Department for Trade and Industry
DWP	– Department for Work and Pensions
ECE	– Early Childhood Education
EPPE	– The Effective Provision of Pre-school Education
HMT	– Her Majesty’s Treasury
LPP	– Legitimate Peripheral Participation
MA	– Mixed-Age
MHCLG	– Ministry of Housing, Communities & Local Government
OECD	– Organisation for Economic Cooperation and Development
Ofsted	– Office for Standard in Education
PISA	– Programme for International Student Assessment
QCA	– Qualifications and Curriculum Authority
QR Code	– Quick Response Code
REPEY	– Researching Effective Pedagogy in the Early Years
SES	– Socio-economic status
SLT	– Situated Learning Theory
USA	– United States of America

## Chapter One - Introduction

### Overview

I am a practitioner in early childhood education (ECE). I work across two nursery sites in north east England; one site based in a middle-class, university City and the other in a Children's Centre, sited right in the core of a local authority housing estate, in one of the most deprived areas of the country.

The juxtaposition of working across the two settings directed my professional and academic interest in 'disadvantaged' children and what this means in ECE practice. In this thesis, I challenge the term disadvantage in the political grand narrative, as an idiom frequently applied interchangeably with 'poverty'. The term 'disadvantage' is used throughout educational policy and supportive documentation to describe children and families as a homogenized group, indicating low expectations and development delay. Some of these documents are explored in chapter two (for example the EYFS (2017)). In the context of childhood, the use of the term disadvantage masks the diversity of children and families' lived experiences. The concept of a grand narrative veiling the diversity of its population is reflected in Archer's (2010) sociological work, which developed the notion of 'agency of the weak' (p167) as an alternative view of the narrative of groups of people who are politically positioned as ineffectual, due to limited resources. As a definition of disadvantage, the Oxford Languages dictionary presents '(of a person or area) in unfavourable circumstances, especially with regard to financial or social opportunities'. This definition is situated in a socio-economic context, as being unfavourable in comparison to others. This notion becomes problematic when applied to children and related to developmental delays, gaps in learning and interventions. The complexities of understanding therefore who is disadvantaged are explored in the section 'Poverty or Disadvantage? - An Interchangeable Term'.

Chapter two is intended as a provocation to disturb the narrative, to problematise the political discourse around disadvantage and to begin to reveal a heterogeneous view of children. Diversity and heterogeneity amongst children is viewed through ways that children interact socially. What is presented is a reconceptualized image of children in ECE unveiling the diverse

strategies that children adopt when interacting. Socio-political structures, such as class, can marginalise and oppress some children and their families. The suggestion here is that the term 'disadvantage', which is drawn from the political narrative, reflected in the early years curriculum as well as the every-day discourse, does marginalise children. Despite the influence of the political narrative in fuelling such a divide within education, MacNaughton (2005) suggests that ECE is in a position to transform inequitable relations. Building on this work, Chapter two starts to problematise 'disadvantage' as a socio-political grand narrative, which has arguably driven contemporary ECE practice into the deficit discourse. This chapter intends to explore the nature of education policy and its influence in constructing problematic, homogenous learning outcomes against which all children are measured.

In part one of the EdD, I have focused my work on disadvantage and the implications of this, for children and families, with a mind to informing and developing practice. Previous work has driven me to strive to understand the social aspects of ECE for children and to explore the nature of culture, both at home and in the setting, to understand its influence in the reported education gap.

The notion of an education gap is a complex, political, deficit discourse, positioning 'disadvantaged' children within a failure narrative, demanding and increasing focus and investment on disadvantaged children and commanding a measured return on that investment (Simpson et al, 2015). This political ideology places the responsibility for that measure and the accountability for addressing the education gap in the hands of educators, despite the problematic nature of the narrative of contingency (Facer, 2019). The implication is that the culture of middle-class is considered a measure of success, suggesting an alignment between school and middle-class culture. This then positions the middle-class children as advantaged and the children who do not present within the presumptions or expectations of middle-class as being disadvantaged. This introduces the notion of cultural disharmony between the adults in education and children's home culture; rather than a development gap; having implications for educational practice.

Despite many children in my care being categorised as disadvantaged, the discourse does not correlate to the children I know through practice. They are all different, all diverse, they have

their own preferences and make their own mark on the group with the interests they have, the things they do, the choices they make and the challenges they present. Instead of homogenised children of 'disadvantage', I see colour, I hear variety, I remember every individual. This led me to direct my research towards understanding how the children based within the pre-school in a disadvantaged area interact in the context of ECE; how they embody different contexts and influence the cultures of home and pre-school. I was intrigued by children's agency and valued their power and diversity. I also saw challenge for young children as they explored a new world amongst peers also doing the same.

My position brought me the opportunity to reconceptualize how children who live in a disadvantaged area are understood, in the context of social interactions, providing an opportunity to present the experiences behind the policies; to use my position as a practitioner to introduce quasi-naturalistic, empirical data to the narrative.

This study extends the notion of social interaction beyond speech, encompassing a social semiotic approach to multimediality (Bezemer et al, 2012) to extend the observational frame of interaction (Flewitt, 2006) and embrace cultural diversity through heterogeneous modes of communication (Tizard et al, 1983). Additionally, Situated Learning Theory (SLT) (Lave & Wenger 1991) has been used to contextualise the nature of children's interactions, encompassing children's agency and power in their interactions.

## Research Questions

This thesis chronicles the social experiences of four children, aged between three and four years-old over the course of three academic terms, spanning two academic years, as they negotiate the social dynamics of a group setting; and how these may change over time. The initial research questions is;

### Main Question

What is the nature of social interaction of disadvantaged children in a mixed-age pre-school?

## Subsidiary Questions

- 1) What strategies do children adopt when initiating or responding to social interaction?
- 2) Does this change over time?

These questions are the focus for this study, representing my aim to explore how the children interact in a group setting, within my own professional context. My aim was to understand more about the nature of children's interactions in context and to juxtapose my observations against policy, literature and practice to identify any gaps in the literature and to bring the children's experiences to the discourse.

## Structure

In the following chapter, a summary of the history of early education in England and the political agenda of the 'education gap' between the most advantaged and the most disadvantaged children is explored. This allows an acknowledgement of the policy environment in which the setting exists and the role of ECE within the political discourse, outlining the politicisation of ECE and the intensifying external pressure on ECE practitioners as their role is increasingly consumed by performativity measures through inspection and assessment.

Chapter three presents a review of the literature, introducing the complexity around the notion of social interaction. Lave and Wenger's (1991) theoretical framework of Situated Learning Theory (SLT) and Legitimate Peripheral Participation (LPP) is presented as a lens through which to observe the children's social interaction in context, considering the cultural implications of a group pre-school setting.

Culturally situated learning is also explored in chapter three, to present and understand the contemporary discourse around children's communication in play, the cultural nature of interactions and the role of children within that culture. The nature of performance repertoires are also explored as well as the landscape of peer to peer interactions and mixed-age groupings in ECE. Considering the ways in which young children communicate beyond speech, multimodality is introduced and explored to guide the observational frame.

Chapter four documents the research methodology and the rationale for the research design. This chapter provides an overview of the thesis, as an interpretive case study with ethnographic influence, highlighting the rationale behind the choice of observational methods with audio-visual recording. It also outlines the complex symbiotic and cyclical nature of the data collection and data analysis processes and their mutual influences. The nature and complexities of data coding and selection in an interpretive study are explored with challenges outlined. This chapter includes ethical considerations for the study, having regard for the young age of the research participants and my position as an insider researcher.

Chapter five presents my findings and interpretation, using various methods of presenting complex, dynamic and rich data. The four participants are presented separately, taking the reader through the six periods to bring the reader into the observations, reflective of the anthropological work of Geertz (1973), providing transparency and insight.

Chapter six brings the findings from the four children together to discuss the most significant findings in children's social interaction strategies with regard to the cultural nature of my interpretations.



## Original Contribution

The concluding chapter explores the implications of the study, including practice and policy, methodology and theoretical implications. Notably, the study highlights the dynamic and fluid nature of children's interactions and presents an innovative reworking of SLT in the context of peer to peer learning in ECE; as children teach and learn in a complex network of participation.

Implications for future research are outlined in the final chapter. It is my intention to publish and present a number of papers from this thesis in a range of academic and professional publications and conferences. Additionally, I intend to use my position as a doctoral level practitioner to bridge the gap between academia and practice in early years; bringing new knowledge to practice and current empirical data to academia.

It is my hope that readers of this thesis will gain enjoyment and insight from sharing in the children's experiences of social interactions.

## Chapter Two – The Political Context

### Introduction

It is anticipated that this chapter will set the scene for the case study. Setting-based early childhood education (ECE) has existed in England for over two hundred years, I will briefly explore the politicisation of early childhood education over those years and highlight the pace of change over the most recent twenty-five years, including an abridged table of the key policy documents used to leverage that change.

I will briefly explore the emergence of political homogenisation of ECE, the measures put in place to inspect for compliance and the effect of those measures on the understanding of 'quality' in ECE.

In this thesis, the term 'discourse' is referred to. Discourse has many meanings, even a fluidity of meaning, leaving it a challenge to define. Foucault, who is understood to have influenced the narrative of discourse, himself gave multiple definitions of discourse, affected by context. For example, Mills describes discourse as being 'largely defined by what it is not' (2004; 3). Drawing on Foucault's 'the general domain of all statements' (1972; 80), Mills (2004) suggests a definition of discourse as 'all utterances or texts which have meaning and which have some effects in the real world' (2004; 6). Utterances are also present in Bakhtin's principles of communicative acts as only having meaning in particular situations or contexts (Dentith 1995). Significant in the context of this thesis is the way Foucault expressed that discourses can have an exclusivity, where some people are invited to participate in the creation and continuity of the discourse and some not. Stahl (2004) describes this core constituent to Foucauldian discourses as being about power. In the context of this thesis, power discourses are present through the political narrative and its influence over everyday dialogue and practice, creating and perpetuating a deficit discourse of disadvantage. For example, in ECE the deficit discourse indicates that power is exerted through the middle-classes via the political narrative, illuding to a 'have and have not' perspective. Arguably the educated middle classes fuel and influence this discourse through policy, creating the deficit discourse of disadvantage, implied as a failure to demonstrate or value middle-class culture.

Mills suggests that the groups of utterances 'seem to be regulated in some way and which seem to have a coherence and a force to them in common' (2014; 6), which leads on to a further definition from Foucault's 'regulated practice which accounts for a number of statements' (2014; 6) where Mills suggests 'here, he is less interested in the actual utterances/texts that are produced than in the rules and structures which produce particular utterances and texts' (2014; 6). Mills goes on to describe these utterances as being enacted within a social context, determined by that social context and which contribute to its ongoing existence. Mills' work highlights the complexity of discourse by its cyclical nature, in this context through the influence of the political narrative on ECE practice and the nature of practice also fuelling that political narrative and contributing to the discourse.

In this thesis, the tacit political narrative of disadvantage brings to the fore both the notion of disadvantage and the representation of disadvantage being implicit in every-day practice (Besley, 2015). The intention here is to understand the political discourse around disadvantage, to identify 'conditions of existence' and subject it to the practical field in which 'it is deployed' (Foucault, 1991; 61). In this study, the every-day practice of pre-school children's social interactions will be observed while problematising the deficit discourse subverted through the EYFS (2017) into every day ECE.

This chapter highlights the nature of everyday practice formations influenced by the political structure, policies and documentation around the term disadvantage. It also acknowledges the influence of the discourse in reproducing the social system of disadvantage through selection, exclusion and domination and the associated impact on discursive practices across ECE (Hook, 2001). In this case, the concept of disadvantage is positioned in relation to 'others' who are more advantaged. This is discussed in policy and through political debate as not only discourse as productive but also presented as a deficit to be resolved.

The terms 'disadvantage' and 'poverty' have been used interchangeably through policy and supporting documentation. I will explore these terms in context. The term 'disadvantage' will be explored in the context of the political narrative, its interchangeability with 'poverty' and the nature of its contribution to the deficit discourse of disadvantage in education. I will then

go on to consider disadvantage, when linked to performativity, as a self-fulfilling prophecy, as its definition fuelling the divide and influencing teaching away from diverse practice towards standardisation. Finally, I will consider literature regarding children's conceptual play spaces, introducing the notion of children's agency and power and their contribution to cultural diversity in education, raising questions of the homogeneous nature of terms such as 'disadvantaged'.

This chapter is intended as a provocation to disturb the narrative, to problematise the political discourse around disadvantage and to seek a heterogeneous view of children.

### The Politicisation of Early Childhood Education

This research is located within, and has been influenced by, the political narrative around disadvantage and its impact on ECE practice today. From the foundations of benevolence to today's regime of performativity and inspection, ECE in England has been through many changes. Firstly, I will provide a brief overview of the political narratives around ECE since its inception and provide a critical analysis of the shifting relationship between ECE and disadvantage, to provide a context to this thesis.

#### *Disadvantage and ECE - A Brief History of Two Centuries*

ECE in England began to emerge in the late 18<sup>th</sup> Century, based in voluntary and philanthropic organisations to fulfil a need for poor working women to access childcare (Kwon, 2002). In the early 20<sup>th</sup> Century, Margaret McMillan established an open-air nursery for disadvantaged children, following the exclusion of children under five-years-old from primary schools in 1905 (Board of Education, 1905). Concerned for the health and wellbeing of working-class children, McMillan's nursery provided children with nourishment, hygiene, exercise and fresh air. It could be said that its emphasis upon free-play and informality continues to influence elements of contemporary practice.

More recently and following a structural and economic recovery from the second world-war, playgroups started to emerge by the 1960's, led by Belle Tutaev who created the first

recorded playgroup in her local church hall in 1961 (Kwon, 2002). Following this, in 1972, the white paper 'Education: A framework for Expansion' (DfES, 1972) was presented, containing recommendations for the creation of nursery school places for 50% of three-year-old and 90% of four-year-old children, the implementation of which was halted by economic decline.

Heading for the 21<sup>st</sup> Century, ECE in England had evolved and changed with little large-scale Government intervention. The sector demonstrated a mixed private economy, from home-based to group-based care and education as well as state-maintained nursery schools (Lewis & West, 2016). A period of focus, transformation and intervention for ECE followed.

#### The Introduction of Political Interventions - Curriculum, Inspection and Performativity

A notable swing in wider English education was the Education Reform Act 1988 (ERA), where shifts in policy were thrust into the English education system under the narrative of neoliberalism. This included the introduction of market forces and parental choice, and significantly in this context, the introduction of a national curriculum and assessment associated with surveillance and performativity (Hoskins, 2012). Titled a 'ferocious accountability regime' by Hoskins (2012; 7) the ERA looked to raise standards throughout schools with the aim to address perceived school failure and link this with disadvantage; through the desire to increase the UK's economic performance on the global stage, establishing the deficit discourse. A criticism of this was the problematic causal inference of academic competence and disadvantage, fuelling a perceived educational attainment gap between the children of affluent and poorer families (Waldfoegel, 2013).

After two decades of political inattention of ECE, two key reports brought the importance of the quality of early education to the fore. The Rumbold Report 'Starting with Quality' (1990), which aspired to improve quality of ECE and to shape consistency and cohesion amongst the variety of providers; and the 'Start Right: The Importance of Early Learning' report (Ball, 1994), which prescribed free early learning for all three to five-year-olds as a preparation for formal education; with the purpose of developing a 'world-class workforce' by promoting social welfare and social order as a counter to disadvantage. This period brought ECE into the scope of the school accountability regime.

The following thirty years witnessed an unprecedented number of policy documents and influencing papers which have shaped and steered ECE towards a regime of curriculum, inspection and performativity, fuelling the deficit discourse around disadvantage and education. With consideration for wordcount restrictions, below is a chronological summary of key policies, statutory frameworks, policy guidance documentation and a summary of the pertinent drivers.

*Table 1 Summary of Key Policy Publications*

<b>Year</b>	<b>Policy/Advisory Document Title</b>	<b>Summary Driver</b>	<b>Reference</b>
1996	'Desirable Outcomes for Children's Learning on Entering Compulsory Education'	Free ECE places for all four-year olds Intended learning outcomes to be achieved by the age of five-years-old.	SCAA, 1996
1998	The National Childcare Strategy: Meeting the Childcare Challenge	Deliver early intervention, promote parental employment and reduce childhood poverty. Free ECE places for all three-year-olds.	DfE, 1998
1999	<i>Early Learning Goals</i>	Measurable outcomes for children under five-years-old.	QCA, 1999
2000	Curriculum Guidance for the Foundation Stage	Detailed practice direction and measure of outcomes for three to five-year-olds.	QCA, 2000
2003	Every Child Matters: Change for Children	To improve life chances for children and young people from birth to nineteen.	DfES.2004
2004	Choice for Parents, the Best Start for Children: A Ten-Year Strategy for Childcare	Driving change through 'quality' measures of ECE.	HMT, 2004
2006	The Childcare Act	To map out the vision for a positive start for children.	DfES, 2006

2008	Early Years Foundation Stage – <i>Setting the Standards for Learning, Development and Care for Children from Birth to Five</i>	A comprehensive framework which set the standards for learning, development and care of children from birth to five-years-old.	DCSF, 2008
2012	Statutory Framework for the Early Years Foundation Stage (update).	Introduction of statutory assessment for all five-year-olds.	DfE, 2012
2016	PISA 2015 Results (Volume 1): Excellence and Equity in Education.	International comparison of educational performance, highlighting inequalities.	OECD, 2016
2017	Statutory Framework for The Early Years Foundation Stage – Setting the standards for learning, development and care for children from birth to five. (update).	Higher level of staff qualifications required.	DfE, 2017
2018	Multimillion investment in early years education and boost social mobility.	‘To halve the number of children finishing reception year at school without the early communication or reading skills they need by 2028’	DfE, 2018

This period in the table witnessed increasing focus on curriculum, inspection and performativity for ECE. Following vast expenditure, the UK Government required a measured return on its investment in ECE, with a keen focus on disadvantaged children (Simpson et al, 2015). This narrative highlights social and political factors which produce dominant educational knowledge and practices (MacNaughton, 2005), the absence of which create a problem to be solved. The problem is presented through positioning families as disadvantaged, requiring intervention to raise their lifestyles to the desired standards. Policy continued to drive the narrative of the ‘Start Right: The Importance of Early Learning’ report (Ball, 1994) with ECE being positioned to improve the family economy by raising children’s educational attainment and reducing their chance of falling into poverty as adults (Lewis, 2009). ECE was being held accountable for improving children’s life chances, through assessment and intervention in children’s learning in ECE settings and at home. Facer (2019)

explored the problematic nature of such an education narrative of 'contingency'; where children who are 'educated' are presented as better able to survive an uncertain future. Facer (2019) described this unrealistic ideology as a contingency narrative which was '...fundamentally fail[ing] to recognise the inadequacy of education alone as a force for human flourishing' (p5). This fallacy created a social category and a solution to this deficit group through education, positioning children and their families as objects of power (MacNaughton, 2005). Rose (1989) described this as penetrating private domains and creating a 'normality' in child development which subsequently activated new assessment practices and generated a categorisation of child behaviour. This in turn influenced the creation of hierarchies which contain entire populations of children who are measured across scales of normality. Viewing this through Foucault's discourse of power illuminates the realities of modern society, in the use of policy to exert power through education to realise the discourse of disadvantage (Stahl, 2004). Problematising such a political narrative raises questions of the power over ECE practitioners into conceding their profession to deliver the 'contingency' political narrative of reducing disadvantage through education. Furthermore, the narrative of disadvantage attempts to frame groups of children who require intervention to resolve their disadvantage. The problematic nature of this and the challenge from this is discussed throughout this chapter and explored through this thesis. The intention is to cut through the deficit discourse of disadvantage, to bring the narrative back to the children, observing their complex and diverse interaction strategies.

### Poverty or Disadvantage? - An Interchangeable Term

Although 'poverty' appears in many of the aforementioned government policy papers, the term 'disadvantage' appears to be used interchangeably. For example, in a recent communication from the Department for Education, plans for closing the education attainment gap were announced and the following paragraph was presented,

*'Schools will be invited to run projects that demonstrate innovative approaches to closing the attainment gap between disadvantaged children and their more affluent peers...'*

(DfE, 2018)



The comparison of 'disadvantaged' and 'more affluent peers' asserts a link between disadvantage and low income, or poverty. The notion that educators have a responsibility to counteract disadvantage is problematic, as well as the notion that the education gap is static. The continuing discourse of targeting disadvantaged children is reflected in the most recent inspection guidance. The Ofsted Inspection Handbook (Ofsted, 2019), which is used to guide Inspectors in judging the quality of a setting (outcomes being outstanding, good, requires improvement or inadequate), includes a focus on disadvantage. Guidance statements include,

*'As part of making a judgement about the quality of education, inspectors will consider how well leaders use the curriculum to enhance the experience and opportunities available to children, particularly the most disadvantaged.'* (p91)

*'Children, including those children from disadvantaged backgrounds, do well.'* (p32)

*'Leaders adopt or construct a curriculum that is ambitious and designed to give children, particularly the most disadvantaged, the knowledge and cultural capital they need to succeed in life.'* (p33)

(Ofsted, 2019)

This documents the assumption that disadvantaged children will have developmental delay, continuing from the previous version of the inspection handbook (Ofsted, 2015a), where evidence of disadvantaged children's rapid progress against their peers was sought and reflected in the setting's inspection grading - the better the progress the higher the Ofsted judgement (considered as part of the cluster of evidence) and the lower the progress, the lower the judgement (Ofsted, 2015b). The deficit discourse of disadvantage and its relationship to low educational attainment is predominant in this document and clearly measures the quality of a setting by its ability to address the assumed diverse educational needs of disadvantaged children. However, the nature of standardised assessment (DfE, 2012) fails to leave room for diverse learners to achieve individually.

This draws me to ask the question of what disadvantage children are perceived as requiring through ECE?

The term 'disadvantaged' has been problematised by academics. Looking for a more representative measure of disadvantage, sociologists have long argued for the importance of socio-economic status (SES) (the social status and prestige that is derived from a wide set of economic and social conditions) rather than household income alone, as a more representative measure of disadvantage (Duncan & Magnuson, 2017). Hackman, Farah and Meaney (2010) also used SES as a measure of disadvantage; reporting SES as being a complex construct that is based on household income, material resources, education and occupation, as well as neighbourhood and family characteristics, such as exposure to toxins and violence.

In Australia Saunders et al (2008) created the 'four dimensions of disadvantage', derived from literature on social exclusion and deprivation. Finding that using household income alone was not a sufficiently robust indicator of need and that although income may imply poverty, poverty needs to be grounded in the conditions faced by those affected by it. They considered poverty, deprivation and social exclusion in the 'Left Out and Missing Out' project (Saunders et al, 2008; 179), finding deprivation resulting in 'missing out' and social exclusion resulting in being 'left out'. They found that deprivation and social exclusion over resources and poverty as more reliable pictures of disadvantage. This explanation is difficult to contend, suggesting that children who are left out and who miss out are disadvantaged. It highlights the heterogeneous nature of children, how they learn and how they access learning through interaction and disregards the binary notion of disadvantage and advantage.

Bringing to the notion of left out and missing out in the political debate, under the guise of 'troubled families', I will now briefly visit the discourse of troubled families and the political debate surrounding the intervention narrative to situate the case-study setting within the narrative.

### Troubled Families

Amid the roll out of standard setting and statutory assessment in ECE the English Government perceived a gap in the sector for 'high quality' settings in disadvantaged areas. As a result, the setting up of Neighbourhood Nurseries, Early Excellence and Sure Start Children's Centres was rolled out (Lewis & West, 2016) delivering interventions to secure the targets from The

Childcare Act (DfES, 2006). The setting involved in this case study is based within one of the said Sure Start Children's Centres, established in 2010. More recently, the core purpose of Children's Centres has been revised, their main focus becoming targeting disadvantaged families rather than universal provision located within an area of disadvantage (DfE, 2013c). This situation does reflect the current position of the case-study setting, being located in one of the few remaining Children's Centre in the County; based in an area of high disadvantage where specific children and families are targeted for support within the contingency narrative. This is reflected in the following statement,

*'For a small minority of troubled families we have no option but to intervene, in the interests of their children, their neighbours and the wider community – to try to turn their lives around'*

(DfE, 2013c; 31)

Child poverty and the effects of such are positioned as rooted in troubled families, stemming from the problem behaviours of parents (Levitas, 2012). With parenting being politicised on an international scale, parents (specifically mothers) are being held accountable for the social immobility of their children (Simpson et al, 2015). In the UK, poor parenting has been identified as a causal factor in poverty and in social disorder (Gillies, 2008), with a more recent emphasis on targeting troubled families to provide intervention - reflective of the current situation in the Children's Centre where the study was held. Simpson et al (2015) cited the new politics of parenting as being the present-day grand narrative, which has shaped more recent developments in ECE focus, placing ECE at the helm of the solution to problem parenting. Selling quality as a social investment with high returns, ECE has been positioned as a solution to improved education, improved employment, higher earnings and reduced social problems – an alignment to the contingency narrative.

In the 'State of the nation 2015' report (Social Mobility and Child Poverty Commission, 2015), it was concluded that children of better-off families have a higher chance of achieving success in the labour market. Interestingly, it claimed that 'High attaining children from less advantaged family backgrounds (income or social class) are less likely to be in a high earning or top jobs as an adult' (p39). While the report suggests that higher income families have more resources at their disposal, which could be linked to labour market success, the report

does raise a question over the role that education has in this. Significant for this study, the report later states 'Values, aspirations and cultural differences may also be important explanatory factors' (p39).

As I write this thesis, I like many others am in lockdown due to the Covid-19 virus (Public Health England, 2020). Although anecdotal, there are legions of low paid workers labelled 'key workers', such as nurses, supermarket operatives, carers, farmers, delivery drivers and childcare practitioners, who remain working to keep people safe, working, fed and help people to recover. Many of these people would be categorised as achieving a low level of success in the labour market (DWP, 2019). This brings into question the focus on income to measure labour market success, rather than contribution.

Reflecting on this notion and considering policy as socially constructed with its levers implemented as a problem-solving framework (Wood, 2014), I wish to problematise the construct of disadvantage and redirect the narrative towards cultural diversity and the heterogeneity of individuals and sub-groups who fall into the category of 'disadvantaged'.

### [The Deficit Discourse of Disadvantage in Education](#)

Within the context of ECE, the socio-political structures such as race, class, gender and education can marginalise and oppress some children and their families. These structures also offer a truth about ECE, which is informed by developmental psychology and adopts a 'positivistic and empirical-analytic paradigm' (Dahlberg and Moss, 2005). It could be said that certain aspects of education and of policy are controversial and regularly generate enthusiastic debate. For example, sexism and racism appear to have a clarity of unacceptability, but classism breeds emotive debate, leaves room for discussion, is apparent in policy and research and can remain unquestioned. Since the 1980's sociologists have discussed the concept of classism (Pincus & Sokoloff, 2008) defined as 'Prejudice and discrimination based on socioeconomic level or class' (Blumenfeld and Raymond, 2000; 25), despite this, classism appears to remain in the culture of ECE, driven by the political discourse of contingency.

Although it is suggested that ECE practitioners attempt to provide a more inclusive curriculum (Brooker, 2010b), it is also said that practitioners may not be as critical of tensions between

their own beliefs, values and goals for children and those of parents and indeed of the children (Vandenbroeck et al, 2009). This lack of criticality can be fuelled with the presence of publications that feed the discourse, for example, to help educators understand the culture of poverty, Payne (2005) created 'A Framework for Understanding Poverty'. It included guidance in how to teach middle class views to meet the prevailing values within education.

*'It is the responsibility of educators and others who work with the poor to teach difference and skills/rules that will allow the individual to make the choice [to adopt the culture of the middle class].*

(Payne, 2005; 113)

This statement fuels a 'right culture/wrong culture' by framing poor as uneducated. Heavily criticising Payne's work, in the context of educational reform in the USA, Gorski (2006) asked,

*'how are we to understand poverty in relation to education without understanding how the very structure of formal schooling in the United States replicates the inequalities that keep many of our students' families in poverty?'* (p 16).

Going as far back as 1969, Lewis' culture of poverty model, from a sociological perspective, theorised the behaviour of poor families and communities and how this affected children. From his experiences of working with poor families of Latin America, Lewis (1969) argued that social mobility was difficult, which resulted in adverse behaviour and values, resulting in a culture of weak impulse and an inability to delay gratification, amongst others. The classism is clear in this text, with a questionable assumption that social mobility, from poverty to affluence, is innate in all.

Like Gorski, Pincus and Sokoloff (2008) provided an analysis of the absence of the acknowledgement of classism woven within educational texts and policies. They suggested that classism is downplayed in texts, with emphases being around cultural differences as an explanation for inequality as an outcome, rather than inherent in education structures.

In the USA Bertrand, Perez and Rogers (2015) brought this discussion into the contemporary narrative around attainment 'gaps', identifying a deficit discourse behind state policy which maintained systematic racism and classism in education, by placing working-class students at

a disadvantage. In Australia Fogarty et al (2018) discussed policy often defaulting to 'non-indigenous' norms adding that the complexities of meeting variable need provides barriers which cause further disadvantage. They found that the homogenisation of indigenous Australians and the statistical comparison to non-indigenous Australians contributed to a narrative of deficiency. Reflecting on the significance of cultural disharmony in education, academics have argued that it is important to take culture seriously as fundamental to understanding the comparable worldviews created by the living conditions that individuals experience (Levinson, 2015; Hamilton, 2018) and how these experiences constrain the range of choices and opportunities available to low-income families (Lamont & Small 2010), however reducing culture to statistics feeds cultural disparity.

Returning to recent, local context, the UK Education Secretary, Damian Hinds (DfE, 2018) announced a multimillion investment in early years education to boost social mobility, indicating that children moving from a position of disadvantage to advantage is a political ambition. Relating this to the context of ECE, Hinds added '... to halve the number of children finishing reception year without the early communication or reading skills they need by 2028'. Although hidden within a narrative that could be justified as a benign approach, the inference here is that affluence is the statistic that differentiates groups of children, and that affluence is the norm, with disregard for heterogeneous view of complex cultural identities (Levinson, 2015).

The social mobility narrative of Government underpins a socio-economic governmentality, which arguably, comes in the form of power. The work of Foucault is frequently cited when considering the power of government through political discourse. Foucault's 'new age of penal justice', where punishment through pain and torture is replaced with political tactics as a technique of employing power to dominate in a socio-economic scenario (Sargiacomo, 2009), underpins the notion of the discourse of power. A general definition or theory of power from Foucault is not readily available. However, in searching for a definition in this context, Gallagher (2008) puts forward power as 'a form of social control'. Jenks refers to a 'training of the psyche' (2005; 79) highlighting power as an influence over educational practice, evident in the spaces of education. Power relating to the political discourse of disadvantage is viewed as a form of social and professional control though this thesis.

This illuminates the notion of power from the socio-economic focus of Government, levered through language and policy documentation to infiltrate everyday practice (MacNaughton, 2005). For example, this feeds the notion of an 'attainment gap' (Kay, 2019), which is used in educational policy to underpin the deficit discourse of disadvantage. This discourse is then levered into practice through policy documentation, which in turn perpetuates a cycle of the notion of success and failure in education, maintaining the gap between the empowered and the disempowered (Kortright, 2003). Furthermore, considering Foucault's (1977) 'enclosure' in education as a formula for domination, illuminates the notion of power enacted through the political narrative identified by 'the place it occupies in a series, and by the gap that separates it from the others' (Foucault, 1977; 145). Therefore, the social mobility through education narrative from the aforementioned comments from Hinds (DfE, 2018) is an example of policy which fuels and perpetuates the deficit discourse of disadvantage.

Considering discourse as the 'conditions under which certain statements are considered to be truth' (Ball, 2013; 19) illustrates the depth of connection between the economic model of power and the structure of education. This is highlighted with measures of attainment presenting power as a commodity to be acquired and failure a form of exclusion. An example of this is the narrative around the two-year funding, where the notion of attending a pre-school setting is presented as a benefit to children, its measure of success claimed to align disadvantaged children with advantaged. The justification of this is presented through outcome measures, via assessment of children's development (EYFS, 2017), which are aligned to the early education political discourse. Arguably, selling the problematic notion of power through education and 'evidencing' that power through the same political discourse.

Foucault's work, however, also presents an alternative notion of power as 'something exercised through small-scale, everyday forms of persuasion' (Gallacher, 2008; 503). Considering this view of power illuminates the infiltration of the political discourse in everyday interactions and practice in ECE. Power exercised in these everyday interactions is explored through the lens of Legitimate Peripheral Participation in chapter three.

Looking at measures of attainment, I will now explore the reported measurable outcomes for disadvantaged children.

## Linking Disadvantage and Performativity – The Education Gap

Briefly returning to policy, the rationale of the 'Ten Year Strategy for Childcare' (HM Treasury, 2004) was to improve social and cognitive outcomes, as well as verbal and reasoning ability, of children from disadvantaged backgrounds. The strategy looked to bring them up to comparable levels of attainment of more advantaged peers by the age of five. The bold message was to turn to ECE to counteract the negative effects of disadvantage on children's cognitive and social development and thus reduce the education gap (Gibb et al, 2011; Dalli et al, 2011; Maisey et al, 2013).

Notwithstanding the problematic nature of the deficit discourse around disadvantage, a review of the literature located many studies that reflect the notion of an education gap between advantaged and disadvantaged. For example, Mathers and Smees (2014) found that disadvantaged children are more likely to experience behavioural problems, lack of social skills and delays in their speech development. Furthermore, Sabates and Dex (2015) found that children who had experienced multiple risks in their development through deprivation had a higher propensity to lack self-awareness, experience reduced speech and lack self-regulation in a learning environment. Additionally, Waldfogel and Washbrook (2011) reported that compared to middle-class children, children of disadvantage are said to lag behind their peers in vocabulary acquisition by almost a developmental year by the time they start school.

However, for example, the notion of 'verbal deprivation' in 'disadvantaged' children was challenged as far back as 1969 by Labov, who found that while 'lower class' children may be monosyllabic in conversation with teachers and psychologists, when the social situation was changed and perceived as less threatening, the children's language flowed freely. Labov (1969) suggested that the language deficiencies of the child cannot therefore be held responsible for the poor performance at school and concluded that the social situation is the most significant determinant in a child accessing the full extent of their language. Tizard et al (1983) expanded Labov's work and explored the notion that teachers understood language deficiency to be as a result of disadvantage. However, looking for linguistic differences across working-class and middle-class mothers and their children, amongst other findings Tizard et



al (1969) identified a disparity in the use of language at school and at home. They found a significant difference for working-class children and no difference for middle-class children. Commenting on the increased resemblance of language between home and nursery for middle-class children, Tizard et al (1983) introduced the notion that there could be a challenge for disadvantaged children at school, with the reduced familiarity in the culture of school, when compared to middle-class children. The debate of school culture and its alignment or misalignment to home continues to date. Kay (2018) explored the culture of school and the notion of success at school being aligned with compliance. Indeed Kay explored the well-used term of 'school readiness' explicit in ECE policy today and found the term to further marginalise groups of children who were already marginalised. The implication suggests that the culture of middle-class is used as the measure of educational success, hinting at cultural disparity between home and school for some pupils (Hamilton, 2018) and an absence of focus away from the plurality of social interaction styles.

Thirty-five years of research and practice between the studies of Tizard et al (1983) and Kay (2018), highlight the ongoing deficit discourse of disadvantage in education as contributing to a subversive debate of classism. This is significant for this study, as it directs the study towards diversity.

### Cultural Disparity

Considering the nature of cultural disparity in ECE, it could be said that teaching and learning environments are developed within a narrow cultural frame, to reflect the levers of education policy. This has been indicated in recent inspection documentation in England, when Ofsted (2017) reported and questioned the suitability or familiarity with the culture of ECE environments in relation to the home life of disadvantaged children, suggesting a significant difference between the two, compared to that of a more advantaged child. For example, daily access to books and literacy, rules and boundaries of routine, such as eating at a table. The implication was that for some children, ECE or school is so dissimilar to their home life, that their period of adjustment may be longer, or their support from home less aligned. The same publication from Ofsted (2017) titled 'Bright Beginnings', reported the effectiveness of the EYFS curriculum in English reception classes (being the first year of school for children who

are four and five-years-old) reporting that half of disadvantaged children are leaving their first year of school failing to meet the expected standards of development, albeit the gap between disadvantaged children and the attainment of their more advantaged peers is closing. Interestingly, the same report stated that no significant difference was detected between the development of mathematical skills between disadvantaged and advantaged children. Surprisingly, this was stated as reflecting that mathematics assessment outcomes were 'depressing outcomes overall', which was 'masking any difference between different groups of children' (2017; 25). The report also implied that children learn more equitably when a teacher is less involved, for example, claiming that when children play with mathematical items in the sand and water, they lose their focus. This problematises the notion of autonomous play (Wood, 2014) and raises a question of the source of inequality being the teacher.

Is pedagogy a source of cultural disparity?

Considering the comments on the devalued child-led exploratory play and the inference on the parity of mathematical development within this context, I was led to problematise the involvement of the adults in supporting children's developing interactions. There is potential to view the adult's role as a source of cultural disparity. Recognising this, Brooker (2010b) explored 'bridging culture through dialogue' where communication between parents and practitioners were encouraged to help bridge the transition between home and setting. Conversely, with consideration for children's agency Yahya and Wood (2017) examined play as forming a bridge between cultures for children, presenting this as a third space - a conceptual space for children to bring together funds of knowledge. This notion extends an opportunity for children to use play to access a hybrid identity, or multiple identities, to bridge dissonant cultures rather than viewing a problematic, binary notion of advantage and disadvantage (Levinson, 2015).

In the context of outdoor play; exploring work as privilege and play as reward, Youell (2008) cited formal learning at pre-school as a contributing factor to the reduction in unstructured, loosely supervised play for children, despite it being essential for the development of cognitive and social skills and with potential for bridging cultural gaps. Bodrova and Leong

(2005) explored the need for opportunities for sophisticated play, with the characteristics of creating pretend scenarios with peers, using props and symbols, and of creating roles and rules for pretend behaviour, to progress social and cognitive development. This sophisticated play was found to underpin some key skills required to develop social interaction skills, including the ability to consider perspectives, to represent symbolically and to regulate behaviours.

Brooker (2011) briefly explored value in children's play in peer groups as constructing and re-constructing their identities in relation to their peers, suggesting that in understanding children's play agendas, children are 'establishing one's own ranking in peer and friendship groups' (p 142). This work led me to value the agency of children and their ability to bridge the cultural gap; to create their own culture within and through their social interactions. Brooker (2011) considered this in the context of research, framing the significance of listening to children as competent citizens, capable of contributing to their immediate environment. This notion is significant for this study in establishing a theoretical framework from which to view children's social interactions in the context of culturally situated learning and will be explored in the following chapter.

## Conclusion

This chapter presents a brief history of political interest in ECE. It describes the move to homogenize, measure and inspect all ECE providers, with an underlying intervention discourse; positioning education as the means to reducing the attainment gap, whilst using education as a conduit to measure the said gap.

I explored the deficit discourse around disadvantage and the implicit nature of 'advantaged' and 'disadvantaged' meaning educated and not educated or 'have' and 'have not'. Alongside the alignment of education with the culture of middle class in England, I explored the enduring acceptance of classism in the political drivers and levers. These binary narratives start to unravel and no longer appear illustrative of the lived experiences of individuals. To this end, I briefly explored the notion of children's agency and the opportunity that they have in their

own conceptual play space to contribute to their own combined culture of their setting, to develop the new cultural norms through social interaction.

In the next chapter, social interaction and its relationship to culturally situated learning will be explored. The theoretical framework of legitimate peripheral participation will also be explored as a theoretical lens through which to explore children's interactions. Taking forward the work of Tizard et al (1983) I will also explore heterogeneous modes of communication, exploring seminal and contemporaneous work on multimodality in ECE as a further lens to broaden the view of communication beyond speech.

## Chapter Three – Cultural Diversity and Multimodality in Social Interaction; A review of the Literature

### Introduction

This thesis investigates the nature of young children's social interactions in an area of disadvantage and how they change over time. The previous chapter briefly summarised the political history of early childhood education (ECE) and the deficit discourse around education and disadvantage, fuelled by performativity in ECE. I briefly referred to cultural disparity and the implied classism within the educational policy narrative and my desire to bring empirical data to contribute to the counter-narrative; illustrating how children who live in a disadvantaged area are understood heterogeneously, in the context of interacting within their ECE setting.

In this chapter, I will explore the nature of young children's social interactions as they embark on the first stages of formal education. I will explore the theoretical lens of situated learning theory and the nature of learning through a cultural and physical space. I will visit a potential for change in the discourse around cultural disparity and consider the opportunities that this may present to young children's learning and developing of performance repertoires. And finally, I will explore multimodality holistically to build on previous studies which value young children's communication through their whole body.

### What is social interaction?

'Social interaction' is an extensive subject, with contributions and influences across many fields. For the purposes of this literature review, I have explored a specific element of 'social interaction' to align with the enquiry behind the thesis. This informs an understanding of the actions, context of and changes in young children, drawing on a range of disciplinary fields, including education, anthropology, psychology, sociology and linguistics.

Considering social interaction as both a learned outcome and tool for learning (Rainio, 2008), it could be said that social interaction be a relatively innate aspect of ECE. As such, I anticipated finding volumes of literature for this review. However, this aspect of the literature

review proved to be the most challenging. Understandings of what constitutes 'social interaction' in ECE are not universal. Social interaction is multidimensional and dependent on the context of the interaction to be defined as social. Many papers brought to the fore that social interaction is not a skill, or set of skills, but a culturally situated communication between one or more people. Phrases and terms such as social competence (Tsangaridou et al, 2013), negotiation (Hackett, 2014), compliance (Cunningham, 2012), participation (Wenger, 2013), social acquisitions (Turiel, 2010), action and embodiment (Goodwin, 2000) and social identity (Geertz, 1973) are woven into the discourse of social interaction. Leading to ambiguous notions of what could be considered as 'social interaction'. However, all these notions bring into view the context of interactions.

### Beyond Intersubjectivity and Dyadic Relations

From birth, babies convey interactions to transmit cultural meaning, with an expectation that they will be understood by their parent or carer at the early stages of intersubjectivity (Trevarthen & Aitken, 2001). Intersubjectivity between parents and babies is well documented, described by Trevarthen (1980) as cooperative understanding with joint patterns of awareness, later bringing together the intramental and intermental psychological processes in a shared framework for collaboration. Intramental being an ability existing within a child and intermental occurring in the relationships between people (Vygotsky, 1978). Described as 'a social pattern of behaviour involving subjectivity', Matusov (2020; E13) viewed intersubjectivity as a transactional relationship that also creates a new socially constructed reality.

Rogoff (2003) explored participating in home rituals by observing and pitching in, describing apprenticeship in thinking. Beraldo et al (2016) described this as secondary intersubjectivity, including 'cooperative awareness of person to person and objects joining a symbolic game' (p 279), in the context of dialogic meaning-making pedagogies, as a form of creating new communities of practice and legitimising the value of an individual's contributions to making culture. In neuroscience, Hackman, Farah and Meaney's (2010) work, found physical changes in the child's developing brain through cultural participation between parent and child. These studies primarily focus on the dyadic nature of interactions.

Returning to the notion of children negotiating the demands of moving between a parental relationship at home and pre-school, unveils a challenge beyond cultural disparity. The move from dyadic intersubjectivity at home to multifaceted relationships in a group setting draw into view the level of complexity demanded of young children's interactions as they join a group setting. Children are required to make a considerable leap in their intersubjectivity as they bring dyadic experiences to a group dynamic (Fernie et al 1993). Bringing existing skills and past experiences from home, children are required to negotiate play and friendship in a social context between participants in shared activities (Ogden, 2000) and generate a new intersubjective space (de Haan & Elbers, 2005). Exploring beyond dyadic intersubjectivity between parent and child, Geertz (1973) referred to renegotiation within a culture as a child navigates between position within that culture. Bauman (1999) made reference to the community being the bearer of praxis, as a source of information and an embodied culture of learning, also hinting at the complexities for children within a group setting.

Because of the demands of the transition between home and setting in such an early stage of a child's developing communication skills, Streeck (1993) proposed that children are more likely to draw on symbolic resources when in new and unfamiliar environments. This notion is supported by Rogoff (2003) who found that children are less likely to use speech in a new environment and also suggested that children seek out structure and assistance from those around them (1993). This draws me to the modes of communication that children adopt at pre-school and how this may change as children become increasingly familiar with the group. Multimodality, which includes modes of communication beyond speech, will be explored later in this chapter.

What is prominent is the implied significance of the context of the communication and the receiver of communication as well as the selection or suitability of the mode of communication. In this study of three and four-year-old children, this constitutes a demand for a significant set of competences in the children, in a complex and changing sociocultural context, quite a myriad of change from a dyadic intersubjective pattern of communication at home.

I will explore the culturally situated nature of interaction and learning, below. Prior to this I will explore the selected theoretical lens for the study, reflecting the significance of the physical space and social practice within that space.

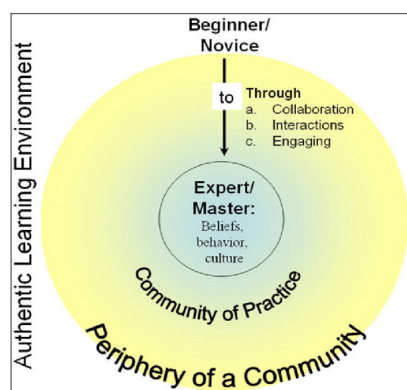
### Situated Learning Theory

Turning now to a theoretical lens for this thesis, I will explore a theoretical perspective which represents my ontological and epistemological position, which will itself be explored in the methodology chapter. A strong thread behind much of the supporting literature explored is Situated Learning Theory (SLT) (Lave & Wenger, 1991), described as learning located in co-participation, rather than in the heads of individuals. An element of SLT is Legitimate Peripheral Participation (LPP), which refers directly to acquiring a skill ‘by actually engaging in the process’ (Hanks, in Lave & Wenger, 1991; 14) alongside an expert. I will refer to SLT and LPP interchangeably.

*‘The social relations of apprentices within a community change through their direct involvement in activities; in the process, the apprentices’ understanding and knowledgeable skills develop’*

(Lave & Wenger, 1991: 94)

This extract from Lave and Wenger’s seminal work summarises the significance that this book has had on much of the literature around sociocultural development referenced in this thesis. LPP aligns with an interpretivist position, embracing the complexity and messiness of social interaction.



(Lave & Wenger, 1991b; 93)

The illustration above from Lave and Wenger’s publication demonstrates the concept of LPP as a movement from beginner or novice on the periphery of a group, towards the expert or



master, in the centre of expertise within an authentic learning experience. The authenticity of the learning experience is illustrated through collaboration, interactions and engagement within the group, referred to as the community of practice. In the context of early childhood education, this could be described as a living curriculum. The following five sections provide an overview and a critical discussion of LPP.

### A Living Curriculum

Lave and Wenger's (1991) SLT is presented and widely acknowledged as a theoretical perspective from which to value and consider the cultural nature of learning. This theory extends the notion of learning beyond the institutions of education and presents learning in the cultural embodiment of everyday context of social relations. Referring to the ancient learning method of apprenticeship, Wenger (2013) described such learning as a trajectory in a community, finding that a significant amount of learning does not take place as a result of didactic communication between teacher and student, but between peers as a living curriculum.

Wenger described the learning of concrete and abstract concepts via social interaction and within human practices, providing a sense of meaning in context from living in a community and providing an identity within that community. Further stating that,

*“knowing is embedded in a practical experience of meaning, an interpretation of the world, and ability to interpret the world in a new way”*

(Wenger, 2013)

Wenger raised some pertinent questions, such as ‘do children fake it before they understand it?’, referred to in the mimesis work of Wulf (2013).

### Master and Apprentice?

Within the concept of SLT is ‘legitimate peripheral participation’ (LPP), which makes specific reference to a master and an apprentice, where the apprentice is learning through

engagement in a contextual application alongside a master. The notion is extended to peripheral participants learning through culturally situated experiences, as an integral part of generative social practice, led by a master or expert. The peripheral participant over time moving from the periphery of the group to the centre of expertise, as a master themselves shifting power relations. Specifically bringing this theory to children, SLT presents the notion that children are peripheral participants in adults' social worlds. Although this thesis does draw on SLT as a theoretical perspective, it draws specifically on LPP and expands this notion by exploring the fluidity of children between apprentice and master and the relationship between adults and children, in their pre-school context (Lave & Wenger, 1991).

The simplicity of LPP, presented as a dyad between master and apprentice has been problematised in this study. Drawing on the notion of power relations within social interactions, challenges the narrative of adults with power and children without power. The study findings, presented in chapter five, disturb the political discourse of disadvantage and open up an alternative view of children and how they negotiate their everyday power relations as agential actors.

#### Communities of Practice in Early Childhood Education

Lave and Wenger (1991) are critiques of more structured learning environments, focusing their reproach mainly on the institutions and practices of formal education. They place value on learning within the myriad of social worlds and sub-cultures outside of formal schooling, as well as social and work groups of all kinds, referring to them as communities of practice. However, my intention is to bring that theoretical perspective back into a learning environment to view and value the informal elements and the social sub-cultures within the 'formal' space of education, viewing this model in the context of ECE as learning to socially interact through social interaction.

Huggard (2015) describes the concept as learning in context through collaboration and expert modelling, expressing learning as best occurring when it is embedded in an authentic situation as a community of practice, where a group of people are engaged in a collective

body of learning. Considering social interaction as praxis, where new knowledge is enacted, led me to view ECE settings as physical spaces where children can learn social interaction strategies from each other. However, being within the structure of a group setting, where children are learning how to interact with others who are also learning how to interact, the complexity and dynamic nature of this leads me to want to uncover the modes used and the movement of change. Huggard (2015) indicated a deeper learning through first-hand experiences. With this in mind and referring to Flewitt (2003) and the differing uses of speech with children at their nursery and at home, I am led to question whether the children are using a wider or even more complex set of skills at nursery.

### Criticisms of Situated Learning Theory

Some criticisms of SLT in an education setting are based around the problematic absence of an acknowledgement of the transfer of learning between contexts and in abstraction (Rui, 2008). Additionally others uncover a mismatch between real-world situations, such as a workplace, and a formal educational setting, citing more emphasis required on bringing real-world experiences into the classroom to aid contextual learning (Anderson et al, 1996). LPP is said to be in direct conflict with learning as recognised by psychology, by bypassing the individual mind (Ernest, 2002), however, due to the nature of social interaction learning within a social context, the educational element of this has been deemed negligible in terms of this critical view.

Additionally, in terms of LPP, literature demonstrates a frequent interpretation of the master in a formal education setting to be an adult teacher, whereas throughout this thesis the traditional assumption has been broadened to incorporate more experienced others, who are frequently children, reflected in Wulf's (2013) work around mimesis, highlighting the nature of teaching and learning between peers, which will be explored later. However, Wenger Trayner (2015) explored and acknowledged the need for a more dynamic understanding of learning.

Looking to other researchers who have used a SLT focus in their work in the context of education; Arnseth (2008) for example described SLT as a practical approach to education, with a social and cultural emphasis, distinct from the structuralist educational theories which place emphasis on mind and mental processes. Arnseth described stepping away from taking social structures or individual cognition as the primary constituents of educational phenomena and moving towards social practice as the primary object of inquiry. Arnseth's work has alignment with this thesis, in terms of a holistic approach and placing value on interaction as a focus for learning.

Prior to this, Cobb and Bowers' (1999) work explored SLT as being explicitly in relation to a physical space and participation in the social practice of that physical space (such as a workplace or a classroom). This is notable for consideration for different and varying contexts and the divergence of the culture within that space, reflective of the work of Flewitt (2003) and of Yahya and Wood (2017), where differences in children's interactions in separate spaces are viewed. Flewitt's work is extensively referenced and explored throughout this thesis and Yahya and Wood's work is explored later in this chapter. Furthermore, Cobb and Bowers (1999) go on to describe the core construction of participation as not restricted to face-to-face interaction but can be viewed as participating in social practices even when individuals operate in isolation from others, describing 'all activity is viewed as occurring in the context of social practice' (p 6).

Drawing on context, I will now reflect on culture and the recurrent and complex relationship between cultural embodiment, interaction and learning as culturally situated learning.

### Culturally Situated Learning

Considering the community around children and drawing on social anthropology, Bauman (1999) viewed society as a 'network of social relations' (p. 88) consisting of a web of interdependences developed and sustained through human interaction. Describing social relations as the hard core of actual interaction and social structure the hard core of social organisation, Bauman goes on to state that

*'The community rather than mankind, frequently identified with the human species, is therefore the medium and the bearer of praxis.'*

(Bauman, 1999; 96)

This indicates the cyclical nature of learning social interaction competences through social interaction, reflected by Verga and Kotz (2009) who suggested that there is a mutual influence between communication and social interaction, highlighting the problematic nature of defining these as separate.

Considering the influence of a child's learning in a cultural context and heavily influenced by LPP, Rogoff (2003) explored different experiences of learning in an indigenous culture, in comparison to the middle-class schooling practiced worldwide. Rogoff found that children from some indigenous cultures learned through experiences, of 'learning by observing and pitching in' (Rogoff, 2014; 70), by being present and involved in the day to day lives of the adults, rather than receiving instruction, referred to as a cultural paradigm (Correa-Chavez, Mejia-Arauz & Rogoff, 2015). Rogoff refers to 'middle-class' children who attend educational institutions as a 'factory' of education in comparison to learning in the home community. Rogoff's work raises a sense of an alignment between disadvantaged children in England and the reported indigenous children, in addition to the aforementioned deficit discourse around disadvantage in contrast to the narrative around indigenous cultures. Rogoff communicates a stark contrast between the learning experiences of the two cultures, writing warmly of the opportunities that indigenous children have in their immersive learning at home. Rogoff's work is acknowledged as influential in this study, however it is within the context of a pre-school setting, rather than at home or home community as with much of Rogoff's work, where learning through observing and pitching in is brought to the fore in the context of social interactions. Rogoff regularly links assembly-line instruction (Correa-Chavez, Mejia-Arauz & Rogoff, 2015; Rogoff, 2014) with educational institutions. In contrast, this study brings Rogoff's view of learning through observing and pitching in into a group setting, or group culture. Additionally, influenced by children's learning through immersive community practices, Rogoff (2015) argues for a move away from studying dyadic aspects of teaching. This area will be explored further below.

## Cultural Disparity

As explored in the previous chapter, the deficit discourse around disadvantage infers that there is a disparity between some home and school cultures which further marginalise the marginalised (Kay, 2018). Gutiérrez and Rogoff (2003) attempted to direct the discourse away from deficit-model thinking, raising questions around the characterisation of commonalities of learning approaches in disadvantaged groups. This shifted the gaze away from widespread assumptions that the characteristics of cultural groups are located within individuals, as 'carriers of culture' (p 19), towards a view of people living a culture. This nuanced change in thinking drives the potential to consider children as bringing experiences and skills but also contributing to their preschool culture. Corsaro (2003) described this appropriation as 'interpretive reconstruction' capturing the idea that children are actively contributing to cultural reproduction and change, whilst working within the changing framework or rules of a new culture. In the context of social interactions, this may be presented through the social repertoires children present. This leads me to further consider the depth of complexity for such young children and to value the impact and value that they have on their own culture, providing a view of pre-school as an opportunity to offset cultural disparities between home and school. This leads me to question whether children are free to bring their cultural repertoires into pre-school, to form their contribution in social interactions

Considering children as contributors of culture problematises cultural disparity as a barrier to children engaging in pre-school education and highlights an opportunity for children to shape and influence their pre-school culture.

## Pre-school as a Transformative, Authentic Learning Opportunity

Shifting the gaze from cultural disparity towards an opportunity to extend social interaction repertoires through apprenticeship, redirects the debate towards ECE providing an opportunity to learn in an authentic situation.

Brooker (2010) considered the transformation of children's participation in culturally valued activities as changing over time from that of novice to that of expert. Visiting the notion of learning through participation, Brooker suggested that children's enculturation in their home

communities will have taught them 'distinctive participation repertoires' (2010; 43). Referring to westernised artificial early learning environments, where conscious and unconscious educational beliefs are communicated through such resources as sand, water, blocks and paint and with beliefs grounded in the importance of play, Brooker's work built on the consideration that the creation of cultural disparity is from unconscious bias in teaching practices.

Building on Brooker and returning to the discourse of disadvantage and the inference that children from disadvantaged backgrounds are reported to lack elements of social interaction required to operate in a group setting, I refer to Greeno's (1998) work. Considering the view that one activity can influence a child's ability to participate in another and that learning can be transferred from one community to another, Greeno supported the notion that the education gap is a cultural gap formed early in a child's 'formal' education. Describing a child's experiences of home and pre-school, for example, being so very diverse that a child's past experience differs significantly enough to require a cultural leap in the new environment of school. Hedges (2015) describes this as children having 'to learn the educational ways and expectations (i.e. repertoires of practice) of a dominant culture' (2015; 85).

Willes (1981) described a child in a setting as having a new role, where they have to find their existing resources and to extend those to become a learner in an institutional setting as one of many children. Willes also described a child learning the rules of the institution; describing turn-taking, competing, asserting rights, giving ground and the consequences of breaking rules (p51), making close reference to behaviour that is acceptable and unacceptable. Similarly, Brennan (2008) referred to collective reconstruction where a child draws on meaning from a reality context and renegotiates an abstract meaning into the new context. This is described as challenging in such a group institution where children are required to suspend their own perspective and listen and respond to others. Donaldson (1992) previously described this as the 'construct mode' in play where;

*'we are no longer restricted to a consideration of episodes in our own experience - or even those we heard about from others. We start to be actively and consciously concerned about the general nature of things'*

(Donaldson 1992; 80)

Considering the signs and symbols that the children may use in their social interaction repertoires at pre-school, Geertz (1973) presented socio-culturally situated sign systems and discussed how they are created, shared and recreated, interpreted and renegotiated by the members of the culture; creating sociocultural webs of meaning which are central to children's interpretation of the world they inhabit. This further supports the notion of children contributing and influencing their ECE culture through situated social interaction strategies, learned through immersion in the culture of pre-school.

#### Cultural Brokers – A Third Space Between Cultures

Flewitt (2003, 2006) found that children used distinctive modes of communication when in a group setting compared to home, suggesting an increased use of speech at home. This is an interesting addition to the debate of cultural differences, suggesting a direct influence from culture on social interaction strategies. Gutiérrez et al (1997) explored a similar notion, describing conflicting communities and depicting people as being 'always in a process of translation' (p 376). This was described as a 'third space', where 'children can develop a tool kit, which is a set of linguistic, cognitive and sociocultural tools and practices, that enhance learning' (p376). The third space signifies a conceptual position between physical spaces, where children become cultural brokers as they move between and embody those spaces (for example home and setting), therefore introducing cultures in the form of a cultural broker.

Yahya and Wood (2017) also explored children bringing their funds of knowledge into a setting and using this in play to bridge the gap between cultures. Likewise, Chesworth (2016) described children as bringing funds of knowledge from their home, classroom and community to reconstruct in their play. For example, exhibiting rituals and interactions from home cultures in sociodramatic play and using this as a cultural broker (Walker and Nokon, 2007) to bridge the space between home and pre-school. These studies support the notion that children bring historical understandings to a new context or culture, which produce a transformation to influence and embody that culture. This is an engaging viewpoint when considering children's social interaction strategies and highlights a consideration for children transferring social interaction rituals and repertoires between home and pre-school cultures.



## Children Becoming Cultural Brokers

The use of interaction through play for cultural broking and the engagement of suitable repertoires within differing third spaces, hints at the complexity of the demands of children in their development of social interaction, referred to by Lave and Wenger (1991) as a 'multiplicity of relations' (p114). Rogoff (2003) referred to this as bridging and suggested that 'bridging between meanings relies extensively on nonverbal means of communication' (p 286). This notion is a possible explanation as to why children have been found to reduce their use of speech when in nursery (Flewitt, 2003), and in turn increase their use of alternative modes (such as body movement, gesture and use of artefact), reflective of the suggestion of children becoming cultural brokers.

## Social Compliance and Social Inclusion

Returning to the concept of cultural disparity being a source of an educational gap for some children led me to consider the nature of social non-compliance, as a culturally influenced term. Bringing into question whether some children's social interaction strategies are judged as unacceptable or outside of cultural norms. Briefly discussed in the previous chapter, poor behaviour has been associated with disadvantage for many years (Lewis, 1969; Jimenez et al, 2016). Described as having reduced emotional regulation or emotional competence, disadvantaged children are reported to have an increased propensity for negative peer and adult interactions (Izard et al, 2008). Drawing on the aforementioned work of Gutiérrez and Rogoff (2003) this concept could be reflective of a disparity in cultural expectations resulting in some group setting not matching a child's third space repertoires, as they attempt to bridge the cultural divide as a relative newcomer to the group.

Referring to social interaction as social competence, Tsangaridou et al (2013) described two aspects of competence, one being social skills (such as helping and cooperation) and the other being social success (such as peer acceptance and popularity). The claim is that successful social interaction is a child's ability to negotiate relationships and behaviours with others in ways that are acceptable to the context. Bruner (1984) preceded this by describing the process of learning how to negotiate communicatively as the method of entering a culture. Referring to individuals as learning boundaries and possibilities, Edwards and Knight (1994) described children as forming their pupil identity as a social role. Whereas Turiel (2010)

explored the problematic nature of viewing socialization as compliance while disregarding the complexities of accounting for children's social repertoires, implying that social interaction is only valued when applied as compliant. Similarly, having interactive skills and acting on them in culturally inappropriate ways was explored by Löfdahl (2001, 2002, 2006), finding unpleasant power and discomfort in children's play as they struggle to position themselves. Löfdahl suggested that to understand children's actions in play, we should pay attention to the way they communicate. Similarly, exploring this as children developing agency in the form of resistance, Rainio (2008) portrayed a typical procedure in classrooms as viewing resistance and reluctance as behavioural problems. Reframing this into a positive discourse, Rainio described a struggle for a child in a marginalised position to be searching for their voice. This led me to question whether elements of unacceptable behaviour, when framed as experimental, agential social interaction strategies, may shine a light on cultural disparity between home and pre-school and provide valuable insight into a child's developing interaction strategies.

Drawing on Sorbring, in this study agency is defined as 'children's capacities to act constructively on their own behalf and on behalf of others' (2019; 2). Van Nijnatten describes children's agency as a 'complex matter, a human attribute displayed in individual development, in human interaction, in social structure' (2010; 2). Furthermore, Bolin extended this notion describing children as 'interpretive agents with legitimate knowledge' (2019; 2). Kuczynski, Pitman and Twigger (2019) problematised adults' desire to suppress agentic behaviour of children as a source of conflict, describing a tension between agency and structure (Morrow, 2003), illuminating a relationship between culture, society, institutions and power inequalities with children's agentic presence. Therefore, further considering the political discourse of education, with an overt governmentality of measure, the notion of children's agency within that discourse could be veiled behind a desire for compliance. This may in turn devalue agency if interpreted as non-compliance, further fuelling the political discourse of without education, or power.

White (2016) considers agency as one of the aspects of human encounter, alongside, emotion, body and consciousness. Similarly, Randall (2014) presents the notion of children's agency, enacted through both the physical space of play and interactions within play, in the

absence of adults; viewing children as not only active participants in their own play but also as independent agents with decisions, choices and actions created to give meaning to their play. Wood (2014) explored agency and choices, expressed in multiple ways in play, and children expressing their interests as means of constructing peer cultures and identities. Similarly, Canning (2019) explored play through an empowerment lens, considering the dynamics between peers and between children and adults. She found a fluidity to children's agency, dependent on multiple factors, where they used skills and initiative to negotiate their play.

## Conflict

Exploring the notion of unwanted behaviour, conflict talk has been a point of focus for those interested in social cognition.

*'Conflict talk is an especially useful forum for investigating children's social understanding: Their knowledge of social rules can, for example, be revealed in their excuses and justifications, and their grasp of the other person's desires, expectations and beliefs in their attempts to conciliate and negotiate.'*

(Dunn, 1996; 191)

When examining forty pre-schoolers' use of mental state talk in peer conflicts (using such terms as want, need, sorry, sad) Comparini et al (2014) viewed 'perspective taking' as a form of social understanding, rooted in interpersonal activity, learned through everyday social interaction with others. They argued that disputes between children can have a positive effect on cognitive and communication skills and thus on development of social knowledge. They found that children use mental state terms in play to organise one another and to further their interactive goals and social understanding. This is interesting when examining the value of disputes between children and contrasting the characterising of such interactions as unwanted behaviour in Brooker's (2010) work.

This led me to explore the context around adult intervention in peer to peer interactions, and whether adult intervention can prevent children from exploring a route to social understanding in group setting environments. This forms a line of enquiry around the pedagogy of the setting and its alignment with or flexibility for children's inherent cultures and repertoires between peers.

These studies clearly indicate that there is a lot for us to value in children’s interactions. In light of unearthing the value of multimodality as communication beyond speech, I considered the nature of peer to peer interactions and their contribution to children’s development.

*‘agency develops gradually as the person participates in the community and thus gains understanding, experience, and knowledge of its practices as well as responsibility for the community and access to power’*

*(Rainio, 2008; 118)*

Considering this in the context of LPP, Rainio described a child searching for membership in a ‘relationship between the subject and the community in which he or she participates’ (p118), through a collection of experimental communication modes, reflective of a performance repertoire.

### Performance Repertoires – Mimesis

Considering performance repertoires, Wohlwend (2009) explored mediated discourse and how ‘social actors use mediational means to transform mediated actors into social practices’ (p230), illustrating this through, an activity model, Diagram 1 below;

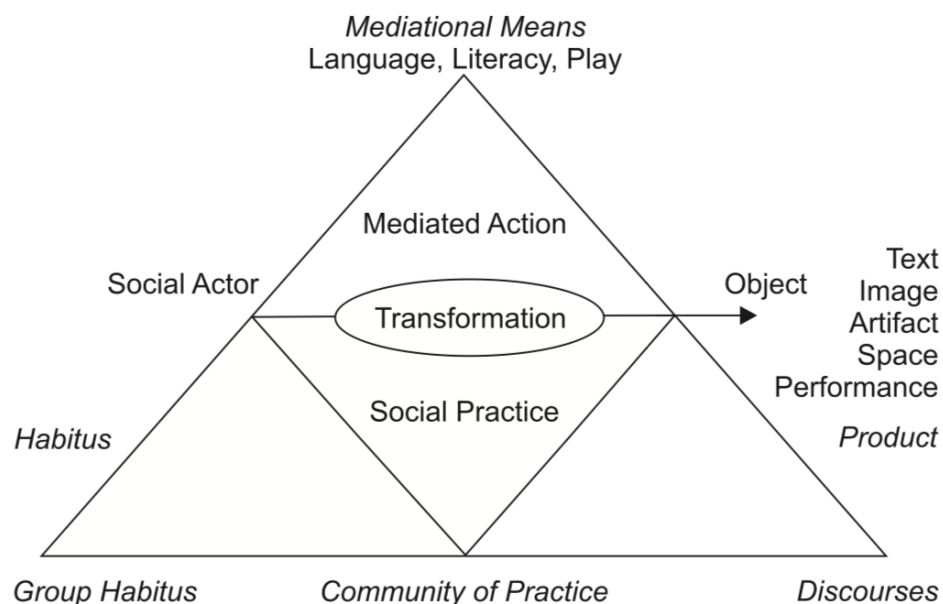


Diagram 1 – Mediated Action (Wohlwend, 2009; 230)

Wohlwend's activity model describes a child bringing together a physical act and a material object to create a performance or an artefact and referring to this as a 'mediated action' brought through social practices. Reflective of the aforementioned transformation from Brooker (2010), Wohlwend demonstrated the complexity of interaction in culturally varied environments and the diversity of outputs displayed to the intended receiver. If the notion of multimodality is used to extend Wohlwend's model, in place of language, literacy and play, this contributes further to the debate of the transformative nature of children's funds of knowledge and their application to cultural broking.

Identifying a specific element of transformative learning, Wulf (2013) developed the concept of mimetic learning, reflective of Bandura's (1961) social imitation, describing mimetic learning as a basic form of cultural learning which is multimodal but in advance of meaning-making, which utilises the senses and the body to direct or be directed by other people whom they wish to resemble. Wulf described children as coexisting with significant others and mimicking them to learn the social practices through participation before moving on to acting independently. Describing three aspects of multimodal learning, as mimesis, performativity and ritual, Wulf's work embodies the significance of the cultural nature of learning and also the notion of multimodal learning processes.

Wulf viewed performativity as a pedagogic practice, placing value on all learning environments, focusing on how representations and interpretations are employed in learning. With emphasis on enactment, performance and reality-constituting character, Wulf investigated the relationship between physical and symbolic action. Rituals are described as being significant for children's multimodal learning processes, such as structures of the day, breaks in the day and regular celebrations, viewed as social and creating a community in which children have their place. Wulf also described power relationships playing an important role, through regularity and repetition, in confirming and modifying relationships.

*'Rituals constitute the social memory of communities. They bring past events back into the present and turn them into a base for future action. They evoke a sense of continuity for the children and convey a sense of security and reliability.'*

*(Wulf, 2013; 92)*

The mimesis, performativity and ritual elements of this work resonate in the context of both peer to peer and adult to child interactions. I was encouraged to regard this when observing multimodal repertoires and the cultural context surrounding that interaction.

### Peer to Peer Interactions

Many developmental theories focus on the significance of social interaction between young children and adults rather than children and their peers (David, et al, 2016). This focus is also reflected in the deficit discourse around parental impairment and lack of resources weaved into the political discourse around disadvantage (Azzi-Lessing, 2010) and the affect that this has on children's development.

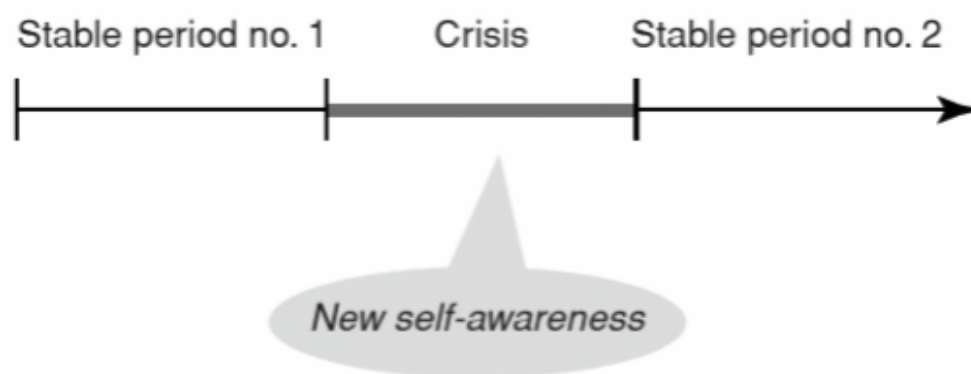
Interactions provide children with opportunities to share their thoughts and ideas and to solve problems through negotiation. If children are provided with a variety of situations alongside peers who can provide challenge and support, children's cognitive structures can be changed and enhanced (Cullen and Greene, 2011; Kim, 2012; Williams, et al, 2007). Dalli et al (2011) advocated that social interactions between peers can promote children's ability and desire to interact and learn from others, stimulating social, physical, language, cognitive and emotional development. This led me to seek and value ways in which children can support their peers' developing social interactions, in whatever mode they take.

Searching literature on children's friendships, Zeece (1995) observed the forming and fostering of friendships in ECE and explored the positive impact that these friendships can have on children's development, including conflict resolution and problem-solving. She observed the developing sophistication of children's notions of friendship, as they conceptualised reciprocity in concrete ways, and explored changes as children developed mutual cooperation, such as sharing and thoughtfulness. Similarly, considering the discourse of free play, Wood (2014) explored the social interaction, interplay and intersubjective skills of pre-school children. She observed children demonstrating the management of power and relationships through strategies such as inclusion and exclusion, challenging of rules, seeking affirmations and support, demonstrating empathy and cooperation. She found that children

were not only influenced by their environments but acted in ways that changed their environments.

Considering peer to peer interactions as a means for learning led me to Fleer's (2009) notion of crisis between stable periods, illustrated below, where a child has increased opportunities to achieve a new self-awareness in a peer to peer scenario, due to the notion of increased crises. Although Fleer's work was in relation to adolescents transitioning into adults, it is closely linked to Vygotsky's (1998) work of a 'critical age' (p168), reflective of the transition of younger children as they move away from reliance on adults, towards other children and into a self-awareness and independence in their social world.

Diagram 2 – New Self Awareness

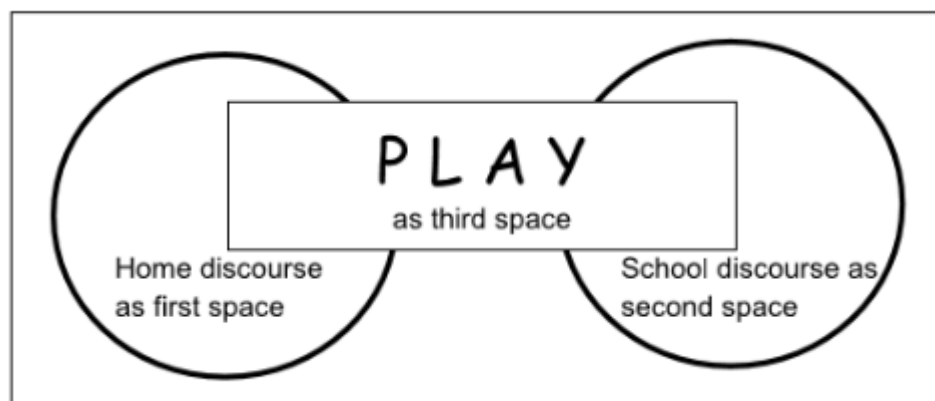


(Fleer, 2009; 172)

Vygotsky's term 'critical age' is reflective of the 'crisis' in Fleer's diagram. However, I find the term crisis problematic, indicating a negative experience. I am inclined to use a term such as 'transformation' reflected in Wohlwend's model (Diagram 1), allowing the notion of this period being a constructive experience, leading to a transformation between stable periods. This highlights context around a transformation; asking 'what were the circumstances surrounding that period?'. Rogoff (2003) described such a period as a time when explorations become more important than closeness from a caregiver, reflective of the aforementioned change in motivation.

In a comparable discourse to transformation, Yahya and Wood's (2017) aforementioned 'third space' is a similar conceptual framework. Presented as an autonomous bridge, accessed through play used by children as a tool to bring together the first space (home) and the second space (school) to form new understanding and knowledge. This describes the use of existing knowledge in a new context, reflective of the aforementioned notion of children bringing funds of knowledge to a new physical space or from one stable period to the next. Considering educators reflecting children's interests in practice, through child-led and adult-led activities, to support children in this third space, the concept is presented as a pedagogic tool, rather than a problematic discourse.

Diagram 3 - Play as Third space



(Yahya & Wood, 2017; 308)

Considering to the notion of children as both teachers and learners; both masters and apprentices, I brought these concepts together and considered how children support each other through different activities and approaches in pre-school; how they negotiate and make choices in their environment and community and how they lead and influence that same environment and community through transformative learning.

### Beyond Speech – Diverse Modes of Communication

Described as a new dimension in understandings of learning processes, Flewitt (2006) asked how and why children engage certain modes of communication to express meaning, in particular in different cultural settings. Pink (2001) described the exploration of materials,



performed narratives and discourses, being interwoven and made meaningful in relation to social relationships. Interestingly, Sylva et al (1980) described a child at preschool as;

*'the typical child is careering through the garden on a bicycle, blowing bubbles at the water table, or quietly watching another child paint. He is not yet a conversationalist at preschool, even if he is at home'*

*(Sylva et al, 1980; 81)*

This description resonates with me and extends the notion of interaction between young children as beyond that which is apparent and verbalised.

Re-examining the value of gesture, in the field of psychology, Goldin-Meadow (2000) argued that gesture gives researchers and practitioners 'privileged access' to information that children know but do not verbalise. Moreover, that gesture allows a speaking child to convey meaning beyond their vocabulary. Interestingly, when discussing the problematic nature of analysing gesture, due to idiosyncrasy, Goldin-Meadow added that gesture does not follow socially agreed codes to the extent that language does. This led me to question whether the deficit model of social compliance and educational attainment excludes other, less valued modes of communication, reflective of Tizard et al's (1984) work, and their place in social interaction. Looking at wider or more diverse ways in which children interact brought me to multimedality.

### Multimedality

The literature on multimedality is wide and numerous; Bateman et al (2017) described multimedality as 'a way of characterising communicative situations... which rely upon combinations of different 'forms' of communication to be effective' (p7). For the purposes of this thesis, I wished to draw on a social semiotic multimodal approach to illuminate signs of learning in a social context (Bezemer et al, 2012). The value of this in a ECE context is to encompass meaning-making in all communication modes (such as gesture, gaze, body movements and artefacts) which reflect the embodiment of young children's social interaction (Potter & Cowan, 2020).

*'Children act multimodally, both in the things they use, the objects they make; and in their engagement of their bodies: there is no separation of body and mind'*

(Kress, 1997; 97)

Kress' (1997) seminal work on multimodality as social competence explored and valued alternative modes of communication in children's meaning-making, beyond written and oral communication, through such modes as body language, the use of space and the creation of objects; as a window into children's thoughts and meaning. Likewise, Franks and Jewitt (2001) placed enhanced value on alternative modes of communication, suggesting that action and speech realise different yet complimentary meanings, having different 'functional specialisms' that 'interweave to shape pupils' views of the world in complex ways which language alone cannot realise' (p217). This led me to reconsider the deficit model of social non-compliance as a model of homogenisation and of misalignment with the context, and therefore of multimodality providing a wider lens from which to view children's interactions more diversely. Likewise, looking critically at the model of language used in ECE policy, Hackett et al (2020) recommended that practitioners pay less attention to the spoken word in favour of multisensory, collective events within context.

Flewitt is a significant contemporary voice for children's multimodality, with her work having great influence on this thesis. Taking culture into consideration, she discussed fluidity of meanings of different semiotic modes that carry socio-culturally different currencies. Her notable work of 2003 'Is Every Child's Voice Heard?' generated debate in considering the whole child when accessing their communication. Flewitt wrote about the accessibility of the spoken and written word, suggesting these to be perceived highly prized forms of communication, which leave alternative forms of communication (such as body movement, facial expression and gaze) being missed, despite being key in a young child's communication toolbox, supported by Campano and Law (2011). More recently Flewitt (2005) progressed this notion, raising its significance for understanding young children's learning and expression, also reflected in the work of Bearne (2009).

### *Multimodality - A Diverse Lens*

Kress saw the written and spoken word as a method of meaning-making but as a managed method, having them considered for their audience and for their interpretation, making reference to 'middle class' parenting and expectations. He shared his interpretations on the complexities of children's thoughts and meanings as they used multimodality through play, a purer form of communication which has been less affected by the wider communication culture or cultural norms and expectations.

*'The signs which children make are, despite their differences from adult form, fully meaningful in every sense. The child's actions have to be understood as productive and transformative of their own representational resources, as well as of those of the community around them'*

(Kress, 1997; 17)

This is a pertinent notion in the context of this thesis, with disadvantaged children reported to have less speech than the wider cohort; devaluing or lacking in acknowledgement of the unspoken and unwritten modes of communication despite children reported to have great capacity to communicate in alternative modes. More recently, the literature is speckled with a similar notion for immigrant and multilingual children (eg Campano & Low, 2011). Moreover, Flewitt and Cowan (2019) found that practitioners failed to capture non-verbal signs of learning, recommending the use of video to capture the holistic nature of such.

### *Multimodality – Unseen, Unassessed and Devalued?*

Flewitt (2003) wrote of the problematic nature of early education being driven by measures of assessment, and the ease to which the spoken and written word are measurable, thus fitting into this concept easily; whereas wider forms of communication can be more difficult to witness, understand and measure and thus can be less valued. Flewitt called these 'product orientated pressures' (2003; 208) suggesting that not only do they detract practitioners from children's processes of learning, such as how children explore and express their understanding in the day to day of early education, but they are also under-researched. Flewitt recommended that early years curricula should articulate and value the range of ways that children communicate and express meaning.

Flewitt (2006) also questioned the adequacy of contemporary research in explaining the phenomena that your children talk less in an ECE setting than they do at home. Two decades previous Tizard and Hughes (1984) went so far as to state the incompatibility of working-class homes and ECE settings in nurturing children's willingness to speak. However this was critiqued as an over simplistic middle-class misinterpretation of the situation by Walkerdine and Lucey (1989). Flewitt has challenged some notable and influential research over the past twenty years for not embracing multimodality, such as the EPPE report (DfEE, 1999, 2000, 2001) and REPEY project (DfES, 2002); stating that the recording and analysis of children's physical and representational communication methods have not been valued, due to their problematic nature of analysing.

This led me to problematize the focus on speech in the current political agenda, above other forms of communication, and to consider whether children are demonstrating different modes of communication which do not fit neatly into the current socio-political education agenda in England, directing this study to explore a more diverse range of modes of communication.

#### *Multimodality – A Holistic Perspective for Legitimate Peripheral Participation (LPP)*

Flewitt (2003) referenced Lave and Wenger's LPP work in the context of an older child referring to a younger child to 'legitimise' (p217) their actions. Observing younger or less experienced children negotiating their way into play or spaces by imitating the behaviour of others who had 'territorial claims' (p219) while using less speech, Flewitt hypothesised that that older children struggled to understand younger children's speech and thus the younger children develop alternative strategies to join play.

Significant for this study, Flewitt indicated that children may choose to use alternative methods of communication in a group setting, not because they are unable to speak, but because they choose not to speak in this context. Flewitt also indicated that a reduction in the use of speech does not imply reduced meaning-making in pre-school, but of co-constructed meanings through gaze, facial expression and body movement. Rather than

pathologizing children's silence in preschool, the multimodal approach used in Flewitt's work gave insight into more diverse modes used by children to express themselves, acknowledging that many of these go unrecognised.

## Conclusion

In this chapter, I have explored social interaction and highlighted the complex nature of understanding children's learning or engagement in social interaction beyond their immediate family at home. Presented as a culturally situated communication, rather than a dyadic message and receipt, this highlights the significance of the receiver and the context of the interaction and thus a child's ability to consider these when selecting how to interact. When further considering children in a group setting, the complexity of this started to become apparent as the children are not just required to respond to others or create interactions with others, but that those 'others' are also learning the same.

Drawing on social anthropology, the contribution that children bring to culture was also explored and opened up the notion of children as teachers as well as learners. This led me to the theoretical lens of Situated learning Theory (SLT), where the cultural embodiment and the complexities of a living curriculum for young children were explored, as children participate in and contribute to the social practices of their physical spaces.

The nature of cultural disparity for some children was framed as a transformative learning opportunity, rather than a problematic education gap. Viewing children's agency and power and their potential to be cultural brokers both conceptually and physically, was explored, with the opportunities and complexities that this presents in a transformational and transforming space.

Kress' work (2001) presented a holistic, social semiotic approach to viewing multimodality, which has influenced the methodology of this thesis. Considering the holistic nature of children's interactions, I was drawn to explore performance repertoires as mimetic rituals. Considering reciprocal learning of repertoires, the contribution that children bring to ECE culture was also explored and opened up the notion of children as teachers as well as learners,

drawing on social anthropology. Considering children learning from peers, the notion of the transformative period was explored, as children are motivated to move away from their care givers and enter a new self-awareness period in their development, reflected as a series of small crises or transitions.

Initial considerations for contributions to knowledge include the; the notion of peer to peer teaching and learning in a complex and dynamic culture of LPP, the value of multimodality alongside speech, instead of a precursor to speech and children with agency and power as cultural brokers presented through performance repertoires.

The following chapter moves on to methodology, describing how this thesis was conceptualised and undertaken, including ethical considerations for research with young children.

## Chapter Four - Methodology

### Introduction

The purpose of this chapter is to provide explanation and justification for the research methodology and methods adopted to answer the research questions.

The research question and sub questions are as follows:

#### Main Question

What is the nature of social interaction of disadvantaged children in a mixed-age pre-school?

#### Subsidiary Questions

- 1) What strategies do children adopt when initiating or responding to social interaction?
- 2) Does this change over time?

In seeking to answer the research questions, this study aimed to contribute empirical data to gain insight into the strategies that pre-school children adopted as they embarked in social interaction. Specifically, the focus of enquiry is upon how children responded to or initiated social interactions through their regular pre-school day. The research explored the interactions of four children over three academic terms, spanning two academic years, to identify and interpret how their strategies changed over time, in a situated learning context.

The chapter starts with the research approach, followed by the research strategy, the research location and sample selection, tools adopted, data analysis processes and ethical considerations (including research with young children and insider research). The study employed observational research methods in a case study design, influenced by ethnographic methodology. Qualitative methods of audio-visual recording of observations, followed by sharing of those videos and generating discussion with practitioners and parents were employed. Episodes were coded using a legitimate peripheral participation (LPP) lens and juxtaposed to highlight changes over time.

## The Research Approach

### Perspective and Context

This research adopted an interpretive perspective. Meaning that individuals' interpretation and knowledge are influenced by their lived experiences, including cultural, social, historical and political (Nicholson & Maniates, 2016). In this case, the individuals included the researcher as well as the view of the children involved in the research, expressed through their daily actions.

Viewing learning as social, rather than purely psychological (Vygotsky, 1978), directed me to use methods that are appropriate for a sociocultural framework, such as qualitative data, case study methodology and small-scale sample; where my focus was on gaining insight into the complexities of interactions within particular sociocultural contexts; moving away from the positivist use of rational argument to confirm a psychological theory of individual children's social development or view the process of knowledge generation as objective (Heck, 2004).

This study was exploratory, driven and influenced by a motivation to engage critically with the current English political agenda, juxtaposed with day-to-day practice in an ECE setting in an area of disadvantage, previously referred to in the political context chapter. From the inception of this thesis, I sought to contribute empirical data to contribute to the narrative of how children who are living in a disadvantaged community are understood (Bertrand, Perez and Rogers, 2015). I wanted to place children's experiences of developing social interaction strategies into the corpus, with subversive aims of challenging the accepted classism within the political arena (Gorski, 2006; Pincus & Sokoloff, 2008). I also wanted to take the opportunity to interrupt my own perspective of the everyday to make the familiar unfamiliar (Osgood, 2016). Additionally, I wanted to take a view over time, to observe the changes that children may experience as they engage in and develop their performance repertoires over two academic years.

In this section, I discuss the epistemological and ontological assumptions behind this methodological approach, considering the implications for the validity of this study, the positionality of the researcher and ethical considerations.



## Researcher Reflexivity

Considering the intrinsic relationship between the researcher, the research context and the methodology, the significance of researcher reflexivity is necessary to visit. One category of reflexivity is defined as 'methodological self-conscious' (Lynch, 2000; 29). Lynch used this to inform researchers to be conscious of their own prejudices and assumptions. In this thesis, prejudices, as an insider researcher for example, are acknowledged and presented transparently and unapologetically, as a strength of the research. The challenges of being an insider researcher are acknowledged and explored below. The interpretivist paradigm concedes and values the unique nature of the field of vision of the researcher whilst acknowledging its limited viewpoint. This study intrinsically considers the notion of power, from the political discourse of power and the prevailing deficit discourse of disadvantage, through to the analytical framework and theoretical lens informed by power and agency.

As a practitioner, my setting is based in a geographical area, where there is a high concentration of children who are categorised as 'disadvantaged'. Within the policy narrative of disadvantage, some of the measures used to identify disadvantage include, (amongst others) individual level indicators, such as low household income; lack of parental education; poor parental mental health; domestic violence; poor housing; chaotic lifestyles; imprisoned parents; absent fathers and unhealthy diets. Also, neighbourhood level indicators, such as high levels of crime and antisocial behaviour.

I read influential report headlines such as 'less than half of the poorest children in England are ready for school' (Social Mobility and Child Poverty Commission, 2015; vi) describing social mobility as the 'new holy grail of public policy' (p iv) and I feel a sense of responsibility to identify and close the inferred education gap with the children I work with. However, when I juxtapose these reports with my everyday experiences of the children, the correlation raises doubts over the validity of the education gap.

Anecdotally, I can see on a day to day basis that many, certainly not all, of the children who attend my setting could be viewed through the lens of normative national assessment

frameworks as unable to regulate their behaviour; having low levels of speech and demonstrating low levels of wellbeing, which is reflective of the image of disadvantage portrayed in many studies (e.g. Assi-Lessing, 2010; Bolin, 2019; DfEE 1999, 2000, 2001). This leads me to consider my involvement in perpetuating the deficit discourse as I am led to frame children within this narrative in everyday practice. However, I do see the same children with high levels of energy; enjoying physical play; thriving in an outdoor learning environment; who are imaginative; who are creative; who thrive on praise; who enjoy a hug; who learn sign language so they can communicate with their friends; who enjoy showing their parents what they have made and what they can do. This highlights a conflict between two narratives, one informed by the policy discourse and the other through lived experiences of everyday interactions.

With this in mind, I was determined to find out what these children can do, rather than what they cannot do, to influence a shift in the deficit discourse to a diversity discourse. For this, it was key to involve children in the research, to value them as agential actors with their own narrative (Tisdall et al, 2009). I am inspired by the notion that cultural differences can contribute to the 'education gap' and that children's development is measured with a 'middle class' prominence. The education gap reflects Foucault's (1977) enclosure of power in education and is threaded through the political narrative of power and dominance in ECE, as I measure children against successes and failures of a narrow, homogenised set of normative developmental expectations. Smith (2010) broadens this notions and suggests that conventional constructions of childhood could disadvantage children, likening childhood to prison as a life with set limitations.

I felt that I had the opportunity to use Foucault's notion of governmentality through political power to problematise the resulting homogenisation of not only disadvantaged children but of all children. I was motivated to counter the deficit discourse and highlight the presence of agency within pre-school children's 'small-scale, everyday forms of persuasion' (Gallacher, 2008; 503) as a counter-narrative to the grand socio-economic narrative. On reflection, I can see that my strong response to this discourse has directed and influenced my research. In particular, I have been motivated by the opportunity to show an element of what happens

within the field of ECE within the context of a nursery based within a so-called 'disadvantaged' area, to contribute my experiences to knowledge to contextualise the subjective words of policy.

Considering my own location within the structures of power and wider societal structures, I was born in a North Eastern English town of high deprivation. My parents were transported from a post-war working-class poor-quality housing (of today's standards) to the more affluent suburbs (Todd, 2008) where I experienced childhood. This brings 'disadvantage' close to home, being one generation away. Studying at doctoral level highlights the notion of strong associations between education and success (Arnold et al, 2008) as opportunity, rather than intrinsic. This life experience has provided me with a vantage point from which to challenge political connections between the deficit discourse of disadvantage and the reality of my family and my practice (Archer, 2010).

Drawing on Foucault's everyday notion of power, viewing myself in a position of power as well as insight, influenced my desire to challenge the Government's view of the social panacea of breaking the cycle of poverty (Osgood, 2009). I wished to illuminate and problematise the role of education, as a socio-political construct that perpetuates power dominance through its socio-economic allegiances (Foucault, 1977), reflected in the school readiness agenda (Gillies, 2014) and the 'under-achieving children' narrative of parenting (Pascal & Bertram, 2013, p.12) and to bring an alternative view directly from the front line to academia.

An acknowledgement of the failures of education policy is reflected in my own bi-lingual practice, a term used by McNair & Powell (2020) to describe the action of practicing within a personal pedagogy alongside a ineffectual political discourse. I negotiate and lead on pedagogy that both achieves statutory requirements and, through interpretation, places value on children's inherent agency and diversity. As a result, my practice and influence on my own settings are to value the whole child and their family, as individuals. This is in spite of a changing political landscape with diverse ideologies, not because of political ideologies (McNair, 2019), influenced by an understanding of the contextualisation of knowledge, of my own education and success, being affluent and educated, yet one generation away from poverty, in today's standards.

On reflection, this bilingual practice is present for me when discussing children's progress with parents and with practitioners within this study. I believe this to be evident in the nature and content of the interview dialogues, which highlight two approaches, influencing the language of those interviews. Finlay (2002; 11) refers to this as the 'need to represent multiple voices' in uncovering different agendas.

My practice, and that of my team, continues to raise questions as the language of the political discourse steals moments of discussion and practice. We continue to correct ourselves or readjust our thinking towards the holistic and the individual, widening our view to a broader notion of interaction.

My reflexivity as a researcher is explored further in the following sections: Positionality, Insider Researcher and Paradigm.

#### Positionality

*'With whose blood were my eyes crafted?'*

(Haraway, 1988; 585)

Haraway's words highlight to me the significance of positionality in this thesis. Positionality describes an individual's worldview, the position I have chosen to adopt in relation to a specific research task (Savin-Baden & Howell Major, 2013), my ability to understand perspective, location and embodiment and the effect that this has on my research (Foote & Bartell, 2011). My world view concerns ontological and epistemological assumptions about human nature and agency (Sikes, 2004), influenced by beliefs and values including gender, sexuality, faith, location, politics, race, social class and status (Wellington et al, 2005). Positionality is normally identified by locating the researcher in relation to the research subject, the participants, the context and the process (Savin-Baden & Howell Major, 2013) and requires a researcher to acknowledge and make allowances for their views, values and beliefs in relation to the research process and findings.

Considering my positionality in the context of this research, many aspects of the research process, from selecting the research subject, adopting a theoretical lens, drafting the research question, through to research design, data collection and analysis, have all been influenced by my positionality and subjectivity (Ball, 1990). Significantly, not only was I an insider-researcher but I was also the designer and influencer of the situation or the case. These aspects of my research are acknowledged as present throughout the research process and the research findings. I therefore, did not see myself as taking a world view for the purposes of the research, but understanding my world view, as an insider researcher.

### Insider Researcher

Insider researcher is steeped in the history of both anthropology and sociology, one definition of insider researcher is 'conducting research with communities or identity groups of which one is a member' (Kanuha, 2000; 440). A frequent occurrence in education where teachers carry out research within their own classroom or setting, this also reflects my situation for this thesis, as I own and work in the setting used for the study.

Considering the research question and the context of pre-school children's social interaction strategies, it is clear that my insider knowledge has been used to instigate and direct the research subject. My aforementioned insight into the narrative and political discourse around disadvantaged children, has provided me with the motivation to share the interpretation of my insight and contribute to the discourse.

Hanson (2013) explored five aspects of insider research; proximity, multiple roles, internal politics, ethics and voice as she explored the complexities and nuances of insider research. She also discussed the simpler process of access and developing a deeper level of trust. Reflecting on this, my existing relationships with the children has given me access in many ways to record their quasi-naturalistic interactions. Of course, I am still an adult in their space and this will have affected their actions, but no more so than any other adult in the setting. As a practitioner, I view myself as an insider (in terms of proximity to the children and the affect that I would have on the children in being themselves at nursery), but from the perspective of the children, perhaps an outsider on any day, whether or not I am researching.

In education, individuals in the position of insider researcher report tensions between their two roles, such as practitioner and researcher, as they undertake action research projects or professional Doctorates; embarking on a substantive role within the organisation in which the research is taking place. On reflection, I consider this duality of position having allowed me to make the familiar strange (Mannay, 2010), which I consider having achieved through the research process, by observing children as a researcher (metaphorically removing myself as a practitioner), then re-watching the video recordings (providing an opportunity to share viewpoints), listening to parents' perspectives and those of the practitioners, thus bringing their contextual narrative into sight.

Moreover, Milligan (2014) explored the concept of inbetween researcher, being not wholly insider or outsider, from her experiences of teaching abroad, reflecting a view as insider-outsider positioning being fluid and changing according to the political, social and cultural values of a given context or moment. This resonated with me, as the duality of my roles and the geographical positioning of my role as researcher - whilst collecting data on-site and analysing data at home, for example, shifted my position between insider and outsider.

Considering an outward view of my thesis and contemplating the notion of this work, I looked to anthropology and considered Geertz' (1989) view of the significance of the 'author' in ethnography and how texts are 'author-ized' (1989; 8) beneath anxieties of subjectivity from researchers. This influenced me as an insider researcher, to direct my thought inward, and although reaching outward to the body of knowledge, to ensure that my work is positioned within that what is already known, as well as being rigorous and methodologically sound, I valued my insider position as a position of strength for the verifiability of 'people's thoughts and feelings; the ontological status of culture' (1989; 10).

## Paradigm

Viewing knowledge as socially constructed through interactions and relationships, reality is understood to be socially and culturally situated, rather than one, object reality. This research epitomised the complexity and the messiness of lives, adopting an interpretive paradigm, where an external reality is thought to exist, but difficult to capture objectively through

research (Willis, 2007). This study aimed to illuminate the diversity and complexity of the strategies that young children adopted in their daily social interactions, as something that we may hold as known and to challenge those assumptions embedded in ECE culture. Assumptions also used in the narrative of the educational achievement gap between children who are advantaged and disadvantaged. This required a critical engagement with the construct of ECE, including its political context, the curriculum, the community and the setting (Osgood, 2016).

The methods used throughout this research have a foundation in the view that children are individual information constructors, connecting new information with prior knowledge; that they learn in an active, contextualized way through social interaction and negotiation, as discussed in the literature review.

An interpretivist paradigm has influenced the methods used towards a case study approach using a quasi-naturalistic enquiry model with purposive sampling. Mills et al (2010) adopted a more nuanced view of naturalistic inquiry, suggesting it as an approach from which many aspects can be drawn on in case study research, for either paradigmatic assumptions or methodological approach. To this end, I am confident that the architecture of the thesis reflects the research paradigm in that both quasi-naturalistic inquiry and case study methodological approaches were well suited to generate valuable qualitative data, to provide rich and contextually situated understandings (McChesney & Aldridge, 2019) and to subsequently answer the research questions (Badenhorst, 2015).

However, the complexity and messiness of the data analysis and presentation of this study did take influence from postmodernism and holism. Osgood (2016) eloquently presented postmodernism as embracing diversity, uncertainty and complexity and seeking to disrupt commonly held 'truths' about our understandings of children, how they live and learn ...' (p160). Additionally, I acknowledge the complexity of my identity, and its dynamic transformation weaved through the research process, as information and interpretations didactically informed my thoughts. This in turn directed and influenced the research methods as I sought to observe and record the children's experiences as competent and vulnerable social actors (Marjatta, 2013). Holism and the works of Geertz (1988) has influenced the study

approach, the methods of data collection and the tools used for analysis, all with consideration for the contextual significance of the study, beyond the immediate focus of children's interactions (Cowan, 2018).

As I approached the study with the notion that reality is a human construct and that I am searching for insights into the children's social interactions, an interpretivist position (Wellington, 2015) directed me to both see and value the complexities of the unfolding social interactions with and between the children but also with and between my interpretation and my influence on the study. Thomas (2011) considered how the world is viewed and how it is analysed; his work having a direct influence on the methods selected for this study. I believe that this provided me with greater clarity, especially with the complexities of the cyclical nature of the children developing social interaction in the social context.

I will now go on to explain the research strategy and the methods selected, considering the influences of an interpretivist position.



## The Research Strategy

### Case Study

*'A case study is a detailed examination of one setting, or one single subject, or one single depository of documents, or one particular event'*

(Bogdan & Biklen, 1982; 58)

This description of a case study resonated with me, as a detailed examination of a single setting. My research question led me to a case study approach, underpinned with the notion from Thomas (2011) that it is appropriate in presenting data holistically. The children within the setting, viewed holistically for the purposes of this study, are the case. Denzin and Lincoln (2017) posed the question of 'what can be learned from a single case'? In this context, I wished to understand the strategies that children adopted when they initiated or responded to social interactions, within the context of their pre-school. As Stake described 'case study is not a methodological choice but a choice of what is to be studied' (2005; 443).

Stenhouse's explanation of case study informed the approach of this thesis, in terms of taking an opportunity to study the social interactions of a specific group of children, with a mind to gain a deeper understanding of the complexities of their changing interactions over time. The methods used have provided an opportunity to view and interpret children's social interactions, where the children are valued and studied as diverse individuals and where the context and culture is valued.

It could be argued that with such a small sample that findings from this case study cannot be generalized, that a case study is subjective, giving too much emphasis on the researcher's own interpretation. However, in defence of the case study and its value to the scientific community, Flyvbjerg (2006) eloquently argues the value and validity of case studies as a source of learning, describing the development of expertise being through 'intimate knowledge of several thousand concrete cases' (2006; 222). Rather than taking larger quantities of data to create a positivist justification of evidence in search of a universal truth, this small-scale case study has the opportunity to contribute to detail and complexity (Osgood, 2016) beyond the large-scale, positivist reports which inform policy.

Moreover, Flyvbjerg (2006) provides an argument for using case studies to inform teaching, describing a good case as central to human learning; adding that context-independent facts are only able to bring a learner to the level of a beginner but that rich, contextually placed facts can transform data and support a learner in moving towards expertise. Considering Flyvberg's claim, this directs my research to bringing rich data to the narrative of disadvantage, moving the discussion away from homogeneity, towards diversity.

### Ethnographic Influence

This study is a qualitative case study guided by ethnographic methodology, not ethnographic in the purest sense. I considered ethnography and extracted its valuable and appropriate elements to enhance the case study.

*'Ethnography is the study of people in naturally occurring settings or 'fields' by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally.'*

(Brewer, 2006; 10)

The first half of this definition resonates with this thesis. I am an insider researcher involved in the context on many levels, although I minimised my involvement in the activities. Also, meaning was being imposed, as I aimed to interpret the social interaction strategies that children adopted. To this end, I viewed the study as being reflective of ethnography in terms of its focus upon naturally occurring everyday events in the nursery, and with reference to the extent to which I am involved in the context, if not the activities.

In considering the influence of ethnographic research Aubrey et al (2000) declared that 'the stated aim [...] is to understand people, and why people do the things they do' (p111). Using the example of a teacher wanting to know more about the children they teach, they also suggested that ethnographic research

*'offers an exciting opportunity to gain insights that may otherwise remain elusive. These insights may carry implications that are important for understanding the processes of teaching and learning.'*

(Aubrey et al, 2000; 112)

These descriptions of ethnography reflect the aims of this research; to interpret the strategies that children adopt when initiating or responding to interaction with their peers and changes over time. From a practitioner point of view, to gain a better understanding and to inform practice and from a researcher position, to illuminate children's social interactions within the context of socio-economic disadvantage policy; making the familiar strange, making the invisible visible, also referred to as 'radical looking' (Clough & Nutbrown, 2007; 48).

### *Emotion in Ethnography*

*Ethnographers need to convince us [...] not merely that themselves have truly "been there" but [...] that had we been there we should have seen what they saw, felt what they felt, concluded what they concluded'*

(Geertz, 1988; 16)

The words of Geertz resonated with me when considering the motivation for this research, bringing emotion into to the debate, which interested me. My emotional response to the policy narrative of disadvantage sparked a desire to bring empirical data to the discourse. I had previously considered emotion to be a motivator but understood that it should be suppressed and replaced with facts, to enlighten the debate. But Geertz encouraged me to reconsider bringing the power of emotion to the thesis. Flewitt (2003) also recognised that the ethnographic researcher is part of the world studied and that the researcher's own reactions and interpretations should be voiced. I found this particularly useful when considering the notion of the value of the emotions involved in the process, emotions from myself, the parents and of course the children.

In this study, one of the more memorable moments which was driven or informed by emotion was when to stop collecting data, stop observing and cease recording. On what became the final day, the boys were happily playing together; unaware of the world around them; immersed in their play; chatting; setting rules; changing rules; giving instructions and sharing ideas. As tears rolled down my cheeks, it was time to stop observing, they had moved to the centre of their world. I have of course explained this further in the findings and analysis.

Furthermore, Newby (2010) provided a warning that ethnography can become descriptive, rather than insightful, so my intention was to bring that emotion into the research as an element of insight. Alternatively, from a sociological perspective, Hedstrom (2005) considered descriptions as answers to 'what?' questions, explanations answering 'why?'. Bringing emotion and explanation to the data led me to further insight. My own interpretations and emotions have had a profound effect on all aspects of the data collection and analysis. This I acknowledge as reflective of its ethnographic influences and valued in this study as insight.

### *Ethnography as a Style of Research*

Reflecting on the challenges of ethnography, Ball (1990) stated that 'ethnography involves risk, uncertainty, and discomfort' (p157). I found it reassuring that Ball used such emotive language as he illustrated the complexity of ethnography, adding that ethnography is 'probably unteachable' (p157) and that the only way to learn it is to do it, expressing the importance of the researcher's engagement with the self. Newby (2010) considered the ethnographer as being a 'participant observer', 'hidden' or a 'non-participant researcher' (p60). These all describe elements of my research methods, but none wholly align with my approach, involvement and influence over the setting and the children prior to the study.

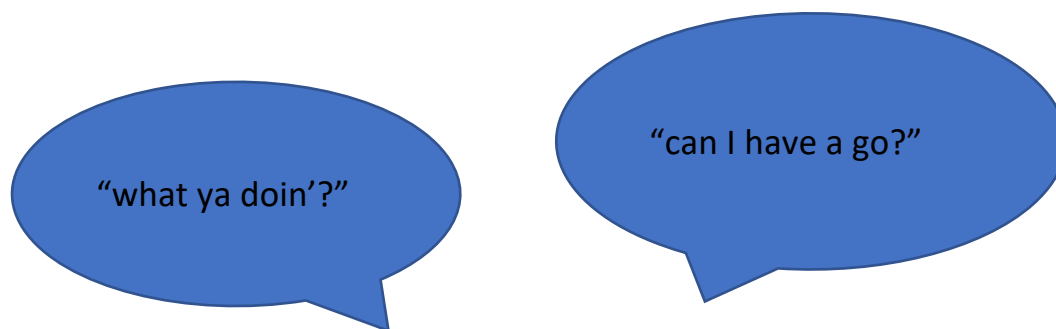
In a further interpretation Brewer (2000) described ethnography not as a particular method of data collection but as a style of research, distinguished by its objectives to understand social meanings; to gain knowledge of the social world, acquired from intimate familiarity with the day to day. However, I felt that the ethnographic influence on this study is in the data collection and the methodological choices made. This led me to view my data collection as quasi-naturalistic, with an ethnographic influence.

However, reading around ethnography did bring into question my level of participation, explored below.

### *Researcher Participation*

As a teacher/researcher with pre-school children with whom I am familiar, who have natural curiosities and who enjoy attention from adults; being hidden or non-participant was found

to be unethical and impractical for me. My usual day of observing and filming would regularly start with children's curiosities about what I was doing, in this way;



My aim was to minimise my participation during the observations, but of course, as referred to previously, the setting, the staff, the pedagogy, the resources had all been heavily influenced by me over the years, so I could not be a hidden or a non-participant observer. Therefore, my limited participation was reflected in the naturalistic influence of the research, where I minimised my inclusion in the immediate activities and interactions, notwithstanding my participation in the setting in the wider context. The children were aware of my presence, they were aware of the iPad I used for recording, and after a while, when they realised that I was not available right now to play, for example, they settled down and ignored me, to a larger degree. I feel that 'non-participant researcher' describes my research approach; observing children in as naturalistic as is practical, in a setting created by the researcher, indicating ethnography, as per Brewer's (2000) description.

As with any research, there are ethical considerations throughout, not least with researching young children, insider research, visual data and involving vulnerable families. All aspects of this research required careful ethical consideration, prior to and throughout my research, which I will explicate further below.

## Research Location and Sample Selection

### Research Location

The research was carried out in a private day nursery located within a Children's Centre in North East England since 2010. The 65-place day nursery operated a full day care provision, open from 8am to 6pm, Monday to Friday, all year round and was graded as 'outstanding' by Ofsted in May 2017, using the statutory framework of the Early Years Foundation Stage (EYFS) curriculum of England (2012 & 2017). The setting was non-discriminatory, accepting children of paying, working parents and wholly-funded children alike. At the time of the data collection, over 80% of the income for the setting was derived from Government funding. The nursery could be described as of high quality but otherwise perhaps typical of many similar settings in the area.

The setting was based in the most deprived locality of a town of a varying socio-economic population. The Children's Centre was one of only twelve remaining of fifty-four in the most disadvantaged areas in County Durham (Durham County Council, 2017). The county sits within the top 30% most deprived authorities (Durham County Council, 2015) and the town in which the nursery is located has the highest intensity of deprivation in the county, with 23.3% of the population living in an area classified as within 10% most deprived nationally and the immediate locality being the most deprived of that sector of the community; within the top 1% nationally. Using the English Indices of Deprivation, the area in which the setting is located is the most disadvantaged across all three data sets and stated as the most deprived 'Lower Super Output Area' in the County, taking into consideration income, employment, education, health and crime (Durham County Council, 2015).

### Research Sample Selection – Focus Children

As a small-scale study running over one year, spanning two academic years, the intention was to select a small non-probability sample size, and to be pragmatic in allowing for the possibility of participant withdrawal without affecting the progress of the research.

Any of the children in the setting could have been viewed and filmed during the observations as the children went about their usual day. However, the study was to focus on four children only – known as ‘focus children’. The ethics process does reflect this, in terms of parental consent being secured for all children in the setting for incidental inclusion. Focus children were selected from those who gave consent. Please see the ethics section below for more detail on the consent process.

All of the children were to be in the age group to start school in September 2018. This was key to them being the oldest children remaining in the setting during data collection in September 2017, following the transition of the older children leaving the pre-school to go to school. This required that focus children be between 32 and 43 months old at the start of the study. The timing allowed me to observe the children with and without the cohort of older children present, which was a valuable element of the research design, in allowing the focus children to be observed as they abruptly became the oldest cohort. Notwithstanding the problematic nature of this superficially linear approach to learning, this sample selection criteria was driven by the theoretical lens of LPP, requiring an acknowledgement of the interaction between more and less experienced children in the setting.

I began the study with five children in June 2017 and finished with four children in May 2018. One child left the setting and the study after one round of observations. The data for that child has been excluded from the study. The children were selected from the whole group of children within the given age range. All children were considered in selecting focus children.

With such a small sample, it is problematic to consider the sample as representative, but it was important for me to consider a broad a range of key attributes as I could practically find, with even distribution across those attributes where possible, to generate rich data. The attributes for each child are outlined in the pen portraits in the findings and analysis chapter. Practitioners used their professional knowledge and their own assessment documentation and records to help select the focus children. An additional pragmatic selection criterion was the likelihood of a parent to want to be involved, considering the time and involvement demands of the research process and also the likelihood of a family staying in the area to complete the research process.

Children were given pseudonyms to minimise identification through the written thesis. Please see the ethics section below for further information on anonymity and the process of discussions with parents.

## The Research Tools and Processes

The research tools and processes used were carefully selected to gain access to the data required in order to answer the research questions. Working with young children it was important to consider their skills and abilities when acquiring valuable, empirical data.

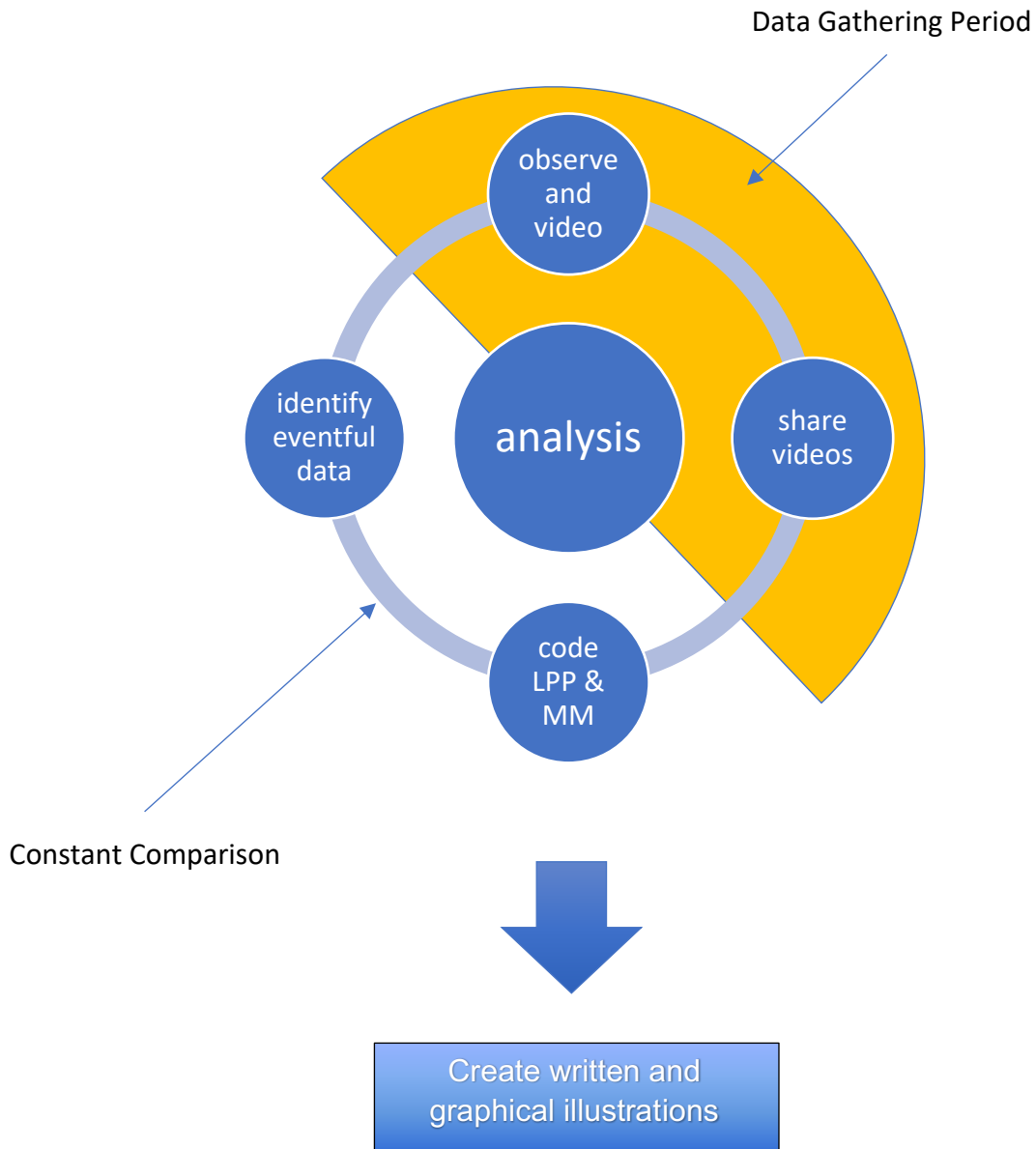
## The Data Collection and Data Analysis Cycles

The data collection and data analysis cycles intersected in this research using constant comparison (Miles & Huberman, 1994) as an iterative method of analysis, where insights and characteristics informed further data collection, supporting a flexible, responsive process of data collection. They included observations; audio visual recording of the observations; watching the video with parents and practitioners; identifying eventful data and creating video compilations; which informed each child's transit through the lens of legitimate peripheral participation (LPP) and multimodality (MM) as they developed their strategies for interacting over time.

For the purposes of presentation to readers, the data collection and data analysis processes were a challenge to separate and describe in the written word, due to mutual cyclical interjections, with one influencing the other throughout the process. For example, if a child rarely responded to others' attempt to interact and was subsequently observed responding, this would likely be observed and videoed, discussed with parents and practitioners and flagged as a significant episode, due to the change in the child's interactions. Without the initial analysis, the episode may never have been identified as significant. This reflects the interpretivist paradigm, where the researcher is a significant element of the data (Cowan, 2013). Despite this arguably unsystematic, intuitive approach, the core of the process is presented for simplicity in the following illustration,



Diagram 4 – Data Collection and Data Analysis Cycle



The cycle of steps 'observe and video' and 'share videos' were completed within a six-week period and then repeated six times, From June 2017 to May 2018. Please see appendix A – Table of Observation periods and meetings for key actions, dates and timescales. The data analysis, through constant comparison (Miles & Huberman, 1994), was carried out

throughout the process, as additional insights were accumulated and new understandings gained. However, I will now examine each of these stages in turn.

## Data Gathering

### *Observation and Video*

The overarching aim of this research was to study the social interaction of young children in their everyday activities at nursery, ethically and thoughtfully. Considering a case study approach and the age of my participants, the study was strongly geared towards gathering observational data which 'deals with behaviour, rather than reported behaviour' (Wellington' 2015; 247) and supports the notion that observation could bring empirical data to the corpus, from such young children. Observation allowed me to gather data on what the children do, how they interact and with whom, not what they, I or others think they do. Wood presents the notion that 'observation is ethical practice' (in Wellington, 2015; 247), offering a distinct way of collecting data by drawing on direct evidence.

In this study observation allowed me to see and hear the multimodality of children in their environment holistically, as a foundation for understanding their interactions in the flow of the everyday. This is reflected in a paper by Tobin (2007) in a move towards encouraging anthropological and ethnographic views of education, away from a preference for quantitative 'scientific research', to measure quality in education (p325). To this end, my intention was not to create statistics for analysis but to build a picture which reflects my epistemological stance, my theoretical lens and the influence of aforementioned anthropological work of Geertz (2007).

It was key for this study for me to collect data which exposed the quasi-naturalistic paradigm in unfolding observational data without a predetermined pathway. This allowed me to see the children engaged in their everyday interactions and for me to respond to them without impacting on their further responses and reactions (that a situation created for the purposes of research may have resulted in). It provided me with a holistic view, within the nursery context, to interpret children's interactions, albeit not able to fully understand their

perspective, as they did not have the verbal skills required to confirm or challenge my assumptions (Elwick, et al, 2014).

Therefore, I joined the children in their nursery and engaged with unstructured observations, in line with the everydayness of the study and observed the children in their play. This varied between adult-led activities, such as baking (where children were asked to follow instructions and encouraged to cooperate with their peers) and child-led activities, such as explorative and imaginative play (where there was less structure with little or no intervention from adults). Observations also included daily routines, such as snack time, mealtimes and small group sessions, as they occurred.

The setting had a child-led pedagogy, with little structure in the day. Therefore, setting a specific time to observe, for example to always include a certain activity or type of activity, was not planned. As a pragmatic researcher, I decided to observe for convenience and also to allow the data to unfold. This meant that during observations, if there were some evolving questions, I extended the observation time on that day, to allow each period of observation to come to an apparent natural end.

The lack of structure or consistent duration of observation may be controversial, but as an unfolding piece of research, the duration of each episode was less significant than the quality or bearing of the interaction to the study. The work of Chesworth (2018) resonated with me in that the unpredictable nature of the data collection had an alignment with the everydayness of the children's lives; more so than the literature would guide my research methods. I embraced the uncertainty of research encounters with young children, to be considerate of the quasi-naturalistic approach.

Also, considering the influence of holism and the lack of want for statistical analysis, my intention was to gain a wide variety of observational episodes, rather than a number of similar or comparable episodes. This did require some consideration, for the element of seeing changes over time, where I was drawn to simpler comparisons, however the theoretical frame of LPP provided me with a consistent lens for comparison. For this study the value was in responding to the children and how they were interacting with each other, whether and how

they initiated this interaction and whether and how they responded to others during each observation period. On occasion a child in isolated play would take quite some time to interact with others. Whilst the isolation was interesting, it was not providing me with data on strategies that they adopted when interacting with others, although it would provide an insight using LPP. Also, while some children took a long time to start to initiate interactions, for others it was the first thing they did. Consequently, to gather rich data for each child, I was flexible on the duration of each observation period.

I allowed for flexibility with children's attendance and permissions – not all of the children were in the nursery at the same time. Some days only one of the focus children was present and I was able to maintain my attention on that child. One parent had not given consent to include her child, therefore I did not record on any day she was present. Conversely, on days where multiple focus children were in the setting, this caused some challenge. I chose to react to that and record diverse and sometimes unexpected interactions. Denzin and Lincoln (2017) described the 'brain work' (p454) required in such a study as being observational and reflective in this process. On occasion I was able to gather valuable data from multiple focus children concurrently, as they interacted with each other. I found that by watching this video back with each parent and practitioner, this shifted my focus and thinking on each child. This was very valuable in gaining multiple perspectives on a single interaction with multiple participants. Had I just recorded field notes, I would not have benefitted from these multiple perspectives.

#### *Using Video to Record Observations*

Shining a light on the significance of methodological approaches and viewpoints for recording children's interactions, Flewitt (2006) adopted audio visual methods of recording children's multimodal interactions, to open up the opportunity to see young children's interactions holistically. Audio-visual recording was adopted in this study, for two reasons; firstly to create an artefact from which to generate dialogue with the parents and practitioners and secondly for recursive viewing episodes repeatedly whilst maintaining a view of the complexity of interaction within episodes, to identify significant episodes or prominent strategies (Cowan, 2014). Maintaining the videos allowed me to revisit episodes holistically, rather than revisit

my previous interpretation through a transcription, for example, by maintaining the integrity of the data, rather than reducing it through filtering and multiple interpretation.

Widely used in education, videography provided as a means to rewind and replay events to allow examination from multiple perspectives, to allow elements to be highlighted and magnified and to allow aspects to be compared (Hadfield & Haw, 2012). Also, considering Denscombe's (2007) comments on the frailties of the human memory, the recording of the observations aided my recall and allowed me to revisit the observations through analytical and theoretical perspectives. Significantly, in creating a medium to view the children's interactions alongside the children's practitioners and the parents, provided additional layers of interpretation of the data. This cyclical approach to visiting the data assisted me in answering the 'does this change over time?' research question.

### *Sharing Videos*

Considering video as both a method and a methodology, Hadfield and Haw (2012) described video data as a resource which has capacity of abstract meaning-making to draw in new forms of interpretation and to generate dialogues which have the potential to generate new insights. Sharing the videos with key adults in the children's lives brought an extractive modality, where the video itself captured educational phenomena to be shared and discussed. Bronfenbrenner (1979) argued the value in broadening the net of data to consider influences not present asserting 'there is more to see than has thus far met the investigator's eye' (1979; 3). I carefully considered how I might gain a broader perspective or supplementary data to the observations, considering the age of the participants. I chose to share the recordings of my observations with the parents and practitioners, as a stimulus for research conversations. Wood (2015) talked about revisiting the experiences, not the data and this was felt to be the case by choosing not to edit the videos or select highlights at this stage. I shared the unedited videos in real-time viewing to elicit their perspectives on the children's interaction with a broader contextual knowledge of the child in and beyond the nursery setting as follows,

- Introduction, discussion and first video viewing - Prior to the introductions of the videos, I held a familiarisation meeting with each adult individually. In this meeting I gathered information on each child's social interaction experiences, discussed the research and ethical considerations in detail and outlined the process. The first meetings were immediately followed with the first joint video viewing.
- Video viewing – The videos were played in full after each period, with discussion during each video and with pauses between videos to generate discussion. Discussions were unstructured and intuitive, reflecting on the content of the videos. Each round of video viewing generated discussion around change and contrast from previous discussion and generated comparison of children's behaviour and communication at home or at different times at nursery. Practitioners regularly commented on their interpretation of events changing when applying a multimodal perspective.

The intention was to include open discussion with the adults in the analysis phases of the process, therefore there were no set questions. However, I did provide prompts to realign the discussion towards social interactions.

The discussions were particularly useful in the analysis of video footage and generating debate about changes over time, to inform the constant comparison, as the adults were able to articulate changes that they had observed in the child's confidence in interacting with others, or the changes in success of attempting to interact, for example. These processes are problematic, having wider implications of reaching a collective mistranslation of the child's experience, perhaps reinforcing my own narratives and perspectives (Elwick et al, 2014). However, this thesis does not claim to present the absolute truth, only the interpretation of the researcher, taking into consideration the perspectives of the practitioners and parents, in attempting to interpret the strategies that children use and accepting these conversations as influencing my constant comparison.

The conversations with parents and practitioners were recorded using an electronic audio recorder. One parent did not want her voice to be recorded. To meet her preference and ensure ethical practice, while maintaining consistency in the research process, her discussions were recorded in non-verbatim notes. The recordings and notes were used to contextualise

and identify significant episodes in each child's changing strategies. Additionally, the data unfolded from my multiple views of the same episodes, which I considered differently each time a layer of depth and breadth was added.

This was technically a very challenging element of the research for me, which did improve as I gained experience, learned from my mistakes and improved my techniques. For example, my initial audio-visual recordings were carried out in long recorded episodes. This caused some technical delays in reloading the videos for viewing, due to the size of the data files. I learned to quickly stop and start the recordings, not omitting any footage but making each episode more manageable. It also provided a more natural opportunity for parents and practitioners to comment on what they had seen, rather than interrupting the recording playback.

## Data Analysis

*'what appears to be troublesome for qualitative method is the manifestation of the body in the cerebral work of research'*

*(Maclure, 2013; 664)*

The data analysis process for me was challenging and time consuming, whilst engaging and enlightening. The recording of that analysis has proven problematic, as reflected in Maclure's words above. Learning to recognise the different ways that young children express themselves is key in this thesis and is the valuable data. Pink (2001b) described an approach where 'the purpose of analysis is not to translate 'visual evidence' into verbal knowledge, but to explore the relationship between visual and other (including verbal) knowledge' (p96). This resonated with this study and summarised the complexity of the data and the challenges in presenting the analysis of the data as a clear unambiguous process.

As the study unfolded, one aspect which took a long time to unfurl was to view the children and their interactions holistically, not to break the 'data' down into modes. This research did not require me to focus in, reduce and understand constituent parts, but to 'lean back', to view a wider, holistic frame and to interpret the whole narrative; for example, who the children initiated interaction with and how they did this and the manner in which they

responded to others in their shared space, what they chose to do and how this unfolded. This perspective was influenced by Geertz (2007), who demonstrated a writing style which drew you in and placed you within the situation of the research by providing the whole picture. I viewed the video recordings as providing a moving image in place of rich, written data. It places the 'reader' there; the children show the 'reader' how they interacted in their social world. Thomas (2011) described certain phenomena as being 'more than the sum of their parts' (p46), referring to holism, describing this as a starting point to be taken in a case study, which resonated with me and influenced the study.

### Analysis of video

*'if the research interest is not only spoken language but also multimodal interaction, the issue of what and how to transcribe becomes particularly complex'*

*(Cowan, 2014; 7)*

The problematic nature of reducing young children's communication to speech, reflected in Cowan's words above, is at the essence of this study, having been explored in the literature review. White (2017) supported the use of video research to provide access to details of context and movement. She also described the strength of validity and reliability and of the value of the body of young children in communicating. Ochs (1999) cautioned against transcription of young children's interactions as it can privilege speech over physical elements so visceral in children's interaction modes. Considering this, I decided not to transcribe the videos, but maintained the videos as whole data, identified and coded each episode to provide the analysis over time.

From the outset, I was ardent not to transcribe and transduce the observations, as referred to above. Transcription has a place for transferring audio to text - aiding the analysis of that text. It is also used to transduce - converting data into a slower-paced format, to allow the researcher to see their data differently and facilitate meaning as part of the analysis (Flewitt et al, 2015). I did feel that by reducing these complex interactions to text was to lose much of the data integrity. I was drawn to consider that transcription belongs in the pre-digital age when images were brought to life through the written word. I had the luxury of the holistic, moving image and wanted to preserve that. Gillen et al (2007) describe video as having 'the



capacity to transport an observer into the felt sense of 'being there' in a cultural context' (p 214). To this end, the videos of significant episodes are available to the reader via a QR code.

#### Data Coding (Legitimate Peripheral Participation & Multimodality)

Through observation, each child provided a contextually situated set of events for me to interpret. Using the theoretical lens of legitimate peripheral participation (LPP), I studied each child's position in the group, for example whether they were a peripheral participant or an expert or central participant. Referring back to the research question, the context of a child's LPP is around whether, how and with whom they are interacting. For example, are they initiating interactions, but being ignored or are they successful and instructing others? The situatedness of the people surrounding the children was considered, for example whether it was a group activity, led by an adult or whether it was a solitary activity, rather than whether they were painting or building with blocks, for example.

Referring back to the theoretical framework of LPP, where I considered a child's position in the group, I was encouraged by Flewitt directly, through email contact (Flewitt, personal communication, 2017), in valuing and retaining the images of video data in stills, as well as short and long clips, to juxtapose against each other. This advice was particularly pertinent in answering the 'Does this change over time?' question, allowing me to bring together significant episodes to compare and contrast. To achieve this, using knowledge that I had gained from immersion in the data, I used elements of multimodal analysis to create a coding structure to identify key episodes, and a second structure informed by LPP to locate the children's positions in the group as a participant.

The two coding structures reflected the theoretical lens of LPP and the analytical lens of multimodality aiding me in identifying a child's position in the group and their prime mode of communication for each episode, to reflect the narrative of the episode and to support the identification and presentation of eventful data in the study. Please see appendix B for an illustration of the coding spreadsheet used to record the coded episodes.

### *Multimodal Codes*

The first set of codes (multimodality tags - appendix C) are informed by a multimodal perspective and were created after the completion of the data collection, influenced by previous researchers such as Flewitt (2011) and using a reflexive approach which followed my immersion in the data (Braun & Clarke, 2019). These codes were deduced from an interpretation of themes identified through a multimodal and holistic perspective. They include whether a child or an adult initiated or responded to the episode, whether the focus child used speech, body language or an artefact and whether or not the focus child's strategies for initiation of an interaction were successful in gaining a response, for example.

Each episode was coded to illustrate the prevailing modes of communication used by the focus children and the other people in their episode with whom they were communicating with. For example, while observing, I recognised that some of the children used different forms of communication, depending on who initiated the interaction or who they were interacting with; therefore separate codes were created for whether the focus child was initiating or responding to an interaction and whether this was with an adult or a child.

This data was then used to draw me to eventful data and juxtapose over time to inform the research findings.

### *Legitimate Peripheral Participation Codes*

To aid the process of identifying eventful data in each child's narrative and provide transparency of my interpretation of each episode, I flagged each episode with a dominating LPP code. The codes were generated using the theoretical framework alongside my immersion in the data, to illustrate the child's principal position in their immediate context during the episode illustrated in appendix B.

I interpreted each child as positioned in each episode, considering a child's changing strategies and their levels of participation in social interaction in the group. Codes were allocated as follows,

Newcomer (passive activities, e.g. observer)  
 One to one with adult/adult led no interaction with other children  
 Passive outsider (isolated play)  
 Peripheral participant (involved but not leading or fully involved)  
 Marginalised member (ignored by others)  
 Active participant (involved, being led or guided)  
 Core participant (involved with responsibilities)  
 Expert/central participant (leading activity and instructing others)



## Bringing the Data Together

I considered using a software package to annotate the video data. My intention was to flag episodes with the appropriate codes, allowing me to use to subsequently identify episodes for juxtaposition. I selected Nvivo with the intention of annotating the videos, adding notable parents' and practitioners' comments to the moment in the videos associated with each comment. This software had been presented by the University, supported with training. However, the hardware available was unable to deal with size of the data files. Feedback from technical support included 'I'm in my 20th year working with PhDs and Doctorate level projects and I have never seen a data set like yours; not even close'. This feedback discouraged me from pursuing a software solution to my analysis.

However, on reflection, this unexpected turn allowed me to maintain the original footage throughout my analysis. I found myself watching episodes repeatedly as I was drawn to revisit episodes. This process forced me into repeated viewing of the original data and as a result, I gained a deeper understanding of each child as my reading progressed and understanding developed. Additionally, on occasion interactions with focus children were inadvertently recorded during shared episodes with other focus children. This provided episodes originally overlooked as previously unseen episodes unfolded. Had I annotated the videos at the outset, I may have lost sight of this data.

However, the change of analysis tools did cause a challenge when attempting to match video footage to parental comments. On reflection, a robust indexing system would have helped

this, also to have recorded the parents and practitioners as an insert on the videos would have improved this process (similar to a video conferencing screen).

### Identifying Eventful Data

After the observations were made and the videos shared, each episode was flagged with the LPP and MM codes. This created a fourth wave of analysis, as each episode was viewed again, with particular focus through the two coding lenses. This process provided a more intensive view of the children's interactions, as I was drawn into specific episodes. It also, illustrated my interpretation of the nature of the strategies that children adopted, evidencing my reasoning for selecting the eventful data for presentation.

At the end of the data collection phase, I had a holistic view of children's modes of communication, the nature of their interactions and the strategies that they adopted, but the data required further translation to enable it to be presented in a manageable format for the thesis. Referring back to the theoretical framework of LPP, where I considered a child's position in the group, I retained images of video data in stills, as well as short and long clips, to juxtapose against each other. This allowed me to bring together eventful data to compare and contrast. To achieve this, I used elements of the multimodal analysis to identify key episodes, then using the second structure informed by LPP to locate the movement of children's positions in the group, within the notion of the children potentially moving from being the lesser experienced member of the group, as an outsider, to more experienced, in the centre of the group.

This layer and application of analysis is acknowledged as problematic, reflective of the complexity in recording the analysis process and the selection of eventful data; which were carried out from immersion in the data; from spending time with the children, understanding how they operate; familiarisation with previous strategies and from witnessing the responses and comments from parents and practitioners who viewed children through a different gaze. Cowan (2014) describes the problematic approaches to analysis of multimodal data, acknowledging the foregrounding of individual aspects of multimodality and obscuring others. Maclure (2013) explored data that 'glowed' (p661) when analysing videos, where the

data grabs the attention of the researchers and the complexities in representing such data which is abstract or intangible. This provides particular challenges in locating an accessible method of guiding a reader through the findings in a written medium.

## Ethical Considerations

*‘ . . . our primary obligation is always to the people we study, not to our project or to a larger discipline. The lives and stories that we hear and study are given to us under a promise, that promise being that we protect those who have shared them with us’*

(Denzin, 1989; 83)

Denzin’s quotation resonated with me in reminding me that ethical approval is not a paper exercise to complete prior to starting research, but as a moral obligation throughout the research process, to ensure that decisions that I made were in the interests of the participants first, the research second.

I achieved ethical approval from the University of Sheffield prior to commencing the process of requesting consent and the collection of data. Please see Appendix D – Ethical Approval.

In its simplified form, the stages of requesting consent from participants were as follows, many of which were covered in a single meeting with the practitioners,

- Introduce the practitioners to the research
- Introduce the Participant Information Sheets and Consent Forms – explaining the requirements of consent and to reinforce the option of dissent at the start and ongoing
- Discussion between practitioners to select potential focus children participants
- Consent Form and Participant Information Sheet handed to each practitioner to take home and consider – individual questions and answers encouraged
- Practitioners handed out Participant Information Sheets and Consent Forms to parents – answering initial questions and referring some to me
- Return of all Consent Forms (six-week process)
- Selection of focus children

- Individual conversations with the parents of the focus children to ensure that they were happy to proceed
- Group activity with the children to observe their response to being filmed
- Individual activities with focus children to observe their response to being filmed.

## Informed Consent

In educational research, good ethical practice includes informed consent, where participants have all of the information that they require to agree, or not agree, to take part, wholly or partially. Exploratory research can be unpredictable, creating an unfolding path as the research progresses. Additionally, using visual data of vulnerable and very young children over a long period of time posed further complexities in the consent given. This presented a question over 'informed consent' of all participants, not only in their ability to understand and give consent (given their age and level of understanding) but also for transparency of what their consent will encompass (Flewitt, 2006).

When involving children in research, it is customary to request and gain consent from their legal guardian on the child's behalf. However, even with this permission, young children's consent or assent to participate cannot be presumed as a result of parental permission being granted. In consideration of this, the children were involved in the decision-making process, as stated in the United Nations Convention for the Rights of the Child (UNICEF, 1989). The British Educational Research Association (BERA) (2018) requires that researchers should ensure that all participants understand, as well as they can, what is involved in a study prior to consent. Supporting the UNCRC, BERA directed me to consider 'the best interests of the child are the primary consideration' and that 'children who are capable of forming their own views should be granted the right to express those views freely...., commensurate with their age and maturity' and that with young children 'researchers should explore ways in which they can be supported to participate with assent' (BERA, 2018; 15). To support this, after securing consent from parents and practitioners, I spent time with the children in a group and talked with them, in an age-appropriate manner. We recorded each other and watched the video clips together. I observed the children's responses. All of the children appeared happy to be recorded, they particularly enjoyed seeing themselves on the iPad. The opinion of one

of the focus children was less apparent in the group. Subsequently I spent some time with him, recording him and we watching it back together. He then recorded me and we also watched this back together. I asked him if he was happy for me to video him, so I can learn about him and his friends and how they play. He said “yes”.

As a longitudinal, ethnographic study, consent or assent was considered provisional, in that the participants agreed to partake in the research within the stated research scope. I continued to review that consent as the research progressed (Simons & Usher, 2000). This was particularly problematic when recording young children using audio-visual methods in a quasi-naturalistic arrangement, for which I was mindful throughout the process.

### *Ongoing Consent*

I understood that a child’s provisional consent is only given within their abilities to understand and communicate. The aim was to minimise any affect that I would have on the children’s behaviour or activities, however this arguably made the research process covert and problematic in terms of ethics. Additionally, at the outset of the research, adult participants gave their consent without having a full understanding of what they were consenting to, due to the emergent nature of the inquiry. However, this was reinforced in the initial individual conversations with the adults and also at each stage of sharing the videos – the study was emerging with them and their ongoing participation and consent, not in spite of their initial consent. Chesworth (2018) whose research methodology is comparable to this study, refers to this as a reflexive consideration of ethical questions when engaging with children in their everyday lives; embracing uncertainty in research with young children as a suggested norm, albeit viewed as a problematic in more ‘traditional’ applications of research methods. My perception was that the parents embraced the uncertainty of the research, as referred to by Chesworth (2018), and they understood that I was observing whatever unfolded; appearing excited to find out ‘what they had been up to’ together.

### *Existing Relationships*

Flewitt (2006), who undertook a research process with methodology and participants comparable to this study, discussed the relationships which are present prior to the study but

also those that develop through the research process. She referred to using the researcher's vigilance to enable them to respond appropriately and flexibly to participants' behaviours, as people demonstrate or voice their discomfort. More recently, referring to 'situated ethics' Dockett, Einarsdottir and Perry (2012) sought to move the debate forward by considering ways in which children may indicate their dissent. They explored the context of the relationship and the child's acceptance of the researcher's presence but also the researcher's contextual knowledge of the child to enable them to gauge the child's comfort with participation. They took the view that other relationships around a child may influence their consent or dissent, as they mirror the behaviour of others and again, the researcher's relationship with a child should allow a researcher to understand this and respond reflexively. Examples include a child's willingness to participate in an activity and a child's emotional state (e.g. displaying distress or happiness).

In this study, reviewing the participants' and parents' initial and ongoing consent was designed into the research process.

#### Gaining Consent or Assent

##### *Practitioners*

The initial meeting with all the practitioners in the setting included an explanation of the research and the methods used, to introduce the practitioners to the research and to provide information prior to requesting their consent. The research methodology was discussed at length and they agreed a long list of possible focus children participants, then using the knowledge of the practitioners created a short list. Children who were or had been on the child protection register were not included because of the problematic nature of current and ongoing consent. This decision was not shared with any parents, to avoid a breach of confidentiality and embarrassment.

##### *Parents*

Each parent was approached individually by their key worker, to remove or reduce any pressure to give consent (which may have been the case had I approached them). Because



the team were fully briefed, they were able to answer basic questions about the research and were very supportive in encouraging the return of signed consent forms. At this stage consent was requested on two levels – one for their child to take part and one for their child to be a focus child. For parents of children who were within or outside the target group (by age), this was explained at the beginning to reduce and concerns of a child being selected or otherwise. Once every child had a signed form, a process which took six weeks, I selected the focus children from the initial list created by the team of practitioners and with consideration for those giving consent for their child to be a focus child. The parents of the short-listed focus children were approached individually, giving them the opportunity to refuse their child be a focus child or to withdraw consent from the research. All parents approached appeared delighted that their child was selected to be a focus child.

I had an initial meeting with each parent, explaining the research in more detail and the requirements of them and their time, answering any questions that they had. I reiterated that they could withdraw consent at any time and that this would not impact their child's nursery place in any way. I explained the consent process for the children too. Two weeks into the start of the data collection, one of the children relocated and was therefore withdrawn from the study. None of her data is included in the study.

Consent was requested from all parents whose children attend the setting, not limited to the focus children. These parents were consenting to their children being incidentally recorded and their interactions with focus children being analysed and shared. This was felt to be essential, as the focus children were in their natural nursery space, where they were interacting with other children.

For children who had no consent, who had partial consent or for whom I chose not to include (children on the child protection register), a schedule of recording days and non-recording days was established (recording days being the day that they were not in the setting), to ensure that no child felt excluded and that they were not inadvertently recorded.

## *Children*

Following secure consent from the adults I introduced the research to the children.

### *Before Recording*

Initially, I joined the children in a group activity and we explored the video recording equipment together. The children filmed and watched themselves, helping them to understand that they were being recorded. I used a child-friendly cover (displaying a smiling face) on the iPad and consistently used this while recording observations, never in the context outside the research, to provide a visual cue to the children that this was different to other recordings (for example in the recording of children's development in the context of the nursery).

### *During Recording*

During the research, children would initiate watching themselves on the iPad, with some 'selfie' live video and some recording and watching back. I took careful note of how they responded to this and used this information as an indicator of assent or consent.

In terms of being able to respond to children's cues, children's eagerness to be involved may have been influenced by my presence, as a familiar adult in the setting (Einarsdóttir, 2011). However, as well as being problematized, the presence of a familiar adult as the researcher in this study has been viewed as an opportunity, in that the children are familiar with me, providing arguably a more quasi-naturalistic enquiry.

### *After Recording*

At the end of the data collection process, I showed the children some of the earlier videos, as well as some of the more recent. We discussed how much they had changed and pointed out friends who were no longer at nursery. I explained about the research and asked them if they were happy to have been involved. All replies were positive, with lots questions about research and books (I explained that the things I had learned would be included in a 'book'). I observed their responses to the videos, assessing within my capability and using my

knowledge of the children, whether they appeared to remain happy with the data collection, using terms suitable for their age and understanding. All children appeared to be not only happy, but enthusiastic about the process.

It is accepted that I, as the researcher, will have an impact on the study, in all aspects, but in this case this has been valued as a strength, to draw on direct evidence from children's experiences, ethically (Wellington, 2015).

#### Ongoing Consent or Dissent

During observations and video recording, participants' ongoing consent or dissent, for children, parents, and practitioners was supported with an ethical stance of resolving any issues or concerns at the time. This included such examples as ceasing observations and recording if a child was upset or appearing disengaged because of my presence; shifting the visual field of recording if a child displayed their underwear or ceasing observing if a practitioner was struggling with a situation, for example.

There were levels of consent given and refused throughout the process, for example a parent gave full consent for the recording of her child and the use of data, but when observing her child's videos together did not want her own voice recorded. Quickly, and without causing undue fuss, our conversations from that day onwards were recorded in written format. One parent did not want her child to be recorded at all, therefore observations were not carried out on the days that her child was present in the setting.

These reflexive responses demonstrate the adoption of situated ethics (Simons & Usher, 2000) also encompassing ongoing consent and participant consultation during data analysis (Flewitt, 2005). The involvement of parents of the focus children throughout, with watching all of the observational videos of their child, providing commentary and entering discussions with me, allowed ongoing transparency of the research direction and preliminary findings as well as an opportunity to withdraw consent, albeit implied through behaviour. Their positive involvement and open discussions reinforced the presence of ongoing consent.

## Visitors and Students

Consent was also sought from students and other professionals who visited the setting, some arriving unexpectedly during filming sessions. I was able to respond quickly and to reinforce the option for them to refuse consent. On one occasion, there were students who were under 18 years of age. I provided them with information sheets and consent forms to pass to their parents. None of these forms were returned, therefore observations and recording did not occur on the days they were in the setting.

I believe that this demonstrates a reflexive, responsive and an effective process of managing initial and ongoing consent and assent.

## Insider Researcher – An Ethical Perspective

Being a senior member of staff in the setting, I was mindful of the ethical dilemmas regarding being in a position of power when requesting initial and ongoing consent. I took guidance from BERA (2018) to consider the power relationships of dual roles and their impact on students and colleagues. This included being specific about the researcher role; about managing confidentiality and managing data which had been collected for different purposes. Throughout this research process, the duality of my role was made explicit and on occasion, conversations which drifted away from the research and towards the day to day role were deferred to maintain distinction. For example, during a viewing session, a parent wanted to discuss a non-research topic. I placed my pen down, paused and removed the recording device, explaining the reason. Once this conversation was concluded, it was agreed that the research restart and the recording devices were reinstated. Following this, after welcoming participants to the video viewing session, I checked that they were ready to start, prior to commencing recording, to establish a clear line of divide.

Informed consent is complex and is socially and culturally situated (Bourke et al, 2017). Not only is the practical differentiation of my dual roles, as mentioned above, significant as an insider researcher but my access and influence over participants is also significant. On reflection, with further consideration for the power relationship element of my insider role, I

did exploit my power to access and engage the practitioners and parents in my research (Kim, 2012). I particularly used my access to the parents to encourage the return of the completed consent forms, which took a significant amount of time. This process took six weeks, much longer than I had anticipated, which threatened to delay the research by a year, as we were fast approaching the end of the first half term. In all cases, I was particularly careful to emphasise that consent was optional and that it could be withdrawn at any time but I did use my access to participants to encourage the timely return of their completed forms.

When introducing the research to the team of practitioners, all of whom worked for me, I presented the research in the aforementioned meeting which was specifically arranged for this purpose. The option of not giving consent was reinforced verbally and in the paperwork. Some of the practitioners limited their consent in the use of their images (not wanting to share their recordings for training purposes, for example). I thanked each of them individually for their honesty and reinforced that I will ensure that this was followed through. I also thanked them for providing me with evidence that my staff were not hoodwinked into agreeing to everything!

Throughout the process with the parents, I reinforced the research process as separate from day to day nursery practice, as mentioned above. The process of them viewing all of the videos, the responses to those videos and the subsequent discussions, indicated to me that they were happy to continue their consent. I was explicit if videoing had been stopped, or the frame had been moved, to protect a child's dignity – to reinforce the process of high standards of ethical consideration. Another example is that one of the parents suggested that some of the videos be shown to other parents to demonstrate the wonderful experiences that their children had in nursery. I explained that I had not sought or achieved consent for this, to reinforce the separation of everyday practice and research.

### Anonymity

The anonymity of participants in research is considered the norm (BERA, 2018). However, this study includes a number of exceptions to this rule, all of which are accepted by BERA.

- the autoethnographical elements of this study – where the setting can be easily identified through my identity and through uniform logos, for example
- the setting being part of a close-knit community – where participants discuss its content and progress
- visual methodology – where concealing identities is not appropriate or practical (albeit data security has been carefully managed to minimise misuse of images in the future)
- audio recording – where the use of names is naturally used in the everyday speech of the children and other participants.

All of these elements have been explicit in the request for the University's ethical approval, which was granted. This includes consent for the use of un-anonymised, identifiable data, which was made clear in consent forms and research information. However, to minimise the identification of the children, pseudonyms have been used in the written thesis.

These examples demonstrate the active and practical application of ethical considerations throughout the stages of this research. To this end, I am confident that the research was carried out ethically and in line with the approval from the University.

## Conclusion

The purpose of this chapter was to provide explanation and justification for the research methodology and methods adopted, to gather and analyse data in answering the research questions. As this research aims were to understand the everyday strategies that pre-school children adopt in their nursery, the research paradigm, methodology and methods were selected to ensure that the complexity and messiness of the everyday is able to shine through the data analysis processes.

In this chapter, I explored the research approach, introducing the interpretivist paradigm and the complexities of influences taken from holism; upholding an acceptance of the messiness and contradictions, which reflect a non-binary approach through interpretivism and the research methods used (Cowan, 2014). The choice of case-study approach and the influence of ethnography and naturalism were explored, both of which were not scientifically applied but strongly influential. The emotion of ethnography was explored and welcomed as a key

driver in this research, having clear influence into decisions made and interpretations generated.

Insider researcher was visited twice in this chapter; firstly from the perspective of my influence on the research and secondly the power this can inflict on participants in securing and maintaining their ethical consent.

An overview of the research tools and processes was provided, including an explanation around the interconnected processes of data gathering and data analysis, providing challenge in presenting the process and the data. The method of observation and of recording and viewing those observations were described, including the challenges.

The messiness and complexity of the data analysis was summarised, accepting the significance of the cerebral elements of these processes and the challenges in maintaining an interpretive paradigm whilst using the theoretical lens of legitimate peripheral participation alongside an analysis view of communication influenced by multimodality.

Ethics were explored, including a description of the processes in place to secure full or partial consent and the ongoing consent from children and adults, ensuring that best practice was understood and in place throughout the process in a reflexive, responsive and effective way.

The next chapter will present the findings and interpretation of the four focus children, including illustrations, photographic and graphical illustrations as well as QR codes, linking the reader to audio-visual recordings of eventful data, presenting my initial analyses of each child using legitimate peripheral participation as a theoretical lens and multimodality as an analytical lens.

## Chapter Five – Findings and Interpretation

### Introduction

The process of observation, review, shared review with parents and practitioners and further analytical review has created a huge amount of qualitative data. This chapter presents a selection of that data and some analyses and interpretation, which provides insight into each child over the period of a year, to answer the research questions, which are,

#### Main Question

What is the nature of social interaction of disadvantaged children in a mixed-age pre-school?

#### Subsidiary Questions

- 1) What strategies do children adopt when initiating or responding to social interaction?
- 2) Does this change over time?

To help me to answer the research questions, I have adopted the theoretical lens of legitimate peripheral participation (LPP) to draw on the notion that children learn the proficiencies of social interaction through participation in social practices and move between being a newcomer, on the periphery of the group, to the expert or central participant of the group (Lave & Wenger, 1991), described in the review of the literature. I have also drawn on the notion of multimodality, to widen the perspective of social interaction beyond speech. The lens of multimodality affords a perspective which problematises the deficit discourse around disadvantage and its associations with a deficiency in speech (Tizard et al, 1983), also explored in the review of the literature.

### Data Presentation

Each child within the case study is presented separately, in the same format, illustrated opposite.



Diagram 5 - Illustration of the Presentation of Findings and Interpretation

## Introducing the Children

**Pen Portrait**

- Parents' perception of the child at the start of the study
- Practitioners' perception of the child at the start of the study
- Brief contextual information, eg age, family structure
- Information on the nature of children's social interactions at home
- Information on the nature of social interactions at nursery.



## Eventful Data

**Key Episodes**

- QR code access to videos of each eventful episode
- Key episodes described to illustrate the prevailing narrative (focusing on the interaction elements)
- Still images from the video reel used to enrich the illustration for the reader.
- Interpretations of each period provided.



## Changes Over Time

**Graphical illustrations**

- Graphical Illustration of the LPP data set showing changes over time
- Tabular chart to summarise key interaction strategies adopted and notes of interest for each period



## Synopsis

**Summary & Analysis**

- Summary of each period, taking a holistic perspective
- Analysis of each child, highlighting the strategies adopted and changes over time.

## Introducing the Children

A pen portrait includes the parents' and practitioners' perception of the child at the start of the study, conveying the contextual information that I was furnished with. I have employed the language used in the interviews and illustrated my interpretations with their commentary.

## Eventful Data

Eventful data were selected from each of the six periods, following data familiarisation. The videos of the selected episode can be viewed via the QR code links below, which are password protected. Please see the section 'data analysis', subsection 'selecting eventful data' in the methodology chapter above explaining the process and nature of selecting eventful data.

From the eventful data, key episodes were selected and a written illustration presented in the thesis, as an example of the prevailing narrative of that period. These are enriched with still images from the video 'reel' to provide a visual image of the context, influenced by Geertz (1988) in providing insight into the data. The video images also provide timings corresponding to their position in the eventful data videos, aiding the reader to observe the original data, should they wish to do so. To maintain confidentiality, focus children and adults have been provided with a pseudonym and other children identified with an initial. It is intended that the differentiation allows the reader to identify interactions with a child and with an adult.

A written summary is presented in each period, to aid the reader in understanding the changes in each child's holistic approach to social interaction.

## Interpretations

### *Graphical Illustrations*

There are two graphical illustrations to convey changes over time. The first graphic is a summary of the key interpretations of each child's adopted strategies and the second

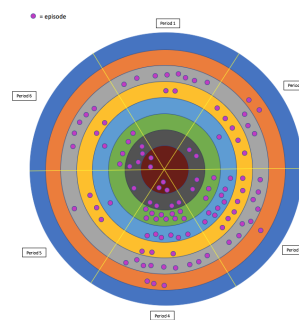
graphic is an illustration of the whole LPP data set for each child. This is presented to illustrate where I interpreted children to be primarily positioned in the group for each period. Using concentric circles the overriding position of a child in each episode is indicated in a physical position from the periphery to the centre of the circle, representing their position in the group. The circles are divided into six segments, one for each period, to illuminate changes over time.

The following small images are to aid the reader in identifying these graphical illustrations,

Diagram 6 - Summary of each period

Observation period	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Instigation targets	Mainly isolated. Occasionally targets adults	Adults	Adults	Adults then children	Children, using adults to access	Children
Initiation strategies	Ignored other children. Attended to activities with adults present.	Gaze, expression and artifact linked to engage adults. Increases with large body movements	Used voice and gesture with adults. Showed animosity for children with adults present	Received spoken response from child. Engaged with large body movements and mimicking play	Used knowledge of children's preferred modes. Requested support of adults	Speech. Complex conversations
Response source	Adults	Adults	Adults. Occasional, short-lived responses to children	Children	Children	Children
Response strategies	Responded to children with artifacts and related body movements	Complete and animated responses with adults	Mainly responded to children in the presence of an adult	Speech. Body movements and artifacts	All adults. Responsive to all children	Speech. Use play, giving and receiving instructions
Notes of interest	Did not use speech with other children during play	Used adults as a conduit to speak with other children	Appeared unable to initiate social interaction with children	A 'lightbulb' moment when a child answered his question	Showed complex understanding of rudeness & politeness	Fully engaged in own play narrative with peers

Diagram 7 - Legitimate Peripheral Participation



The graphical illustrations are acknowledged as problematic in a qualitative, interpretive study and presented in the absence of a suitable method which allows presentation of both the holistic, rich, multimodal data and the constant comparison (Miles & Huberman, 1994) embedded in the data analysis (Maclure, 2013) with consideration for word count limitations.

### Written Interpretation

And finally, each case study is summarised in a written analysis of each child and the changes in their social interaction strategies over the study period.

## Research Setting – An Overview

The English pre-school education system is complex, containing group and individual providers, including state maintained, private and independent providers as well as voluntary. All providers are required to be registered with Ofsted and to follow the statutory framework of the EYFS (2017). Presented as setting the standards for children's care, development and education from birth to five years, the EYFS is reported to be a contradiction, as it promotes children as individuals, yet sets out standardised learning objectives (Langston, 2014). Having worked in early years for 18 years, over five settings, I am the lead pedagogue of the setting and have adapted a reflective and responsive approach to ECE, which has spanned changing political ideologies and resulting shifting curricular. This has resulted in the aforementioned bilingual practice (McNair & Powell, 2020) with a pedagogy adopting a culture of being and of learning as well as and the required administration of the curriculum.

In the research setting, practitioners take the role of key workers (EYFS, 2017) and form a detailed understanding of each child, including their preferences, interests and characteristics, for example. The ethos of the setting acknowledges playful orientations to teaching (Wood, 2010) and value children as contributors to their own environment and influencers of their nursery day. The day regularly includes interesting and engaging, planned activities which are optional for the children, and which will be led by practitioners who respond to the direction of travel of the children. Children are encouraged to access a wide range of resources independently. Resources include items of open-ended play with some expectation, such as sand and water, some fully open-ended play, such as junk items and some more structured items, such as jigsaws.

The setting adopts a mixed-age pedagogy, where children from 24 months to 59 months share spaces and are free to explore independently. The routine of the day brings the children together on occasion, such as meal-times and some group activities. The combination of adult-led or initiated and child-led or initiated interactions has provided a wide range of opportunities to observe children's social interactions in a range of contexts.

## Dan Case Study Profile

### Dan's Pen Portrait

Age at start of the study	41 months
Family	One older male sibling (6 years old), mother and father
Started Nursery	15 months old
Nursery Key workers	Chantelle and Dani
Attendance	five mornings a week, term-time only
Qualified for two-year funding?	No
Gender	male

Dan is the youngest of two brothers. They live at home with 'Mam and Dad', have daily visits to 'Granny and Grandad' with weekly sleepovers there with five cousins (aged 14, 7, 5, 6 and 4). Dan enjoys spending time with his grandad outdoors with the animals. Dan's family is of a traveller heritage. Father works full time and mother is at home.



### Mother's Perception of Dan

When asked how he interacts with his brother and cousins at home, Mam reported that he liked playing on his own. "He will play upstairs with his toys, just on his own". On

occasions, he plays with his older brother, enjoying playing with the toy animals. Mam says he was “dinosaur daft”. Dan and his brother talked together as they played, with Dan directing play. At home he was reported to have “temper tantrums” and “has the better of his older brother”. When in the larger group of cousins, Dan was reported to enjoy role-play and imaginative play with his 4-year-old cousin.

Mam reported a recent change in his behaviour following a procedure to correct glue ear, describing that the day after the grommets were fitted his “understanding got better” and “it was like having a different little boy”. She reported that previously he was “just a bad boy, wanting his own way”. Now nobody bothers him “he is peace itself”.

When discussing Dan in new and social situations Mam reported that the brothers stuck together, with Dan leading the way and his older brother following. Mam reported that his speech was fantastic, and that there was a significant improvement in his clarity of speech following the hearing improvement procedure.

(Interview 21/06/17)

#### Practitioner’s Perception of Dan

At the beginning of the study, Chantelle was Dan’s key worker. In the initial interview, Chantelle described Dan in the group as a confident child who was quiet and liked to be independent. He was reported to take a while to settle in his first few weeks of nursery. Dan was also reported to infrequently use his speaking voice at nursery. He struggled in group situations, being quiet and distracted, unless the topic was one that he had prior knowledge of or an interest in. He liked to share his knowledge with adults. He was drawn to older children, appearing to mimic their ideas and “join in with their play”. Chantelle reported Dan preferring to play on his own, sometimes alongside other children with little apparent interaction between them. Dan was described as having recently been observed attempting to engage in play with an older child; the older child initiated with speech which was reciprocated with few words from Dan. This friendship was considered new and “not a strong relationship”, Chantelle conveyed that this was something that she was

working with him on, supporting him to “develop a special relationship with another child”.

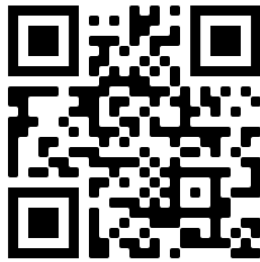
Chantelle also described him enjoying playing with the animals and was often seen joining in with a group of children if there was something that interested him. Dan was known to report this back to Mam, enthusiastically recalling the activity to her. Chantelle had no concerns with his development and was supporting him in making friendships, in listening and with skills at mealtimes.

(Interview 21/06/217)

#### *Analytic Comment On The Practitioner's Perceptions*

The practitioner's analysis of Dan indicates an unconscious bias for valuing speech as the main mode of communication (Brooker, 2010), illustrating the performance discourse in practice Kay (2018), influenced by the EYFS (2017). This could suggest that Dan's infrequent use of his speaking voice and his disengagement in group activities were a cause for concern, rather than expressing value in his speaking at home (Flewitt, 2006) or acknowledging the complexity of interacting in a group (Wohlwend, 2019), for example. This introduction to Dan opens an alternative view to consider his social competence (Tsangaridou et al, 2013), and to observe how his funds of knowledge (Chesworth, 2016) have a positive impact on high levels of engagement in topics of which he has prior knowledge. The joining in of older children's play is another thread of interest and poses the potential for seeing Dan's differing social interaction strategies in these varying situations. A development target of 'making friendships' is a learning and development outcome in the EYFS (2017), indicated in 'to form positive relationships' and 'to develop social skills' (2017; 8).

## Findings and Interpretation of Dan's Interactions in Nursery



Please use a QR code reader if you wish to access Dan's video. This is password protected.

To allow you to select an event to watch, the timing provided alongside the illustrations below correspond with the timing in the video.

Period One (41 months old)

### *Summary*

Dan appeared to favour large or nuanced body movements when he was interacting with children. He also appeared to favour using artefacts to support his interaction, be it an initiation or a response. Although he had well-developed vocabulary, he was observed mostly using his voice with adults and seldom with children. Dan was rarely observed initiating interaction with a child using his voice but he demonstrated, through expression and actions, that he was listening as he played. When in a small group Dan exclusively directed any conversation towards the adult, even when answering a child's question.

### *Illustrated Findings*

#### *Illustration – Carboard Tube Arms (0:07:23-0:09:32)*





*Dan is one of four boys in the construction area. They all have their arms in large cardboard tubes, all moving like robots. One child is older than Dan, one the same age and one younger. One of the children is 'speaking robot'*

*Dan leaves the area and walks around like a robot (arms out straight – legs moving straight)*

*An older child asks Dan if he can have one of the tubes – Dan drops one for him, using a few inaudible words.*

*While stomping around as robots, the older boy asks Dan for a silver one and Dan takes him over and says, "there's some in there". Dan returns to his play.*

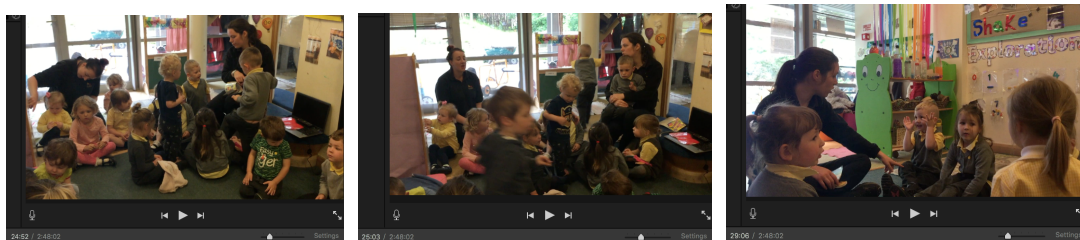
This illustration drew me towards considering that when older children spoke to Dan he replied to them using his voice, but he did this exclusively to answer their question, not in play. Reflective of Fleer's (2011) conceptual space of 'inside the play' and 'outside of the play', the other child's voice appeared to momentarily remove Dan from his conceptual play space, which he paused; answered the question; then returned to play where he used his whole body in his playful interaction. Dan appeared to adopt a number of 'social interaction repertoires', relating to the immediate contexts (Flewitt, 2003; 259); one repertoire for during play without speech and one outside of play with speech, as a response to another speaker. This also appeared reflective of Trawick-Smith's (1998) work where this was referred to as metaplay, as children step out of a make-believe play to think or communicate about play.

In isolated play, Dan demonstrated that he ran an internal dialogue between characters he played with, apparent through occasional oral mutters. When focused on this isolated play, Dan actively ignored the attempts of other children to attract his attention.

When Dan joined in activities where other children were present, he appeared to be attracted by the activity and/or the adult present, rather than to engage in social interaction with other children. Additionally, he appeared to be listening to others' speech, aware of the events around him, demonstrated through his response with action. Interactions were present between Dan and other children playing in parallel but were nuanced and easy to miss, such as turning their bodies towards each other. Interactions such as eye gaze and conversation were not observed between Dan and peers during concentrated play. Adults present appeared to have no affect on this.

In a group situation, the communication could become complex or even chaotic, with multiple people wanting to speak or and adult speaking to multiple children. The following illustration provides an insight into Dan varying his repertoires in different contexts.

*Illustration – Group Time (0:24.01-0:35:06)*



*This illustration starts with a large group time, with many children present. Dan appears to be keeping himself busy making babbling noises and playful body language (rocking side to side, head tipped) attracting the attention of a younger child. While Louise is talking to other children Dan asks, “what’s them?” referring to the stickers in her hand. He repeats this but receives no response. He gets up and runs around with his arms waving. Louise sees this and asks him to sit down, which he does. He rolls around the floor while they separate into smaller groups. He dances then pops a tin on his head and drops it. He appears to be looking for eye-contact from the adult. When asked to join the circle, he does so.*

*In a small group Dan is one of 5 children.  
He is the youngest.*

*The circle time starts with chatting about book characters. Louise asks the group for their opinion on the characters.*

*Another child (dominant in the group) gives her opinion.*

*Dan answers one of Louise’s questions using a ‘babified’ voice.*

*Louise gives a clear sign that she wants to hear Dan’s reply (hand on his knee, while the other child speaks she turns directly to Dan).*

*Dan responds to this. He does not give a clear sentence but appears to either lose his train of thought or is feeling the pressure of being the one speaking – he babbles and waves his hands around his head, shaking his head from side to side.*

In this episode, Dan appeared to have two preferred repertoires for interacting; one with adults (mainly verbal) and one with children (mainly non-verbal). These repertoires may have been selected in response to his intended audience, perhaps mirroring others’ repertoires. When there was less clarity of his addressees, the complexity is highlighted

through unclear mediated action. In this example, when adults and children were brought together in a group discussion, Dan appeared to have conflicting strategies. This resulted in Dan appearing to struggle in this context, as his large body movements used to engage younger children failed to engage an adult in a positive way and using his voice in front of children appeared to give him some discomfort.

Considering LPP, and social interaction I interpret this as Dan considering the adult as the centre of expertise, adopting the strategy of speech in his response repertoire. Dan's observed episodes are interpreted to be mainly as a passive outsider, with two episodes as a peripheral participant. In the two episodes where Dan was perceived to be a peripheral participant, the interaction was triggered by either a child or an adult using verbal interaction. Using multimodality in my analysis has illuminated the complexities and nuances of the non-spoken interactions adopted by Dan and the children around him.

Period Two (43 months old – 2 months later)

### *Summary*

In contrast from the previous period, Dan appeared to have gained some confidence in joining a group and in extending play with adults. This period saw Dan spend an increasing amount of time in the presence of adults, actively excluding children's attempts to join in; moving his body away from children; turning his back to them and placing himself between the child and the adult. On occasion when other children attempted different strategies to engage him, such as mimicking Dan's play, or talking to the adult present, Dan ignored the children. On occasion he would patiently wait for them to finish before recommencing his interaction with the adult. Sometime Dan used adults to speak to children for him, focusing his attention on the adult mainly, while demonstrating an awareness of interactions around him.

### *Illustrated Findings*

The illustration below of an extended observation shifted my interpretation of Dan and highlighted his desire to interact with adults.

*Illustration – Parallel Reading (0:40:34 – 0:51:37)*



*Dan sits at the far edge of a mattress on the floor. He is looking at a book by Julia Donaldson. Turning the pages, he appears to be happily exploring the book independently.*

*After a minute, he takes the book to Louise, speaks to her (inaudible) and returned to the mattress (approximately 6 feet away).*

*Dan points at different parts of the book and mouths to himself. He looks comfortable and confident. He points to a bat on the book and says “Bat” a few times, with eyes gazing momentarily at Louise.*

*Louise doesn’t reply.*

*He continues to ‘read’ his book. He slowly edges from one end of the mattress to the other end; getting closer to the group.*

*After six minutes, Dan joins the group – he walks over and sits. He doesn’t use any words.*

*Louise is talking to the children about a book on the bookshelf.*

*Dan spots it, says “that one” and goes over to collect the book.*

*When the other children are discussing other green books, Dan animatedly says, “I’m reading this one” and directs his gaze to Louise.*

*Looking at the cover of his book, Louise asks “what’s your story about Dan?”*

*Dan, “I dunno”*

*Louise, “lots of bugs and spiders”.*

*Looking at the cover of his book he excitedly tells Louise what is on the cover, for example he tells her “That’s the brightest”, pointing at the pictures. He does not make eye contact with the other children.*

*One of the other children points at Dan’s book and tells him “no that’s all of them” but Dan doesn’t appear to respond.*

*Louise starts reading a story to the other two children (they are at each side of her) Dan is flicking his pages as if he is ‘reading’ his book but repeatedly looking over at the book that Louise is reading.*

*His attention then moves back to the book he has – lifting a flap and comparing pictures as he mutters to himself [inaudible]. He spots a spider [Dan loves ‘creepy crawlies’] he then becomes animated – waving the book up high and shouting “spiders”.*

*This grabs Louise’s attention and she responds to him, asking questions about the spider.*

*The other children discuss spiders with Louise, but not with Dan.*

*Louise directly asks Dan a question and he tells her about the spider in his house – opening his arms and saying, “yeah big they are the size of me and they go way up to there” (as he looks at the ceiling) to describe how big they are.*

*Another child joins the group.*

*Dan moves onto his high knees (he is now directly in front of Louise).*

*Another conversation is started between a new child to the group and Louise.*

*Dan tries to tell them something but it goes unheard. He goes back to his book and finds the page he wants, then shows it to Louise (close to her face).*

*Louise shows an interest in 'creepy crawlies' and shares her own stories of ants in her house, then Dan tells her all about his experiences of creatures at home in a 29 second monologue.*

*Not until another child points out that he has a wet mark on his top which he looks down at, does he stop.*

*Dan returns to his book.*

During this episode, Dan gave the appearance of looking at a book in isolation, which could be described as 'typical' for Dan in his tendency to favour solitary play. As this episode unfolded over six minutes, what appeared to be solitary play presented itself as a method of initiating interaction through a prop which visibly mirrored the book of the nearby group. As the episode unfolded, Dan attempted to interact with Louise (adult), using the similar book to the one she was reading with other children. Repeated viewing of the supporting video illuminated that Dan had been communicating to Louise for some time, replying to the questions and comments between her and the other children, starting with subtle gestures and eye gazes then shifting to replying to questions then on to large movements. He appeared to have changed strategy when his attempts were unsuccessful in gaining a response from Louise. Finally he gained her attention with large body movements and enthusiastic chat about his shared artefact. However, Dan was ignoring or excluding the other children; actively turning his back toward them, his intention appeared to be only to engage the adult. The other children were older than Dan and used speech during their interactions, but Dan appeared to have no intention of attempting to join in with their conversation. When the group discussed spiders, a subject he was enthusiastic about, he used his whole body to grab the adult's attention, speaking clearly and extensively when he did.

This period saw Dan mainly as one to one with an adult and as a marginalised member of the group (ignored by other children), with an adult present. There was a marked increase in him successfully initiating interaction in this period, through both speech and gesture. This indicated that he was gaining confidence to attempt to participate, albeit

unsuccessfully on occasion. I interpret that he was using the expert/central participant to gain access to interactions.

Period Three (46 months old – 3 months later)

### *Summary*

In this period the older children have left for school one month prior to the observations. Dan was now the oldest child in the nursery, besides one school child who joined the nursery for part of the day (3pm – 6pm).

Dan's attempts at joining or initiating interaction had been less successful in this period. His position as a marginalised member has increased in duration and extent. However, considering his efforts and attempts at new strategies, I am presupposing that this be a key period in his attempt to transition, relying less on adults and more towards children; being a core participant with responsibilities. His skills in considering the abilities of the responder appear deficient, in the absence of responders who are able to interpret his intentions. The change in the balance of children who are more likely to respond to his repertoires seemed to have affected his success rate, albeit not his enthusiasm. This period is reflective of the complexity, during a period of semiotic development of understanding the demands of others (Brooker, 2011).

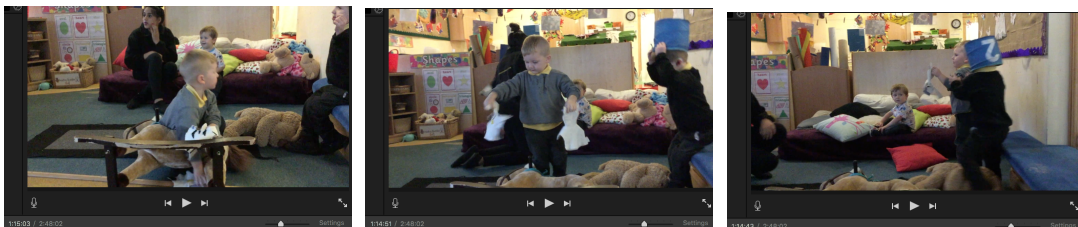
Dan was notably spending more time between activities or interactions, appearing without purpose or intent. Further consideration indicated that he had less opportunity to use his response strategies, as the groups of older children were no longer present, therefore he was relying more on his abilities to initiate interaction, with less success. On occasion, his behaviour, and that of his peers, could be judged as attention seeking, with him moving around the room with large gestures and appearing to be destructive. Observing the group, it became evident that they had collectively lost some key skills within the group as verbal interactions were mainly between adults and children, there was a sense of less instruction and less speech between children. Dan's Mam added later

in the study, when reflecting on this period “he just changed completely when the older ones left. It was like... he was just lost for ages” (interview 25/05/2018 1:31:32).

### *Illustrated Findings*

The following illustration presents Dan as only responding to adults, during play with puppets, and actively discounting another child’s efforts to initiate interaction.

#### *Illustration – Puppets (1:14:46 – 1:15:03)*



*Dan is in the library with four other children (one new and younger, three same cohort – one of them with SEND) and an adult – Chantelle.*

*Dan is moving around with two puppets in his hands.*

*Chantelle and the others are moving around and discussing a bus ride.*

*Chantelle asks where the bus is going to take us,*

*N replies, “on outside”*

*Dan says “outside” – directing this answer to Chantelle.*

*C gently but animatedly pushes Dan, who falls onto the mattress in an exaggerated, playful way.*

*Dan gets up and dances around with his puppets.*

*C gently punches Dan.*

*Dan looks at C then returns to his play, turning away from C.*

*C gently punches Dan again.*

*Dan ignores this.*

*After a few seconds C sits down (appearing to move from trying to initiate interaction with Dan to giving up his efforts).*

*After 15 seconds, Dan looks up at C then continues his play with the puppets.*

In a later episode, Dan appeared to respond to C, using an artefact and attempting to engage in imaginary play with large body movements. On reflection, albeit short-lived this episode appeared to be a first spark of Dan understanding how to initiate play with C, through artefacts and body movements [C has a hearing impairment]. Despite prior

repeated failures to pick up on C's efforts to engage with him, Dan said that C made him happy, as follows.

*Illustration – Wincey Spiders (1:29:45-1:41:11)*



*Dan is in his 'family group time'. Initially, the group are not fully engaged – Chantelle asks another child how they are feeling. She does not get a verbal response, so Dan tries to help.*

*Dan turns his body towards the other child and moves his gaze towards Chantelle as she speaks and back towards the other child waiting for a reply. Dan replies for her (after a period of waiting) [inaudible]*

*Chantelle talks about how friends make her happy at nursery.*

*Dan then explains that H\*\*\*\* makes him happy and C\*\*\*\* makes him happy.*

This episode indicated that Dan had adopted a more established role, starting to demonstrate expertise. He was acknowledging children in a group interaction, moving his gaze between them – previously his gaze was fixed on the adult, even when responding to another child.

This next episode brought into question that perhaps the younger or less able children were starting to rely on established children such as Dan to lead. I sensed that the younger children are responding to the diminutive gestures, such as illustrated above, perhaps without Dan's intention. The earlier group-time indicated that Dan was developing these skills in the presence of an adult, demonstrating empathy and appearing to support younger children in their interactions. Without an adult, this was not apparent, as the following illustration emphasises:



*Illustration – Chariot (1:51:28 – 1:56:23)*



*Dan is outside. He looks around for a while then moves over to the chariot and stands on the rear platform without a driver in place (this is a bicycle with a front seat and pedals and a rear platform for standing passengers).*

*He moves around the chariot then gets off and leaves.*

*Later he sees L (younger and a newcomer) sitting on the front of the chariot*

*Dan gets back onto the rear platform as L is getting off, they make eye contact. L gets back onto the driving seat.*

*There are no audible words.*

*L is rocking back and forth – indicating that he doesn't know what to do next (or possibly cannot reach the pedals).*

*Dan lays down on the platform.*

*L very slowly gets off the chariot (this sequence is just under a minute)*

*Dan remains on the chariot, waiting for a further thirty seconds or so, then leaves.*

This memorable episode led me to interpret that the children are not 'speaking' the same language. It appeared that Dan wanted someone to drive the chariot and that L was willing to do this. But when L was unable to or unsure of how to pedal the chariot, Dan did not respond. With his broad vocabulary, Dan could have explained how to do this but did not. Dan was using body movements and gesture, but L did not pick up on these. Interestingly, although Dan had used different repertoires to interact with different people prior to this, he did not utilise these to seek a solution to their impasse.

Considering the events involving child L. I am led to question whether Dan was perceived by others as an expert participant, increasing their reliance on him having a wider range of interaction skills than perhaps he was able to engage at this time. Some of his own actions appear to have placed him closer to the centre of expertise, perhaps without his awareness. The first observations of this period did not immediately bring to the fore the lack of awareness that Dan appeared to have of his position in the group, which became more apparent with further watching of the video observations. This highlighted the

contextuality of his position and the significance of others in placing him in that position, rather than taking the position for himself.

Period Four (48 months old – 2 months later)

### *Summary*

The end of this period saw Dan operating as an expert participant in numerous episodes, as well as most other LPP categories, as he moved around the group with confidence and tenacity, this reflects Gutierrez et al's (1997) view of children as both learner and teacher through complex interactions, building on what was observed in period three. Dan used his speaking voice much more in this period, both to initiate interaction and in response to others. He was also seen mirroring the strategies of others, for example, if they use gesture, he used gesture. I was led to consider that in this period Dan was reaching the children as part of his community for the first time, moving away from his reliance on adults.

### *Illustrated Findings*

Dan's interactions increased significantly in this period, resulting in a high number of observed episodes. He continued to enjoy playing with adults in a one to one context and started to instruct them. Adults attempted to engage other children in their play, which Dan was patient and tolerant of, but he showed little sign of engaging directly with the children. However, an episode which was caught on video [whilst observing another child] appeared to record a pivotal moment for Dan as he asked an adult a question but a child answered, directing their speech directly to Dan. Dan replied with a 'babified' voice but then followed this up with gesture, appearing to invite her to share an experience, as follows.

*Illustration. Speaking with Paint (2:19:18 – 2:21:24)*



*A&B are at the mark-making table with another child. They are chatting and looking for paper with the help of Laura.*

*Dan appears and tells Laura “I’ve caught some ghosts”.*

*Laura repeats this back to him and says “wow”.*

*Laura moves away and B says, “really scary?” directly to Dan.*

*He smiles, tips his head and looks at B, speaking to her [which is hard to decipher] using a ‘babified’ voice.*

*He continues to chatter [inaudible]*

*B shrugs her shoulders (indicating “I don’t know”).*

*Dan moves to the painting easel (just to B’s left), touches the paper, turns to B and says “urgh” momentarily sticking out his tongue.*

*B moves towards him and touches the paper too, in the same way. They are standing side by side.*

*They take it in turns to touch the paper and say “eugh” (as if the paint is wet and on their hands).*

*B starts to sway and moves her body from side to side as she is rubbing the paper with both hands, scratching the paint with her nails.*

*Dan watches her hands.*

*She then turns and moves away.*

*Dan scratches the paint in the same way with one hand, smiling with his head turned towards her as she moves away.*

*He turns and moves away too.*

This episode was immediately followed by a number of episodes with the same child, where Dan attempted to initiate interaction using his voice. He had differing levels of success but I witnessed him building in confidence while attempting different strategies. He appeared to follow the same two children around for the afternoon. My emotional response to this was that he had found that other children spoke his language. This breakthrough afternoon led to a complex interaction with the same two children, illustrated below.

*Illustration – “Next customer please” (2:22:46 – 2:30:56)*



*Dan is in the investigation area with A&B. There is a double-sided freestanding set of shelves with bottles filled with coloured liquid inside them, cardboard tubes standing on the top shelf and a plastic door fly screen over this – dangling on the top shelf.*

*A&B were playing shops with the shelves.*

*Dan observes them for a short while, then joins in.*

*Dan picks up one of the bottles and places it on the top shelf. He looks at A as he does this.*

*A does not look at Dan, she continues to play.*

*Dan “thank you for the big green”. As Dan places another bottle inside a tube on the shelf as he looks at B.*

*Dan repeats this, each time he places an item on the shelf he seems to hang around, looking at A&B.*

*The third time, he hangs on to a bottle he replaces and watches A&B.*

*They are slowly moving away.*

*Looking at A he shakes the bottle on the shelf and says, “here you are”.*

*A returns to the game.*

*B also returns.*

*Now B is the customer on one side of the shelves and Dan and A are serving at the other side.*

*B “can I have some water?”*

*A to Dan “give me a bottle”.*

*Dan passes a bottle to A, who subsequently hands it over to B. B walks away.*

*A “next customer please”*

*B returns*

*A “what do you like?” (Dan looks at B)*

*B “I like [inaudible]”*

*Dan passes a bottle to A, A passes it to B*

*A “bye” as B walks away with her ‘purchase’*

*Dan – speaking to A “if you ask for water, this is the water” placing a bottle into a tube*

*A “I will say ‘give me the water’ and I will say ‘thank you’ and I will give you [inaudible] because I am the customer”*

*Dan “yeah but I give it to you” Dan is looking at A during this conversation*

*B returns.*

*Dan “hello, do you want some water?”*

*B "yes, pardon me"*  
*A reaches over for the water and Dan gets it instead and passes it to A who subsequently passes it across to B.*  
*Dan is smiling.*  
*B moves away.*  
*A "next customer please"*  
*After a delay B returns*  
*Dan "be my next customer" "do you want some coke?"*  
*B "I want this one" moving a tube towards Dan.*  
*Dan moves it towards B.*  
*Dan "get some of these, get some of these, and them and them" as he moves some smaller items towards B. He is leaning over A. B leaves area*  
*A is now quiet – appears pushed out of the game. She is leaning on the shelf with her arms crossed.*  
*Dan leans on the shelf also with his arms crossed he looks at A.*  
*A slowly moves away.*  
*Dan "next customer" he shouts as B is reappearing.*  
*A turns back.*  
*A spreads her arm over the shelf, as if to take the whole space and says, "shall we go and play somewhere else" to B.*  
*B says "yeah" and they walk away.*  
*Dan watches them, appears to be thinking then shouts, "next customer". Nobody comes. Again "next customer" then louder "next customer".*  
*A returns and places a bottle on the shelf.*  
*Dan "thank you" "next customer"*  
*B returns a bottle saying "thank you"*  
*Another child moves into the area and places a bottle on the shelf*  
*B places a bottle on the shelf. Dan picks up a small bottle and says "you need some of these", showing her the bottle.*  
*B walks away.*

Dan engaged props and voice in his repertoire to initiate an interaction or receive an invitation to A and B's play. Was Dan drawing on his earlier interaction with B and had developed the confidence to join in their play by observing, mimicking then making a contribution from the periphery? This episode is reflective of de Groot Kim's (2006) reference to children's use of scripts for everyday experiences, learning to make sense of social and cultural experiences. Dan rapidly moved from peripheral participant to active participant then through to core and on to expert participant on this day. Watching this emotive moment, Dan's Mam added "It's like something's clicked" (interview 2/2/18). This was an atypical event in my observations of him, appearing to evidence him building on his previous experience, reflective of Kolb and Kolb's (2005) model of experiential learning. He appeared to feel secure from his previous inadvertent interaction with B and

use this experience to create a repertoire to join further interaction. However, this appears to have marginalised A, who then charged a withdrawal for her and B.

I witnessed Dan's confidence continue as later he used an artefact, body language and speech to interact with another child. Although this child turned away initially, he subsequently turned back to play rockets, verbalising rocket noises. Dan followed this with speech, which resulted in a smile then an extended period of joint play. Subsequently an older child joined the space and a series of complex interactions resulted in Dan making a new friend and confidently using his speaking voice to chat at length to the older child.

In a very short space of time Dan had developed multimodal strategies for joining interaction without an adult present, he had used his voice, as well as artefacts and gesture to establish a friendship, which in turn introduced him to a further friend. He quickly established a conversation with his older friend, outside of narration during play. This period could be described as transformative through a 'mediated action' (Wohlwend, 2009; 230) as Dan brought together physical acts and material objects to create a performance of social interaction.

This was reflected in the LPP analysis, as Dan was observed as an expert participant for the first time in the study. He was also viewed to be an active and a core participant through this period; reflective of the move to reciprocity between Dan and other children which had not been apparent in previous periods.

Period Five (51 months old – 3 months later)

### *Summary*

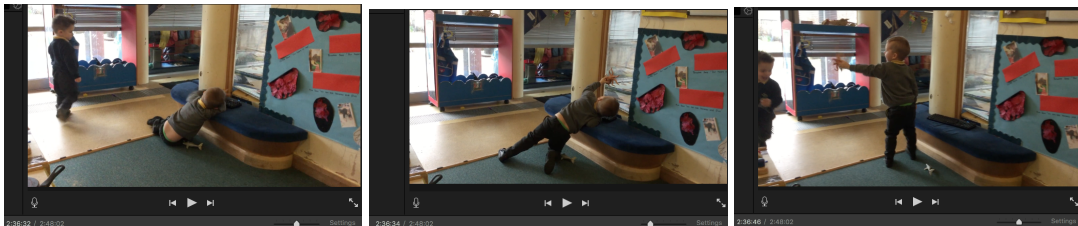
This period drew me to consider the other people in the group and the difficulties that children may have in not only learning new skills in social interaction, but also developing empathy with consideration the interests or desires of other children in the interaction. The theory of LPP was created based upon a group of people with a common purpose, be it tailoring or midwifery, for example. This episode demonstrates the complex nature of developing social skills within a community, the transformative embodiment of the

community of practice and the changing form of participation. Lave and Wenger (1991) describe this as ‘rather than a teacher/learner dyad, this points to a richly diverse field of essential actors’, further describing ‘relative old-timers’ and the importance of near-peers (p 56).

### *Illustrated Findings*

Whilst observing Dan respond to a less skilled or younger child and comparing this to the earlier episodes of him ignoring what appeared to be efforts to interact, an episode highlighted a change in his understanding of the situation and the appropriateness of his response.

#### *Illustration - The Squid and the Keyboard (2:36:31 – 2:36:50)*



*Dan is playing on his own with a keyboard and a squid model, he is resting on a bench against a wall with an internal window in front of him.  
He appears to be walking the squid along the keyboard.  
Two younger children are playing behind him.  
Dan appears to have little interest in them at this time.  
One child (F) goes around to the other side of the window and makes gestures and facial expressions reflective of a monster.  
Dan sees him and holds the model against the window saying “arghhhhh”  
F runs around to where Dan is  
Dan stands up, holds out the model and shouts “arghhhhhh”.  
Smiling, Dan watches F run away then returns to his keyboard game.*

My interpretation of this event saw Dan’s awareness of the other child come to the fore, he appeared to be demonstrating intersubjectivity (Bronfenbrenner, 1979), empathy and cooperation (Wood, 2014b) in responding to the child with humour, before he returned to his play. His use of gesture demonstrated a mirroring of the other child’s initiation and supplementing this with the use of an artefact and speech.

This next episode saw further examples of Dan's empathy as he appears to plan his approach ahead of an interaction, creating reciprocity in concrete ways (Zeece, 1995). This is particularly notable because the interaction is with a child who has limited communication skills. My interpretation of this is that the observation sees Dan demonstrating assimilation of social skills, observing how someone likes to interact, using this knowledge and engaging the support of an adult to reinforce his attempts. He appeared more considered; selecting body language, artefacts and speech to effect.

*Illustration – A Line of Animals (2:38:43 – 2:40:04)*



*Dan watches Sam and R for a short time as they interact, appearing to listen to R as he speaks to Sam.*

*Dan then moves around R, gets some animals and lines them up.*

*Dan then tells Sam "I've got R\*\*\* some of these and them and them" pointing at the animals [R is known to love animals and enjoy lining them up].*

*R "this"*

*Dan turns around and smiles animatedly (giving the impression that he thinks R is talking to him) but walks away when he realises he isn't.*

*Sam to R "Did you hear that? Dan gave you some animals"*

*R "thank you"*

*Sam "good boy"*

*Then Dan turns and smiles, reaching for a cow model walking towards R "here's another one" adding it to the others.*

*Dan continues to sort the animals.*

The sporadic nature of others in Dan's community, due to their relative inexperience in social interaction, creates a complex and perhaps chaotic community, where the mastery of a skill does not necessarily generate a predetermined response. In this episode, Dan has not only used his knowledge of social interaction, he has used his knowledge of the other child and he has engaged the support of an adult (master) to develop the other child's response.



Initially, I had interpreted LPP as a view of the community. For example, an expert is viewed as such by the apprentices. However, with young children, the near-peer experts are perhaps less visible, with their perceptibility reliant on their own tenacity or presence.

Reflecting back, when comparing the most recent episodes, above, and the first episode 'The Dinosaur and the polar bear (0:00:08 – 0:07:35), the differences were in Dan's responses; his demonstration of empathy; his ability to use the skills he has; the use of his knowledge of others and his ability to engage the support of an adult have made the social interaction 'successful' and meaningful to both parties in the episode.

Further interpretation of this period, illuminated Dan moving between being a core participant (involved with responsibilities) and an active participant (involved, being led or guided) but he was also an expert participant (leading an activity and instructing others) as well as peripheral (involved but not leading). Significantly, Dan could be seen as understanding his position in the group and becoming more purposeful or intentional in that position.

Period Six (52 months old – 1 month later)

### *Summary*

This period has been interpreted as Dan in a clear position as an expert or central participant, where he is leading and instructing others. Dan was using some complex social interaction skills, able to interpret events by gathering and sharing knowledge to manage the social dynamics (Wood, 2014). On reflection of the whole study, Dan's Mam described her concern over whether he would manage in school, until the 'next customer please' episode. She added "when you see that.. at first `I said to you [Dad] a couple of times, if I could, I wouldn't have sent him to school, but watching it now... he's ready for school" (interview 25/05/2018 1:37:38). I also reflected on the changes I had witnessed in Dan's interactions at nursery.

### *Illustrated Findings*

My final observation was selected as it generated such an emotive response from myself. I witnessed Dan, as well as Ben and Leo, alongside their friends C and D playing a super-hero game. They took turns to run after each other, to pretend to push each other over and to fall in slow motion. They were using humour, gaze, speech and body movements to establish their game, to discuss and amend rules and to continue the game.

#### *Illustration – D Got Pushed (2:45:15 – 2:47:58)*



*A group of boys are playing super-heroes.*

*L pushes D over as they all have been doing in the game but pushes him a little too hard and D falls heavily.*

*I felt I had to intervene at this point [stopped recording] to check that D was OK*

*I asked L to not push the younger ones too hard as they are not ready to pretend to fall [off camera].*

*Dan came over to ask me what had happened [camera back on].*

*I explained to Dan that “you were play-falling gently but D just got pushed”*

*Dan showed me the controlled falling.*

*Kate “that’s right, so you fell over nicely, yeah? But D got pushed. That’s not good”*

*Dan then marched to L, with C behind them. Although I was unable to hear him, he was clearly relaying our conversation to L as he pointed at the scene of the pushing and animatedly described what they should do.*

*They continued their game.*

As I had tears rolling down my cheeks, I felt that Dan had ‘cracked it’. He was able to negotiate, instruct, welcome others, extend play ideas, share jokes, accept guidance and to consider and respond to others around him. In terms of LPP, I felt that Dan and his friends had become the centre of their community, the experts in their game. However, they did interchange their position regularly.

The illustrations above indicated that Dan had positioned himself as the central participant, on this occasion. Dan was not only operating as an expert, as the centre of expertise in the group but he was also sharing the responsibility as the friends took turns

to listen to each other, negotiate and make suggestions, as they created their own game. They were all dynamic contributors in their game.

#### Interpretation of Dan

Over 11 months, Dan's strategies used to initiate and join social interaction have changed significantly. The evolution of those changes having been observed from one period to the next.

The following chart illustrates the overall nature of Dan's social interactions in each period. Using a holistic view, this shows the strategies that he adopted in initiating or responding to interactions. It illuminates a shift in his approaches and responses to social interactions. In particular this highlights the gradual decrease in his reliance on adults and the gradual increase in the breadth of his repertoire with children.

(Diagram 8) Dan - Summary of each period

Observation period	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
<b>Instigation targets</b>	Mainly isolated. Occasionally targets adults	Adults	Adults	Adults then children	Children, using adults to access	Children
<b>Initiation strategies</b>	Ignored other children. Attracted to activities with adults present.	Gaze, expression and artefact failed to engage adults. Success with large body movements	Used voice and gesture with adults. Showed empathy for children with adults present	Received spoken response from child, followed with large body movements and mimicking play	Used knowledge of children's preferred modes. Requested support of adults	Speech. Complex conversations
<b>Response source</b>	Adults	Adults	Adults. Occasional, short-lived responses to children	Children	Children	Children
<b>Response strategies</b>	Responded to children with artefacts and nuanced body movements	Complex and animated discussion with adults	Mainly responded to children in the presence of an adult	Speech, body movements and artefact	All modes. Responsive to all children	Speech, role play, giving and receiving instructions
<b>Notes of interest</b>	Did not use speech with other children during play	Used adults as a conduit to speak with other children	Appeared unable to initiate social interaction with children.	A 'lightbulb' moment - when a child answered his question.	Showed complex understanding of audience's preferences	Fully engaged in own play narrative with peers.

Dan's journey from isolated play to initiating play with children and leading an activity without an adult has been a steady and nuanced process. On reflection, he has developed confidence and created successful repertoires (Hedges, 2015) through mimetic learning and participating in social rituals (Wulf, 2013) with reciprocity, experiential learning and mimicking. He has honed his performance repertoires, with consideration for the intended receiver (Kress, 2001).

It is notable that with the sudden absence of the older children in period three, who perhaps were the previous central participants, Dan appeared lost without guidance or direct invitation. This was followed by a time of challenge for Dan as he used large movements and gesture to attempt to initiate play, considered as playing with agency through individual choices, interactions and behaviours. Unfortunately, this did not gain reaction from children and was interpreted by adults as destructive or inappropriate behaviour. This could be interpreted as reflective of Wulf's (2013) three aspects of multimodal learning, where Dan was perhaps at the stage of mimesis, where his meaning-making wasn't quite honed, the absence of his older peers revealing this.

Initially Dan appeared to have little shared 'language' with other children (despite them both being speakers around adults) but gradually learned to use his speaking voice with them by hearing their response to a question he asked an adult. This gave him the opportunity to continue the interaction using gesture, providing him with a multimodal language for children. This was underpinned with the use of artefacts interpreted using Wulf's (2013) work as bringing a past event into action. This then appears to have instilled him with the skills and confidence to use this prior knowledge to influence a transfer of that learning to another episode (Greeno, 2008). Dan started using his speaking voice in play as narration or action and on to using it with other children in conversation, which he appeared to find delightful. At this point his reliance on adults for interaction support (especially with speech) reduced and shifted towards interacting directly with children. This was followed with a demonstration of him understanding different modes of communication with younger or less able children and using this knowledge to respond to their interaction or initiating interaction with them, reflective of Katz's (1995) work where she found children capitalising on differences. Eventually, Dan's strategies started

to work and his rate of success developed rapidly as he appeared to learn from previous strategies adopted.

From observing Dan, I am led to question my understanding of Kress' work. My interpretation of Dan is that he had developed the skill of speech before he was able to interpret gesture. Kress (1997) referred to gesture as a purer form of intention of interaction and inferred that non-verbal communication is apparent first in children, followed by a higher level of communication being speech. This may be the case with familiar people to the child, but in Dan's case, the unfamiliar gestures from other children appeared to go unnoticed or untranslated for Dan. Kress' work had limited focus on how children interact with each other in different modes as they learn to socially interact. On the contrary, Flewitt's work (2003) underpins my findings of Dan. Where a consideration for the whole child needs to be made to identify their different currencies of communication. Aligned with Flewitt's (2006) later work, Dan was found to speak less in the nursery than he did at home. However, this may have left room for him to develop other modes of communication with co-constructed meanings, arguably in Dan's case a much more complex skill.

Dan brings into question the validity and suitability of the normative measure of attainment used in the EYFS (2017). The complex elaboration of Dan's experiences and interactions, which were performed dynamically and in consideration of his peers, are not reflected in these normative measures. Yet, his lack of speech with peers reflect the expectation of a disadvantaged child, validated through the curriculum and the political narrative of disadvantage.

Dan leads me to consider further the inadequacies of the policy-led measures of success which fuel the deficit discourse of categories of families as 'disadvantaged'. Without viewing Dan holistically, his interactions could have been interpreted as poor behaviour as the political discourse informs the lens of practice and frames Dan within the norm of disadvantaged. Also, his multimodal repertoires could go unnoticed, as he interacts with his peers in complex and dynamic ways. The nature of Dan's social interaction strategies disturb the disadvantaged narrative, as he demonstrates agency and complexity in his

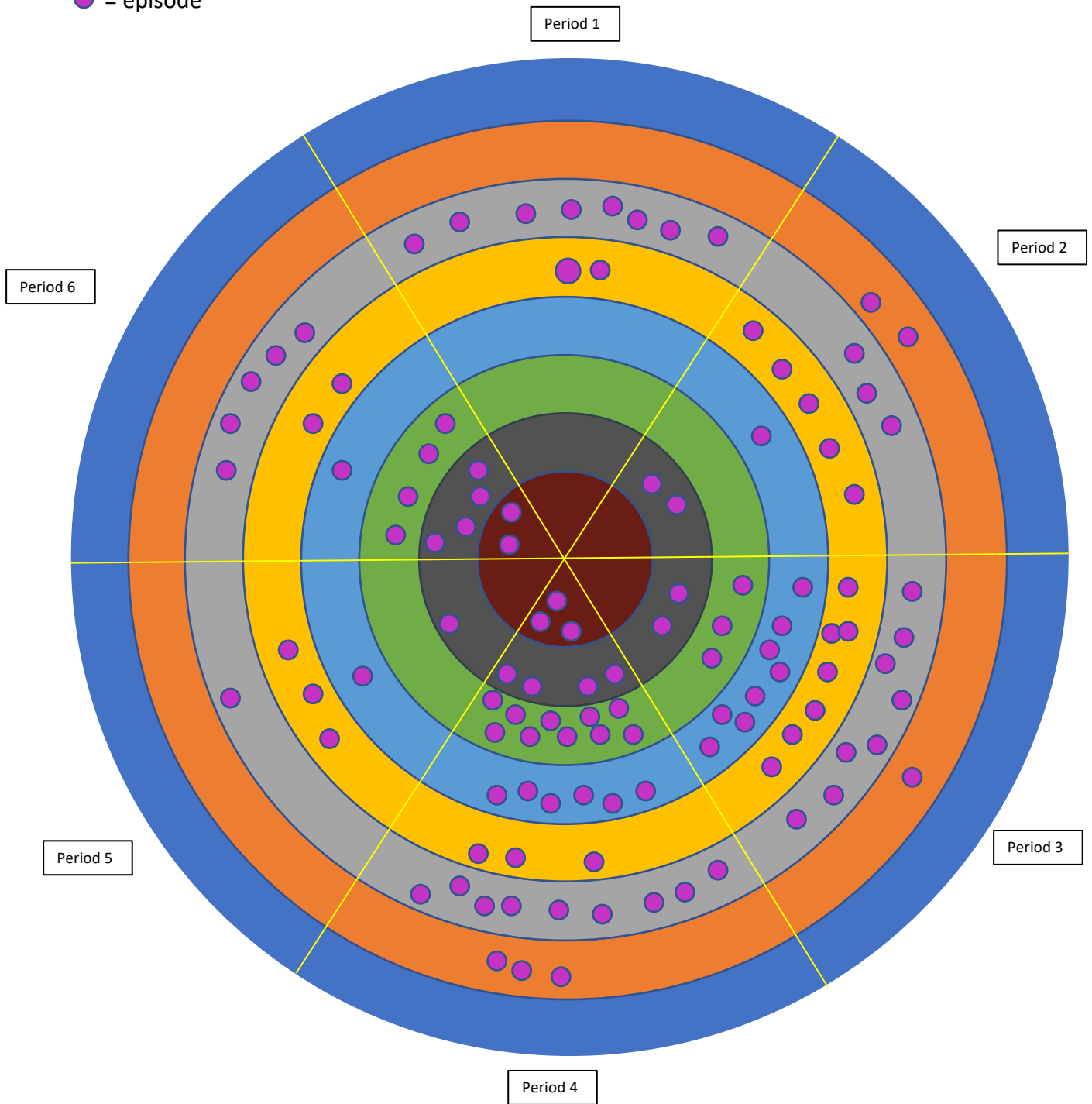
performance repertoires. This raises questions over the homogeneity in EYFS assessment criteria, problematises the lack of diversity in the political narrative of assessment and the categorisation of children (Rose, 1989) and challenges the discourse of disadvantage.

With three and a half hours of video footage it has been a time-consuming exercise to identify significant events and to revisit past episodes to locate possible roots of events, to illustrate the strategies that Dan has adopted.

The following chart summarises my interpretation of each episode in each period of Dan's LPP position, demonstrating the changes over time. It illuminates the shift from period one, where Dan was mainly a passive outsider, with instances of being a peripheral participant, to period six, where he was mainly an expert participant, a core participant and an active participant; albeit he was also a peripheral participant and a passive outsider on occasion.

(Diagram 9) Dan - Legitimate Peripheral Participation

● = episode



- Newcomer (passive activities, eg observer)
- One to one with adult/adult led no interaction with other children
- Passive outsider (isolated play)
- Peripheral participant (involved but not leading or fully involved)
- Marginalised member (ignored by others)
- Active participant (involved, being led or guided)
- Core participant (involved with responsibilities)
- Expert/central participant (leading activity and instructing others)





What is not apparent with this illustration is the intent from Dan or the others. On occasion, Dan was seen to be the expert, for example, but he did not respond to this. On other occasions Dan attempted to be the central participant, but he did not receive the response he required, for example.

Dan's early attempts to develop strategies to initiate or join social interaction, with both successes and failures, and the changes in Dan's strategies used over time appear to illustrate Lave and Wenger's LPP theory; as Dan appears to have observed others interacting, has tested and used different modes of communication and over time has honed his successful modes of communication. However, the theory does not appear to reflect a consideration for the chaotic nature of responses in communication, where near-peers or less able children do not have the skills to respond to Dan or make their intentions known to him as they attempt to initiate interactions with him.

What is apparent to me for Dan is the importance of the adults to him, being the experts until Dan and his near peers move into the centre of expertise.

Thank you Dan.



## Leo Case Study Profile

### Leo's Pen Portrait

Age at start of the study	36 months
Family and	Two older female siblings (5 & 7 years old), mother absent father
Started Nursery	27 months old
Nursery Key worker	Sam T
Attendance	five afternoons a week, term time only
Qualified for two-year funding?	Yes
Gender	Male

Leo is the youngest of three. He has two older sisters (five and seven). They live at home with Mum who works full time and is a single parent.



## Mother's Perception of Leo

When asked to describe Leo, Mum said "he's so outgoing.. he's so adventurous.. he likes to be in three places at once.. he likes to try and do everything all together". I asked Mum about Leo at home and whether he interacts with his older sisters or other children. She informed me that Leo enjoyed playing with the older sister; but was reported to 'clash' with the younger. She referred to him as 'being a handful' and needing attention from her, she also made reference to this when explaining his relationship with his younger sister "She never plays with him or interacts with him. He might be trying to get her attention by annoying her".

Mum described his relationship with the girl next door, who is the same age; that they enjoyed imaginary play and he chased her around. She described that they do talk to each other and that she felt the girl does understand Leo's speech "I think she knows what he is saying to a certain extent". Although without prompt tells me that when he tried to string a sentence together, he could get muddled; inferring that it is difficult to decipher.

Mum described a recent event as being transformative for Leo. This was the fitting of grommets and a hearing aid six months ago. Prior to this, Mum reported that Leo's behaviour was poor "His temper was unbelievable. He used to hurt himself. He would hit himself in the face, he would bite himself.". Mum also described that she put this down to frustration, as Leo was unable to speak or hear clearly before is ear procedures. He was described as having "No communication whatsoever" 6 months ago.

In a group situation, such as parties, Mum described Leo as being "a little bit wary, once he's away he's fine".

(Initial Interview 26/06/17)

## Practitioner's Perception of Leo

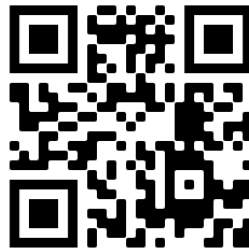
Sam's view of Leo at nursery echoed that of Mum's as a confident, independent child, despite him initially lacking confidence on entry to the nursery. She described him as being friendly, assured and "sporadic" at nursery and having a "short attention span". Sam also described him as vocal, with recent improvement in his speech and understanding since having his grommets and hearing aid fitted. She also described him as having good relationships but tending to stick to one person [child] for a couple of weeks, then moving on to someone else. Sam described Leo as enjoying role play and physical activities. She also added that he was "very loving. He shows you affection, he gives you a hug." (Interview 21/06/2017)

### *Analytic Comment On The Practitioner's Perceptions*

When discussing Leo, the practitioner described a holistic view of Leo with a progressive undertone to her view, indicating a tendency to focus on unification (McNair and Powell, 2020) and what he can do (Tsangaridou et al, 2013). The practitioner also considered prior challenges with hearing for Leo, illustrating awareness of his prior experiences. Although through an ableist lens, there is an indication of Leo having a lack of focus, suggesting having to learn the ways of the setting (Hedges, 2015; Willes, 1981). The practitioner is a senior member of the team and perhaps is more aware of bilingual practice and the accepted notion of the holistic child. However, the political discourse, although present in her narrative, is more nuanced, suggesting a deficit model of Leo's communication as problematic behaviour



## Findings and Interpretation of Leo's Interactions at Nursery



Please use a QR code reader to access Leo's video, using the password provided.

### Period One (36 months old)

#### *Summary*

In period one Leo was a busy child who was sporadic in selecting activities, playing for a short while then moving on. I witnessed the adventurous, enthusiastic nature of Leo's behaviour, reported by both parent and practitioner, as he moved around the room. I also observed some extended engagement in activities alongside other children. He was affable, having friends, regularly interacting with them, exploring together and sharing experiences. With further analysis of these interactions and movements, it appeared that Leo had a preference to interact with one person at a time. On occasion there was clearly Leo and one other child exploring and playing together, but on other occasions there were other children present yet Leo was interacting with only one of those children.

## Illustrated Findings

### Illustration – Lego Table (0:00:09 – 0:03:40)



*Leo is at the Lego table with three other children. They have quietly been building models for some time.*

*Leo holds a block in the air as B does the same. They make 'pew pew' shooting noises. Leo appears to pass his block to B.*

*An older child returns to his place at the table (to Leo's right).*

*Leo appears to move his body to block him from returning, then pushes him with his elbow.*

*The older child ignores Leo.*

*They both return to their models.*

*Leo starts to build again.*

*B sits on the chair he was previously standing behind, then shakes a shaker (instrument)*

*Leo moves in a gentle dance to the shaker.*

*Leo looks over to B and mutters something like "find it", he takes one of the blocks and walks around the table, moving next to B.*

*As Leo approaches, B is talking [inaudible] and picks up a dinosaur and the shaker and shakes it.*

*Leo has a smiling expression.*

*B holds up the dinosaur and says "raaagh"*

*Leo replies with a "wooh" and snatches a block from the table.*

*B briefly glances towards the block in Leo's hand*

*Leo briefly glances towards B, then walks away.*

This led me to contemplate the complexity of interactions in a group and whether Leo appears not yet comfortable in negotiating these webs of interaction (Wohlwend, 2009) and further consider that this may be underpinning Leo's apparent preference for an interaction with one child at a time.

Leo appeared to have a preference for communicating through large body movements and gesture. His use of speech was limited and unclear. I observed only one clear use of

speech, which was directed at an adult. When another child spoke to Leo, Leo responded with gesture and gaze.

Considering LPP and all observations in this period, Leo moved around from passive outsider (isolated play), through to core participant on occasion. Most of his observed episodes were in active participant and marginalised positions. The episodes where Leo was most active or most central regularly involved an adult, where the adult had initiated the interaction using their voice. This led me to consider whether he was more confident around adults, viewing them as the centre of expertise.

Period Two (37 months old – 1 month later)

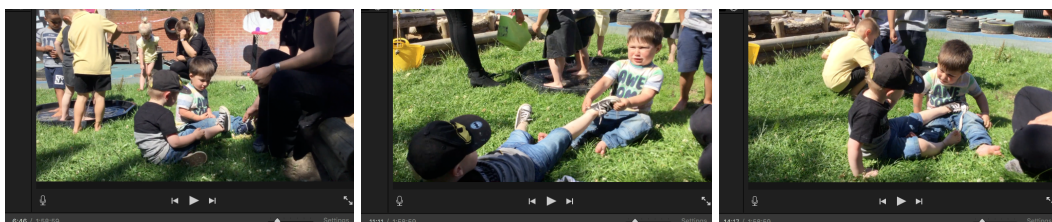
### *Summary*

This period illuminated the dyadic nature of multimodal dialogue between Leo and one other, on this occasion being an adult then a child.

### *Illustrated Findings*

In the following illustration an adult used their voice, reinforced with demonstration, to support Leo in learning how to remove his own shoe.

*Illustration – How many people does it take to remove your shoes? (0:06:29 – 0:15:09)(in part only)*



*Leo is outside. The weather is warm and children are splashing the water; shoes and socks off.*

*He approaches Louise [adult] and asks for her to take his shoes off.*

*Louise tells him to “pull your laces” repeating this several times (encouraging him to do it himself). “grab this one Leo”, “now this one” “that’s it, if you pull this your shoe will come off” as Louise takes him step by step through untying his shoelaces.*

*He looks at Louise and reluctantly attempts to remove his shoe.*

*His body language is open and his movements exaggerated. Leo leans back and holds his foot up towards Louise.*

*Louise then removes her own shoe, demonstrating how to do it, as Leo watches intently.*

*Louise "see. You can do it too"*

*Leo "no" as he shakes his head.*

*Another child joins them [L] and sits beside Leo.*

*Louise "shall we ask L to help?"*

*Many minutes of the children trying to remove each other's shoes follows.*

*Leo turns to L and taps L's leg then his face gently. He then points to L's shoe, looking at L's face "shoes come". While saying this, Leo's face softens, tilts to the side "yeah"*

*Leo "you", briefly pointing at L*

*L briefly speaks [inaudible] then removes his shoe.*

Leo used a number of non-verbal strategies to encourage the adult to remove his shoe. When the adult introduced a third person to the interaction, Leo remained focused on his initial interchange with the adult; albeit he held his leg directed towards the child for his shoe to be removed and vice versa. This hinted at the adult being used as a translator, with Leo using them in more apparent interaction and the leg directed at the child in a less apparent interaction. When Leo turned to focus on the child, his posture and expression changed dramatically; being reflective of that of a parent or carer. Had Leo witnessed this body language, appearing reflective of Wulf's (2013) ideas of children mimicking significant others to learn social practices and performing repertoires? This led me to view whether Leo perceived the interaction between children as requiring a different repertoire from interaction between adults and children; Leo shifting his position into the 'adult' role for this final section of the interaction.

In terms of LPP, Leo was firmly in the 'one to one with adult' category for much of the observed episodes, however he was also an active participant, using non-verbal modes of communication when initiating interaction and also when responding to adult speech, albeit there was some speech in his interactions. He appeared to briefly move towards the centre of expertise for the final episode, momentarily leading the interaction.



Period Three (40 months old - 3 months later)

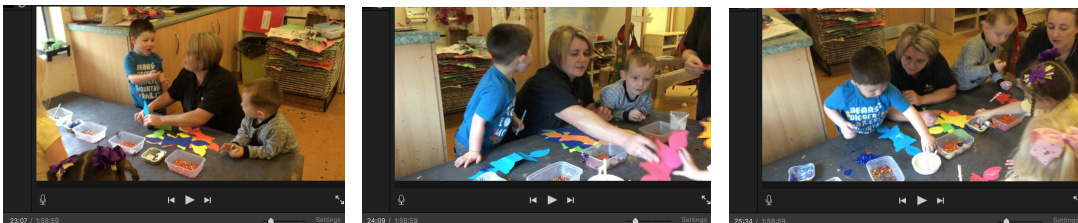
### *Summary*

Multiple episodes have illuminated that Leo continued to favour dyadic multimodal dialogue. He was observed using large body movements, facial expression, gesture and voice to initiate interactions with adults. On occasion these failed to gain responses from the adults but did result in inadvertent responses from children. On occasion he provided a counter-response to this and sometimes he did not respond further.

### *Illustrated Findings*

Leo was observed actively ignoring and rejecting others' attempts to join in with his dyadic interactions. The following illustration includes an episode where Leo ignores his friend, excluding him from the conversation, despite spending time playing with him previously that day.

#### *Illustration – A handful of Sparkles (0:24:24 - 0:26:01)*



*Leo is decorating a card diva lantern with guidance from an adult (Sam).*

*Leo turns his body towards Sam "I made his eyes"*

*Sam "did you?"*

*Leo "yeah" turning to his card to draw*

*Sam "what else are you going to do?"*

*Leo turns his face back to Sam "make his lips"*

*Sam "make the slips?"*

*Leo drawing "one..."*

*Sam turns to help B*

*Leo turns his face towards Sam "make his really scared eyes"*

*Sam "really scared eyes?" as Leo continues to draw*

*Sam "is he really scary then?"*

*Leo "yeah" as he places the lid onto the pen*

*Sam "oh no will he make me scared?"*

*As Leo sticks 'sparkles' onto his lamp Sam T [a second adult] off screen "I hope he doesn't scare me Leo"*

*B [child] "yes, he scare me"*

*Leo does not respond; he continues to stick.*

*Sam finds a card for B [L is on Sam's right, B on Sam's left at the table]*

*Sam "oooh"*

*B "red"*

*Leo looks at B, then turns away and continues his work.*

I was drawn to consider that Leo's strategies were as a result of his desire to interact with one person only; the interruption of which was irritating for him or perhaps drove him to use an alternative mode. There were a number of observations indicating a lack of empathy or an inappropriate response from Leo in this period, for example, he continued to laugh when an adult pretended to cry. This reflected the mimesis (Wulf, 2013) stage of interactions, where he was using strategies which mimic those he has observed from others; perhaps not understanding the complex emotions behind those interactions.

Notably Leo was involved in activities which could be perceived as non-compliant. Some interactions appeared to be spontaneous as Leo attempted to engage others; for example by running away and shouting as a child approached him (starting a game of chase) or by shoving (starting a joint effort to balance on a tree trunk). Initially I considered this to be 'behaviour' but applying the lens of multimodality brought me an alternative viewpoint to such observations. Were Leo's strategies to interact at any cost? Hence the inappropriate nature of some of his attempts. I was curious as to whether he was repeatedly attempting to interact, which could explain the frequency of his interactions and reflect the comment from Mam "he likes to be in three places at once" (Interview 26/06/17).

In terms of LPP, Leo changed his position in the group regularly. He moved his activities and interaction towards the centre of expertise, with the majority of his observed interactions being as an active or core participant. On occasion he had been a marginalised member, which reflected his unsuccessful attempts to interact. This demonstrated the complexity of his interactions in a nursery day; where his position in a group moved and changed with his chosen activities and play partners.

Period Four (42 months old - 2 months later)

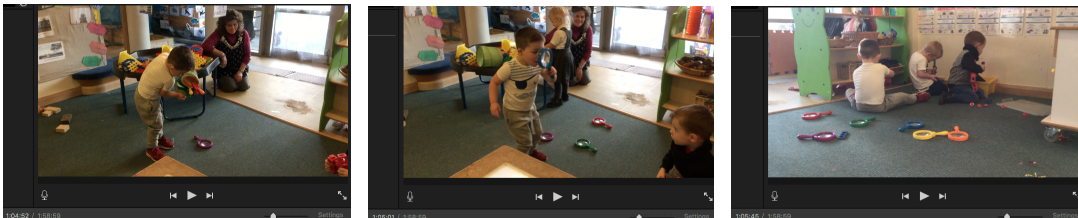
### *Summary*

In this period I observed Leo making efforts to initiate interaction with near peers, demonstrating a preference for children of his age. He used large movements, noisy resources, exaggerated expression, humour and on occasion speech to gain a response from children. Each occasion appeared to be an invitation to join him in play. He had variable rates of success, showing some tenacity in trying different modes and strategies until he achieved a response. I interpret this as Leo having gained an understanding that loud and large modes of communication do attract the attention of children.

### *Illustrated Findings*

In the following episode Leo appeared to be attempting to initiate interaction using magnifying glasses. It is unclear whether he used them as an invitation to play with them or as a noisy prop to attract attention. Dropping a basket of noisy resources could attract the attention of adults, but on this occasion, the adult chose to observe and not respond. This choice may have provided Leo with an opportunity to see his strategy though. Failing to achieve a response from his friends, Leo moved closer to the children and used other resources to initiate interaction. When Leo used his speaking voice, he was successful in gaining a verbal response from B.

#### *Illustration – Magnifying Clatter (1:04: 52 – 1:05:54)*



*Leo is in the exploration area, with an adult watching and two boys [B & J].  
B & J are playing with connecting blocks, building separately.  
Jackie [adult] is sitting on the floor observing.  
Leo elevates a basket and tips magnifying glasses on the floor. They clatter as they hit the floor.*

*B turns toward the noise “uh oh”. Leo glances at him briefly, then twists his upper body towards Jackie, looks at her and discards the basket. Jackie doesn’t respond. B watches him.*

*Leo points at the magnifying glasses on the floor with both hands waving “yeahhhh”*

*B “no”*

*Leo picks up a magnifying glass and looks through it briefly towards B “neh-nuh-neh-nuh”*

*B turns away and continues building.*

*Leo “no you [inaudible] me” as he places the magnifying glass on the floor and approaches the tray of connecting blocks. He grabs a couple of blocks and says “move” to J.*

*Both B & J have their back to Leo – the tray of blocks is against the wall. They continue to connect on the floor. Leo stands up to connect his.*

*B talks as he plays.*

*Leo turns and drops his unconnected blocks on the magnifying glasses then approaches the tray again. He rummages for blocks, making a loud noise, he stands and two blocks are on his fingers. Leo turns towards Jackie “Oh. Twoooooooooo” then giggles. He moves his fingers in a pincer movement with the blocks. He turns back to B & J and sits behind them on the floor playing with the blocks.*

*Leo “I’ll be Santa Claus in a minute”*

*B turns his head to Leo “No, I’m going to be the Santa Claus. I’m Santa Claus”*

*Leo turns, gets up and moves away, towards where they played Santa Claus earlier*

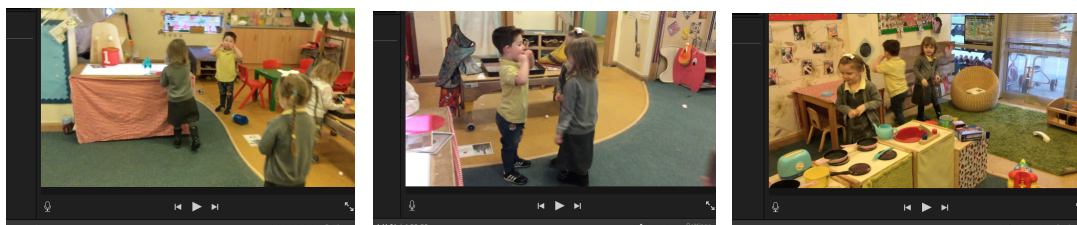
*B “I Santa Claus in a minute” not looking up from his blocks*

This episode directed me to look for successful and unsuccessful strategies in further observations, which highlighted that Leo was mimicking other children and drawing on previous shared experiences. For example, when a child banged on the table, Leo also did this, smiling at them to express his feelings. Leo appeared to attempt to initiate interactions much more than was apparent on first observation. For example, in a group activity, where Leo had to wait his turn, while sitting he moved his body; made facial expressions, shuffled and turned, which were interpreted as persistent attempts to initiate interactions. When his strategies failed, his expression and vocal volume [regularly of nonsense words and noises] became more exaggerated and louder. At this stage, this would generate a response from children, and from adults; the adults responding to this as ‘behaviour’ (Practitioner interview, 09/02/2018)

Repeated viewing of such episodes provided a different perspective of Leo, as his communication strategies bled into behaviour. When he was allowed to see his strategy through (rather than his ‘behaviour’ being regulated) it became apparent that he was

using a wide variety of multimodal communication strategies to attempt to initiate interaction with his peers. In the remarkable episode below, Leo appeared to be having a full interaction, with non-verbal dialogue, facial expression, gesture and body movement.

*Illustration – A Harmonica Chat (1:10:55 – 1:13:27)*



*In this sequence, Leo uses a harmonica to instigate an interaction with A & B. [for the purposes of the Illustration' to represent the sound of the harmonica, I use \*\*\*\*]*

*Leo \*\*\*\**

*A younger child runs over to him. Leo shakes his head a runs away from her  
Leo \*\*\*\* from the corner of the room*

*- Break in the video -*

*Leo \*\*\*\*\* as he looks at A & B*

*A & B look over and walk towards Leo*

*Leo \*\*\*\*\* \*\*\*\*\* \*\*\*\*\**

*A walks towards Leo but moves to the light box and picks up an item. Leo is now facing her, on her right.*

*Leo \*\*\*\*\**

*B walks towards A.*

*Leo approaches B with the harmonica outstretched in both hands. He holds it for B to try.*

*B blows but there is no sound*

*A turns to watch closely, then reaches out her hand to Leo "can I do it?"*

*He holds it out for her and she holds it too and blow – no sound.*

*Leo brings it back to his mouth and blows \*\*\*\*. He repeats this with several short blows then giggles. Both girls are standing close to him, watching him.*

*He then does several more blows, using exaggerated body moments.*

*He holds the harmonica to B's, then A's mouth for them to try. No noise*

*He blows it again loudly \*\*\*\* and smiles. B & A both laugh*

*He blows again, then holds it up to A's and B's mouth alternating between them. No sound*

*B "I can't do it"*

*Leo \*\*\*\* \*\*\*\*\**

*A "can I do it?"*

*Leo holds it to her mouth, no sound. Leo tilts his head and shrugs his shoulders.*

*He then holds it for B to have a blow – no sound, he tilts hid head and shrugs his shoulders again.*

*This is repeated several times until both girls manage to make a noise with it. They repeat this several times.*

*A laughs.*

*A 'conversation' of \*\*\*\*\* and giggling continues.*

*Leo gets more exaggerated in his movements, blowing the harmonica in A's face.*

*A & B both move away. Leo chases them and when he catches them he blows the harmonica with great force. B looks uncomfortable with this.*

*A approaches him "Leo. Don't do it again, right?"*

*Leo \*\*\*\*\**

*A "just do it gently" and she walks away*

*Leo turns to B and holds out the harmonica gently, she walks away.*

*He sees himself in the mirror and proceeds to hold a harmonica conversation with his reflection.*

In the observation above, an intensive and multimodal narrative arose without the use of speech for Leo. He indicated that he had intent to actively engaged two chosen peers into his apparent planned strategy. Using eye gaze and the harmonica (which was loud and did attract attention) he held a 'conversation' with his peers. When they use speech later in the sequence, Leo responded to their requests without using speech.

This episode appeared significant for Leo. He was able to hold a conversation, without relying on his speech. This activity could have been stopped by adults, under a negative behaviour narrative but was not (the harmonica noise could be described as irritating). Leo took the opportunity to perform his planned repertoire and it appeared to work for him, achieving a successful initiation of interactions.

Leo used a wide range of strategies throughout this period; using speech, artefact and gesture to both initiate and respond to others. I am led to consider whether his hearing impairment had influenced him to use loud and big movement strategies to ensure he is able to engage others, perhaps being the modes of communication that have attracted him in the past and him mimicking these experiences.

Considering LPP, Leo had moved through the categories depending on the context and circumstance. He was not observed to be a peripheral participant during this period but had mainly operated as an active or core participant and for the first time in this study

had been observed as a central participant. This may be reflective of his successful and tenacious strategies in initiating interactions.

Period Five (45 months old - 3 months later)

### *Summary*

In this period, Leo continued to try different modes to initiate interaction. He remained active in attempting to interact with anyone. His interaction strategies appeared to be forming constructed performance repertoires (Kress, 2001) insofar as they were more tailored to the receiver, which resulted in increasing apparent desired responses.

### *Illustrated Findings*

The following successive illustrations illuminated the tenacious range of strategies that he adopted to attempt to initiate an interaction.

#### *Illustration – White Hat (1:20:03 – 1:20:26)*



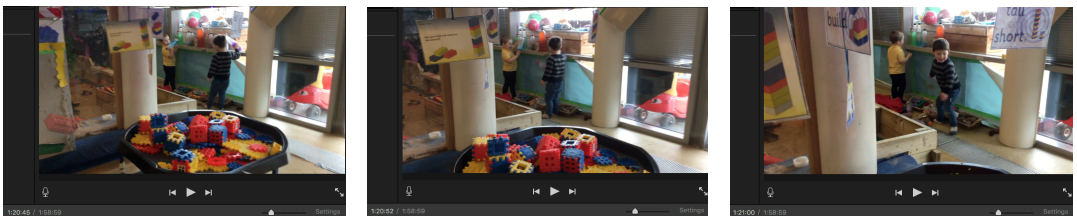
*Leo is walking across the nursery; he has a cookie cutter in his hand.  
Sam [adult] is sitting on the floor, talking to other children as they play.  
Leo approaches Sam, kicks a shoe on the floor – which attracts Sam’s attention, she turns to look.  
Leo places the cookie cutter on his head, holding it with both hands.  
Sam “ooh, that’s a nice hat”. Leo bends his knees and wiggles as they look at each other [I am unable to see his facial expression]  
Leo “it’s a white hat” as he removes it from his head  
Sam “A white hat?”  
Another child walks between Sam and Leo, Leo moves to his right, the child moves away. Leo then stands as close to Sam as he can.  
Leo is talking to Sam [inaudible] as another child is trying to engage Sam in a conversation.  
Leo walks away.*

*Illustration – Look over your shoulder (1:20:27 – 1:20:45)*



*Leo walks towards S, who has her back to him.  
He taps her on the right shoulder, while standing on the left and outstretching  
She turns around to her left as Leo moves around her to avoid her seeing him. He smiles. She walks away. Leo follows her with his arm outstretched (he looks like he is planning to grab her hair).  
She continues to walk away. He runs past her and turns around to look back at her.  
She turns and plays with the fire station.  
Leo continues to the tunnel*

*Illustration – Knocking bottles off (1:20:46 – 1:21:01)*



*Leo is near the tunnel. R is there [R rarely uses speech]  
R is exploring the sensory bottles  
Leo and R make eye contact  
Leo takes a bottle and drops it on the floor  
Leo then continues to knock more bottles off the shelf one by one.  
Across the room Sam [adult] can be heard saying “aww good boy” to another child  
Leo turns and briefly looks at her as he continues to knock the bottles off the shelf.  
The doorbell rings. Leo shouts “Mammy” and runs towards the door.*

This series of illustrations highlights Leo’s attempts to initiate interaction as continuing to meld into ‘behaviour’ as he used increasingly exaggerated movements, resulting in belligerent strategies to gain a response. It also indicates his continued preference for dyadic interaction, moving away from a complex multi-faceted group scenario. He used speech, artefact and gesture to initiate interaction with an adult and he used gesture and artefact to initiate with children. These were ‘quick-fire’ strategies with him appearing to be searching for a more sustained interaction. However, Leo also appeared to be



displaying a more refined set of repertoires in attempting to interact, with consideration for his audience. For example Leo used his voice and an artefact to initiate an interaction with an adult; used humour to initiate an interaction with a younger, vivacious child and used large movement of sensory resources to interact with a non-speaking child.

Considering LPP, it could be said that Leo was an active participant and that his position in the group varied according to the response he received rather than his intention. He appeared to have a desire to lead activities, but on occasion his strategies were not successful, resulting in him becoming marginalised. This perhaps contradicts my interpretation. As I studied Leo's interactions, his lack of desire to share an interaction with more than one person appeared to result in Leo marginalising himself, not him being marginalised. My interpretation of LPP is that of an individual being indoctrinated into an existing culture, this felt suitable for a teaching/learning adult/child construct. However, considering Leo's agency and the multifaceted elements of interaction in the nursery, I am led to examine the notion that the nursery environment is a collaboration of cultures and that children have some influence in their position in the group, or sub-group by choosing where they want to be, in terms of physical space, LPP and culture. The success of this of course lies with the response they receive and thus is an alternative view to that of moving within an existing culture.

Period Six (Leo is 46 months old - 1 month later)

### *Summary*

In period six, the final observation period. Leo could be described as being more purposeful in selecting and engaging his performance repertoires. He continued to appear to select a mode of communication for his 'audience' and appeared more successful in his strategies.

This period saw Leo approach children and ask them directly if they would like to play a specific game. He was initiating interactions as an activity or game leader and creator "... would you like to play hide and seek" (Leo, video 1:41:05). His interactions were

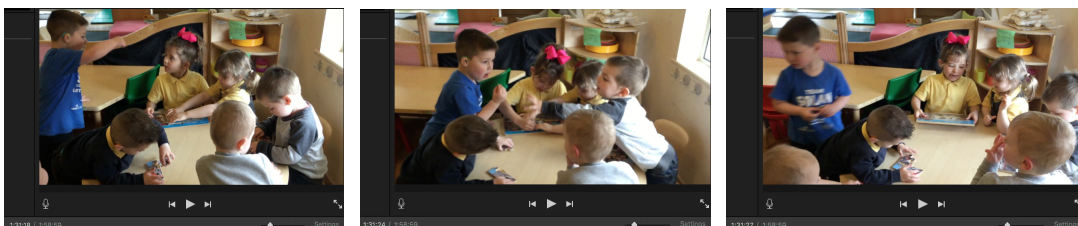
purposeful, targeted, clear, directed and multimodal. Leo was also involved in the superhero chase game, described in the findings of Dan (Dan video; D Got Pushed 2:45:15 – 2:47:58, Period Six) where a complex game of ‘chase’ saw leaders and followers change, multiple modes of communication used and participation levels dynamic.

This period saw Leo less affected by other people in groups and more selective in his performance repertoire when initiating interaction. When in a group of children, which could be described as ‘chaotic’ (with many interactions happening simultaneously), he appeared to engage communication strategies with purpose.

### *Illustrated Findings*

The illustration below follows Leo approaching a group of children.

#### *Illustration - Look What I found (1:31:13 – 1:31:29)*



*Leo has been playing at a table doing a jigsaw with five other children for some time. Communication has been complex and with conflict as the children all try to contribute at the same time. A [child] appears to be the central participant, with Leo contributing as an active participant. Leo has left the activity.*

*Leo re-joins the table at the second jigsaw.*

*Leo “look what I found A\*\*\*” holding up a glass bead.*

*A turns to Leo and holds her hand out. She appears to see it and look away.*

*Leo turns to D [child] who is also at the table. “Look what I found D\*\*\*”*

*D looks at the item and reaches for it “that’s mine”*

*Leo holds it towards his body “no, that’s not yours”, shaking his head*

*Leo leaves*

This short episode saw Leo’s confidence to leave and re-join a group of children. He approached multiple children with his artefact and with a directed use of speech; using the children’s names to be clear as to whom he was directing his interaction.

Later I observed Leo find a football, firstly using a broad approach to find play mates then secondly targeting one friend. He appeared to have a specific person he wanted to play football with, but when Leo failed to locate him, Leo attempted to engage a younger child. Leo used lots of modes of communication, however when the younger child did not respond, Leo moved on to find his original targeted play mate.

Considering LPP, in period six Leo continued to operate in all categories, from passive outsider to central participant. Notably however, he was rarely seen as a marginalised member of the group. This reflects his success in adapting his repertoires to his audience to gain a response. What is not reflected with this lens is Leo's power and agency in influencing his position in the group and his flexibility when operating within a dynamic group of peers.

#### Interpretation of Leo

During the period of time in which the research was conducted, I witnessed Leo using a variety of modes within his repertoire for intended recipients (Kress, 2001) to engage people of his choosing and responding to others using a wide selection of modes of communication. From an LPP perspective, Leo appeared to be at the centre of his social group; leading activities and instructing people, but also responding to other central participants, in dynamic contexts. This emphasised the complexities of social interaction in a group of young children who are developing their understanding of and skills in the art of interaction; alongside other children doing the same.

The chart below illustrates the overall nature of Leo's social interactions in each period. Using a holistic view, this shows the strategies that he adopted in initiating or responding to interactions during each period and with whom, illuminating changes over time. In particular this highlights the shift from his preference for dyadic interactions through the earlier periods, through to negotiating communication with multiple people. It also demonstrates Leo's tenacious attempts at trying different strategies, learning from his failed attempts and adapting his performance repertoires, followed by honing-in on successful strategies which he varied for different people. Leo's use of large and loud strategies is situated between his preference to interact one to one and the development

of interacting successfully in a group; possibly highlighting the experimental nature of this period, reflective of the crisis or transition discussed in Fleer's (2019) work.

Over the duration of the study, elements of Leo's strategies used to initiate and respond to social interaction have changed. What has remained the same is Leo's tenacity and his willingness to try different modes of communication to hone his performance repertoires.

(Diagram 10) Leo - Summary of each period

Observation period	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
<b>Instigation targets</b>	Adults and children (single)	Adults and children (single)	Adults and children (single)	Adults and Children (single)	Adults and Children (single)	Children (groups)
<b>Initiation strategies</b>	Large body movements and gesture. Attracted to activities with engaging resources	Fluent, unclear speech with adults and sympathetic body language with children	Large body movements and humor to engage children. Using speech with adults	Loud and large modes. Constant desire to initiate. Used a range of strategies.	Preferred one to one. Varied strategies to engage audience.	Speech, movement, artefacts. Active engagement
<b>Response source</b>	Adults and children	Adults and children	Adults and children	Mostly Children	Children	Children
<b>Response strategies</b>	Responded to children with gesture and gaze	Expression and body language	Excluded other children when in a one to one interaction.	Mimicked children's movements. Using humor	Loud, large movements	Used complex modes, aligned with the group.
<b>Notes of interest</b>	Interacted with one person at a time, little speech	Interacted with one person at a time	Strategies appeared out of context - high failure rate	Tenacious in trying to initiate. Wide range of strategies	Changed strategies to meet his audience	Interactions initiated with purpose. Complex group play

For much of the study, Leo had a strong preference for interacting with one person only, this became clear as he was observed rejecting approaches from children who attempted to join the dyad. Early in the study I observed Leo joining in activities of interest where it appeared that he was happy to join a shared activity, exploring alongside other children. On closer consideration, he communicated through the resources, rather than directly with the children, interpreted as him not having a specific target for his interactions, but inviting a response from anyone in the group. He appeared to have a preference for multimodal dialogue with one adult at a time, using his voice, gesture and movement confidently.

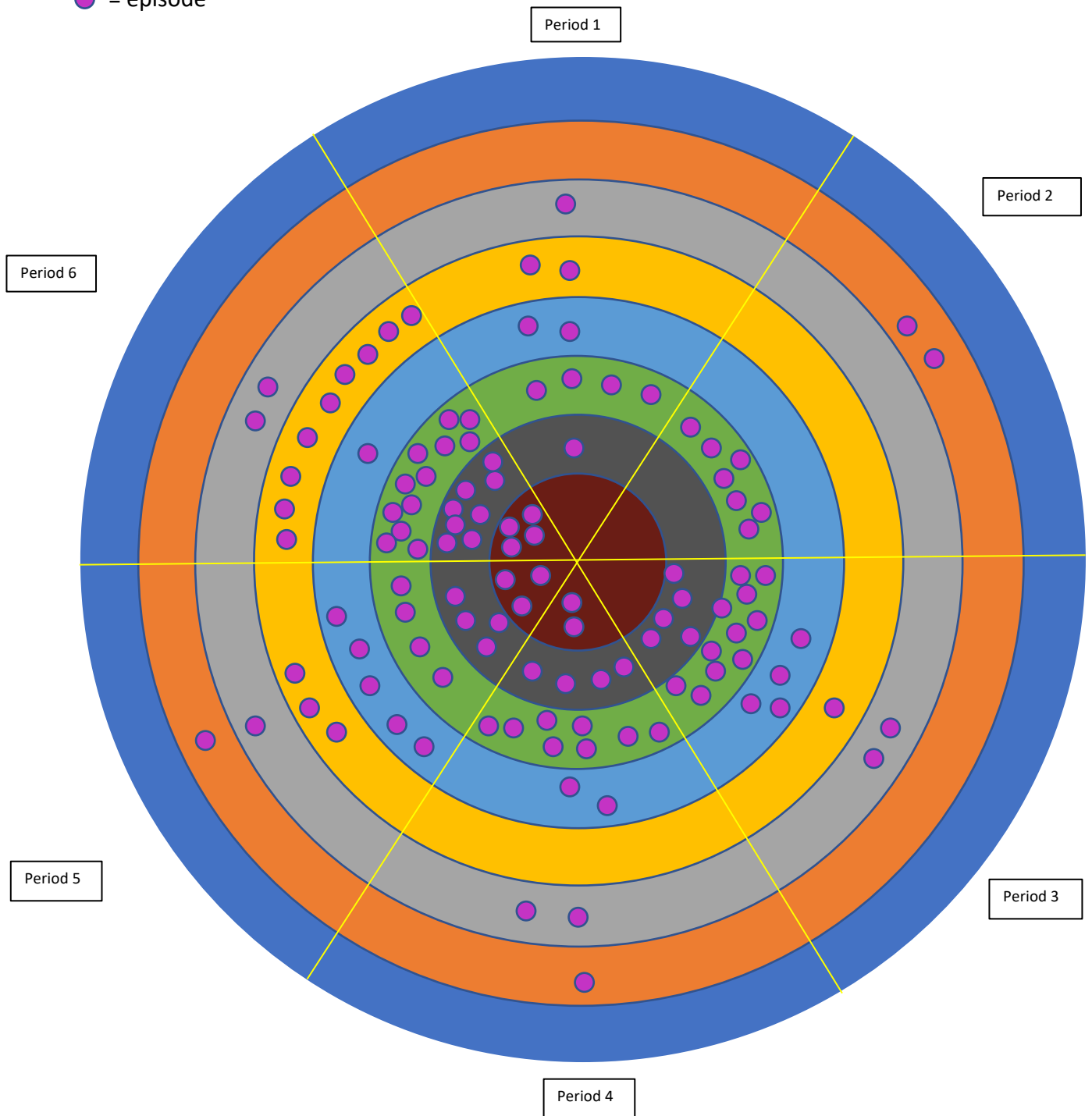
For some time, Leo appeared to have a preference for loud and large modes of communication, including dropping and knocking over resources, reflective of undesirable behaviour. I am drawn to question whether Leo was experimenting with different modes to initiate with children. This period was a period of crisis for Leo (Fleer, 2009) as he failed to initiate a response on many occasions but appeared to be learning which strategies worked with whom. The political discourse inferring 'good behaviour' (EYFS, 2017) as a measure of educational achievement, or at the very least educational engagement, has potential to lower a veil over the wonderful intentions of communication from Leo. Providing Leo with space and time exposed a transformative stage in developing his performance repertoires. Over time Leo gained increased responses from children, which resulted in him being observed using a wide variety of modes, as he altered his strategies from unsuccessful to successful repertoires to achieve a desired response. The nature of Leo's multimodal repertoires, which could be interpreted as poor behaviour when considering the deficit discourse of expectation of disadvantaged children, are reflective of the practitioner's tentative view of Leo. Her holistic view of Leo hinted at some communication challenges, informed by the EYFS (2017) outcomes, specifically their absence in the curriculum, positioning Leo in a deficit position of knowledge.

The following chart illustrates my interpretation of each episode in each period. Illuminating the changes over time of Leo's position in the group. It highlights the complexities in Leo's participation, as he moved between peripheral participant and central participant. Leo notably moved toward being a core participant when the older

cohort of children left for school, he proceeded to expert participant the following period, once he had established some successful repertoires. It also illustrates the complexity of Leo's journey to central participant as being fluid and multifarious, as he negotiated his position in the evolving group of children. This highlights the changing roles of children as they weave amongst others, being a central participant one moment and a peripheral participant the next. Bringing teaching and learning back into the fold of the theory, the children align and position themselves as both teacher and learner in a complex web of interactions Gutiérrez et al (1997).

(Diagram 11) Leo Legitimate Peripheral Participation

● = episode



- Newcomer (passive activities, e.g. observer)
- One to one with adult/adult led no interaction with other children
- Passive outsider (isolated play)
- Peripheral participant (involved but not leading or fully involved)
- Marginalised member (ignored by others)
- Active participant (involved, being led or guided)
- Core participant (involved with responsibilities)
- Expert/central participant (leading activity and instructing others)





Leo appeared to have had a desire to be the central participant early in this study; wanting to lead on activities from the start, illustrative of his desire to influence others through his actions. He achieved this relatively early on, by limiting his 'group' to only one other and enjoying being an active participant. He was not observed in isolated play and when marginalised or ignored, refused to accept this and tried different people and varying strategies. Leo appeared to develop new strategies rapidly; enabling him to initiate social interaction with increasing success. This is not visible when using the EYFS outcomes, which are designed to measure children's progress against normative outcomes, which brings into question the suitability of the term 'disadvantaged' and the discourse around 'correcting' such disadvantage. Leo demonstrated a complexity in his interactions and raised the significance of the situatedness of his repertoires. This brings into focus the 'blind spot' created by a set of measures which are easy to observe (Fleer, 2009) and illuminates the complex nature of child development beyond a correlation with advantaged and disadvantaged. This indicates a marginalisation of the marginalised (Kay, 2019) in a systematic failure to value diversity in favour of a narrow view of communication.

It wasn't until period six that Leo was observed interacting within a group of near peers, taking part in multi-directional and multimodal communication with children as their game moved and developed. Instruction and leadership shifted between children; each child negotiating movement between active, core and central participant.

What has been constant for Leo throughout this study is his desire to communicate. At times, this could have been judged as poor behaviour, rather than the enthusiastic, wonderfully tenacious multimodal repertoires he created.

Thank you Leo.



## Ben Case Study Profile

### Ben's Pen Portrait

Age at start of the study	38 months
Family	No siblings; mother and father present but separated
Started Nursery	13 months old
Nursery Key worker	Louise
Attendance	four afternoons and one whole day a week
Qualified for two-year funding?	No
Gender	male

Ben is an only child. His parents are separated and active in his life. Ben spends weekdays with Mam and weekends with Dad. He enjoys playing with a neighbour at Dad's (5) and the son of mam's friend (1) when at Mam's. He also sees grandparents every weekday and extended family weekly.



### Mother's Perception of Ben

Mam described Ben as "funny", "cheeky", "naughty" and "loving". She told me about his strong personality and that he likes to joke and play tricks on her. She described him as having limited time with children of similar age while at home. In group situations, such

as soft play centres, he plays alone. Mam describes him as “quite distant” from other children, expanding with “I don’t think he knows how to interact with other kids”. Mam talked about him using his voice in play, such as making noises for dinosaurs and cars and using his speaking voice with play people. Ben liked to help Mam with housework and gave her instructions in the car, such as “watch the traffic light; red means stop”. Mam explains that he appears to remember what she has told him before and repeats it back to her in context.

Mam (Interview 28/06/17)

#### Practitioner’s Perception of Ben

Louise, Ben’s keyworker throughout the study, described Ben as being quiet at nursery at the beginning of the study; having built his confidence in the past few weeks, following a lack of confidence on entry. She reported his preference to play in isolation although he was beginning to play with other children. At nursery he was being encouraged to use his speech; with a recent expansion of his vocabulary and starting to use his voice in social situations. He had started to invite other children to join in his play. He was reported as needing to develop his listening and attention, as he was easily distracted and in small groups was more inclined to join in actions to songs, rather than words. At snack times he would not speak with children but used his voice with adults to make his preferences known.

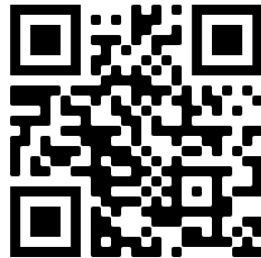
(Interview 21/06/2017)

#### *Analytic Comment On The Practitioner’s Perceptions*

The practitioner’s analysis of Ben indicates an unconscious bias for the spoken word as a communication tool (Brooker, 2010), in particular indicated as a deficit assessment of his joining in with singing using only actions to songs, despite the complexity of group interactions (Wohlwend, 2009). The practitioner had identified a differentiation between the repertoires used when communicating with adults and children, inferred as a deficit model of social interaction rather than a carrier of culture (Gutiérrez and Rogoff, 2003) exploring prior cultural experiences from home interactions. Multimodality is devalued in this interview, pitched as a deficit model of communication (Kress, 1997), which is

unsurprising, considering the absence of reference to multimodality in the EYFS (2017). This example, highlights the everydayness of the power and influence of the political discourse, through utterances in practice.

Findings and Interpretation of Ben's Interactions at Nursery



Please use a QR code reader to access Ben's video. This is password protected.

Period One (38 months old)

### *Summary*

There are some complex and multi-layered interactions in this first period for Ben. Observations illustrate that he had a wide range of modes at his disposal, using them dynamically to engage others. However, his calm and considered approach to activities also demonstrated a steely determination to be central in his plans and to accept or decline others in their attempt to be involved. What appeared acceptable to Ben was the success of the interaction achieving his goals, in terms of engaging others in his plans, rather than interaction at any cost. However, he demonstrated that he was able to adjust his approach to invite a younger child into his play and direct the same child in his prior plans.

Ben was observed engaged in isolated or parallel activities for lengthy durations in this period. During these times, he appeared relatively uninterested in the comings and goings of other children, continuing to explore while other children came and went.

Ben had short moments of initiating interaction with other children. The first, lengthy episode saw Ben playing with Lego blocks and dinosaurs. This was a busy activity, with

lots of children joining and leaving. Initially, he appeared to be playing alone, albeit alongside other children, however closer observation illuminated short bursts of interaction. Ben provided his own narration to his play; he used artefacts and voice to invite friends in, indicating that he was confident in leading his own play, interacting with others when the moment came; then returning to his play.

### *Illustrated Findings*

I was drawn to the following observation as Ben had moved from a shared activity, where he played alongside others yet appeared focused on his own plans, over to an interaction with a selected friend using artefacts. Prior to this planned interaction, Ben and his target friend had a brief interaction around dinosaurs. This led me to consider Ben's intent underpinning this interaction.

#### *Illustration – Come and play Dinosaurs (0:09:03 – 0:11:23)*



*Ben attempts to initiate play with L [child], running over with two dinosaurs he confidently says "hello L\*\*\*"*

*L is already getting his apron on to paint and ignores Ben.*

*After a pause, Ben places a dinosaur on the floor next to L.*

*Ben moves over to the tuff tray (adjacent to the painting), holding the other dinosaur high in the air.*

*Finding a further model on the tray, he proceeds to quietly narrate a fight between them.*

*Attracted by the chatting at the painting table he looks up, drops the dinosaurs and walks over.*

*Watching his friend make handprints, Ben stands close by then he walks away from the table.*

*Lauren [adult] "Do you want to do one Ben?"*

*Ben "yeah". Returning while pushing up his sleeves*

*C [child], talking to L "you've done yours"*

*Lauren to Ben "put an apron on"*

*Ben turns to get an apron.*

*C "Ben. Come here, get your paint done"*

*Lauren holding an apron "get an apron on Ben" "you don't want to?"*

*Ben is now at the tuff tray. He holds up a dinosaur and roars loudly, eyes directed to L & C. He bangs it on the tray loudly, briefly looking over again.*

*L comes over, reaches out his hand "Let me" his hand is covered in paint.*

*Ben pulls the dinosaur away, smiles and says "yuk, yakkie"*

*L returns to the painting table.*

*Ben plays animatedly with the dinosaurs, banging them on the tray.*

*Another child [L2] comes over and grabs the hippopotamus next to Ben, Ben tries to get it first.*

*L2 bangs the hippopotamus on the tray.*

*Ben looks at him, smiles and does the same; following L2 around the tray as they bang the animals on the tray.*

From this illustration, Ben demonstrated that he was more measured in his interaction than was initially apparent. He appeared to have a strong multimodal strategy of engaging a repertoire of speech, artefacts and large gesture; his choice of which appears to have been based upon prior interests of his target individual, applied through interpretive reconstruction (Corsaro, 2003). When Ben's strategy was unsuccessful in attracting his friend over to play, he appeared to adjust his strategy, leaving the artefact with his friend as an invitation while making his planned game attractive with loud noises and large movements. Realising that this adjusted strategy was also unsuccessful, he returned to his friend but resisted an invitation to join in his friend's activity; his intention appearing to be fixed on his original plan. Having returned to his planned activity he was successful in attracting his friend over; however with his friend's hand covered in paint, Ben rejected his friend from the activity, interpreted as it not being part of Ben's plans. Furthermore, Ben then demonstrated that he was prepared to welcome another child into his planned activity instead. He appeared to be managing his interactions through power (Wood, 2014), maintaining his own desires in the interaction and not yet considering that of others.

Observation in this period brought to the fore the non-verbal modes of communication adopted in his complex repertoires. For example, when attempting to initiate an interaction with a non-verbal, younger child, the interaction has the character of a dance; with Ben taking the lead as he and the younger child communicated through movement

and artefacts. Ben appeared to have a wide range of modes to call upon in his repertoire, to achieve his desired goal.

Looking specifically at LPP, Ben provided challenges for me when coding his interactions, as he moved from attempting to lead an activity, to being ignored, to directing others, then playing in isolation. My initial coding illustrated that Ben mainly moved between peripheral and active participant. However, this does not reflect Ben's dogged attempts to be a central participant, to lead play and his rejection of others who do not appear to intend to play within his rules.

Period Two (39 months old – 1 month later)

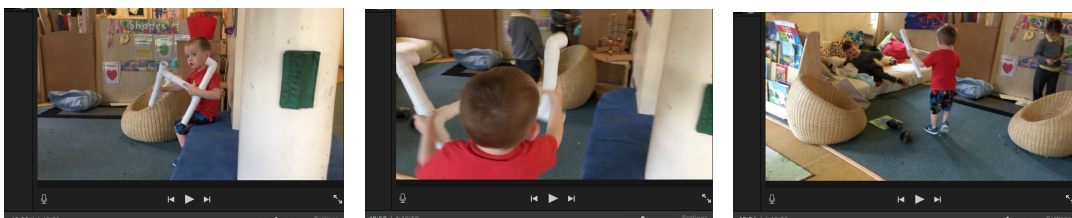
### *Summary*

As in period one, I was drawn further to consider that Ben viewed himself as a central participant in his planned play. Period two highlighted Ben's use of artefacts in his nursery day although I was unsure whether this was a method of communicating, or whether exploring. However, artefacts were present in many episodes.

### *Illustrated Findings*

In the episode below, Ben had made a complex gun from plastic waste pipes. Initially, I considered him to be using this to initiate interactions. During observations JJ had tried to take the 'gun' from Ben, which resulted in an older child 'having words' with JJ for "snatching". Continuing to observe Ben, the following episode occurred.

#### *Illustration – Waste Pipe Gun (0:18:00 – 0:19:27)*



*Ben is sitting with his gun, following a child [J] attempting to take it from him. Ben is mouthing a machine gun noise and pretending to shoot D as she approaches him.*

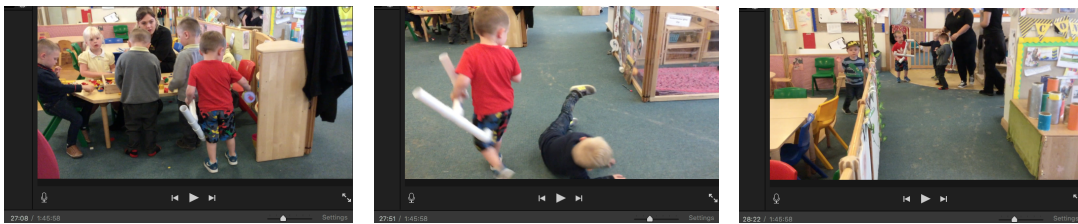
*D "is that [inaudible] off ya?".*  
*Ben smiles and shakes his head.*  
*D approaches Ben.*  
*Ben stands up and passes D then turns around to face her and sits back down.*  
*C approaches "Laura's watching ya" [referring to a previous incident]*  
*J kneels next to Ben*  
*Ben stands, making gun noises then sits and turns his gun to shoot, appearing to be scattering machine gun shots around the room.*  
*J stands and waves his arm in front of Ben.*  
*Ben immediately stands and walks away; before leaving the area he turns to shoot J. Stomping he gives the appearance of a comedic movement.*  
*J lays on the mattress briefly, smiling, then he jumps back up.*  
*At this Ben turns to run; J following.*  
*Ben turns to shoot at J and reverses away.*

This illustration led me to revisit this episode many times and reflect on whether Ben was using dual strategies; encouraging one child at a time to join his role play game, while concurrently using other children in his imaginary game as props without their knowledge. Considering this holistically; while other children appeared to be continuing with their play, Ben did not try to join in their play; he 'shot' them from his play frame. I was drawn to view the context of the gun and ask whether Ben was using it within imaginary play to keep a child away from his gun; considering he had previously tried to take it. I was less inclined to interpret Ben wanting to interact, due to his rejection of children who tried to join in.

Later in this series of episodes, Ben was observed 'shooting' children who passed by, followed by him running away to sit in the library area, where he remained for some time alone looking into his gun. There were moments when he appeared to be waiting, and others when he appeared to be interacting with me through nuanced gesture, but he continued to sit alone. He then moved towards me and looking in the corner of his eye, started 'dancing' with the gun, verbalising a shooting noise. This episode followed,



*Illustration – Convincing Death (0:27:11 – 0:29:05)*



*Ben is holding his gun, he approaches the snack area , picks up a cup from the floor and places it on the shelf.*

*He drops a small section of his gun.*

*He turns to pick it up and runs away.*

*J [child] follows him.*

*Ben turns to shoot J with the new piece, as a handgun “bler bler bler”.*

*J does not respond.*

*Moving around the room, Ben comes across JJ [child] and shoots him with the handgun.*

*JJ falls to the floor, pretending to die dramatically.*

*Ben walks away, looking back to JJ.*

*A [child] leans over JJ to check he is OK [so convincing was his dramatic death]*

*As A and JJ stand up, Ben shoots them.*

*JJ finds another item to use as a gun and shoots back.*

*Ben spends some time placing the handgun pipe back onto the big gun. Others are shooting at him but he ignores them.*

*When JJ walks towards him, Ben runs backwards shooting JJ with the big gun.*

*JJ doesn't respond.*

This episode suggested that Ben was unprepared for a child to shoot him back; he did not ‘die’ himself but appeared to focus on rebuilding his large gun. The time it took him to do this appeared to interfere with the natural flow of the interaction, losing the others’ interest. I am led to view the shooting and dying scene as Ben wanting to be the centre of his imaginary play as he interacts. His response appeared to be a single interaction with a singular reciprocation where Ben initiated and a child responded, but Ben does not then respond further in order to continue the interaction. This reflects his earlier interactions that appeared to be self-centric, where Ben’s initiations of interactions reflect his own plans for the interaction.

In this period, Ben favoured gesture and artefact to initiate interactions with both adults and children. What was observed from this initial analysis was the absence of continuing that interaction beyond the response. His performance repertoire appeared planned and

fixed for a singular response. Ben maintained an equipoise with both adults and children; not having an apparent preference; using verbal and non-verbal modes of communication with both. I am drawn to consider that as Ben spent most of his week at home in the presence of adults (parent discussion; 17/11/2017) he has shown a regard for children which indicates a lack of near-peer differentiation.

Considering LPP in period two, Ben operated on the peripheral, marginalised and active aspects of participation; a busy child with lots going on; rarely looking lost for things to do and able to spend time engaged in play for some time; Ben appeared on the surface to be actively interacting with others. However, removing background 'noise' uncovered a singularity in his direction of travel. On reflection, Ben did not appear to have the ability or the desire to reciprocate with others beyond 'serve and return' and therefore positioned himself as central to his plans, with less regard for the group.

Period Three (42 months old – 3 months later)

### *Summary*

In this period, Ben was observed in group activities or surrounded by other children, although he was mainly interacting with individuals. When in imaginary play with an adult, he joined his near-peer and the adult in their interaction. In this activity Ben initiated and responded to interactions with both the adult and the near peer, within the play frame. This was a shift for Ben, in being able to interact with two people as well as being able to respond to unplanned events in play.

Reflecting back, although Ben had moved to join others in their play during this period, when he had initiated the interaction using gesture and artefact, or example, he remained unyielding within those modes; perhaps still not ready to veer from his intended plans in this context.

### *Illustrated Findings*

Ben appeared to have developed some friendships and was observed using his speech more within his play when with these friends. In this first illustration, Ben is surrounded by lots of children. He is joining in with the dancing activity, but mainly interacts with his near peer.

#### *Illustration – Look at My Finger (0:41:37 - 0:44:07)*



*In a group session, where the children are singing and dancing along to a video, Ben appears to be enjoying this, copying the moves and singing along.*

*He turns around to Shannon [adult] “oh no, his nose” holding his hand in a pointed index finger in front of his nose.*

*Later L turns to Ben and touches his nose “Nose”*

*Ben says something to L [inaudible], then leans in, close to L’s face.*

*Ben pretends to pick his nose and show L the contents on his finger. L smiles, Ben folds over in giggles.*

*They both leap around.*

*Ben stands with his feet wide apart and L mirrors him.*

*They both return to following the dance moves.*

In this brief interaction, the friends shared their experience with humour. Primarily a movement activity, they maintain this while interacting verbally; then move on to mimicking. This interaction appeared to be enjoyed by both children, taking turns to lead their own interactions within the context of the activity.

I was led to believe that Ben had started to enjoy an intersubjective interaction as an equal, active participant and was anticipating more of the same. Later, Ben was observed interacting with a younger child. On this occasion, Ben appeared to have intent but this was not mirrored or followed by his friend. Looking a little lost and with the invitation of an adult, Ben changed his intention and followed his friend into a group activity.

*Illustration – I want a go (0:44:08 - 0:45:40)*



*In a short episode, Ben is waiting for his friend [JJ] outside the bathroom. An adult stops JJ and asks him where he is going next. Ben points with a stick to answer her question. JJ points in the same direction. Both children run in the direction, but JJ is distracted and turns towards an activity on the left.*

*Ben turns to see that his friend did not follow him. He looks lost for a while, rocking from left to right and gazing at the sticks in his hand. He watches the activity from behind the room divider for a while then he walks around slowly to join the activity, while swinging a stick in his hand.*

*As he approaches, Lauren says “Does Ben want a go?”*

*Ben takes a few steps forward then stops, appearing to lose his confidence.*

*Lauren holds out a bingo dabber.*

*The other adult turns to look at Ben.*

*Ben “I want a go”*

*Adult “you want a go?”. She takes his sticks and makes a space around the table.*

*Ben takes the dabber and joins in.*

This episode saw Ben change his strategy away from his play intention, in response to his near peer, albeit with support from an adult. Unlike previous periods, Ben was observed joining in with others’ existing play. Concurrently, Ben appeared to extend his repertoires, mirroring those of others as he built and understanding through play. For example, Ben was observed interacting with younger children individually, using artefacts, as he made marks in the sand with sticks, or poured sand into a digger which was held by another child. He used very little speech in these interactions. Although on one occasion, he did use his voice which was responded to with speech, albeit the conversation was not continued. Later he was observed primarily using his speech in imaginary play. This game was a shop game, buying tea or ice-cream with Ben’s near-peers and an adult. Language was already being used in this game when Ben joined. He continued the play with his voice and demonstrated that he was actively listening to others. This appeared to be a shift for Ben, towards understanding and contributing to social interaction dynamics in a group scenario.

Ben appeared to have added a wider range of modes to his repertoire, with consideration for his receiver, not just to fulfil his own desires but to engage beyond 'serve and return' as reported by Fernie et al (1993). He appeared to have more consideration for modes used by others, appearing to mirror these modes in order to maintain play and continue interacting (Ogden, 2000).

Focusing on LPP, Ben was energetic in period three as a core and active participant for much of his time. He was observed as peripheral participant on occasion and for the first time also a passive outsider. This is reflective of his continued desire to control many of his activities, with a change in his apparent shift to being more responsive to others but also happy to play alone.

Period Four (44 months old – 2 months later)

### *Summary*

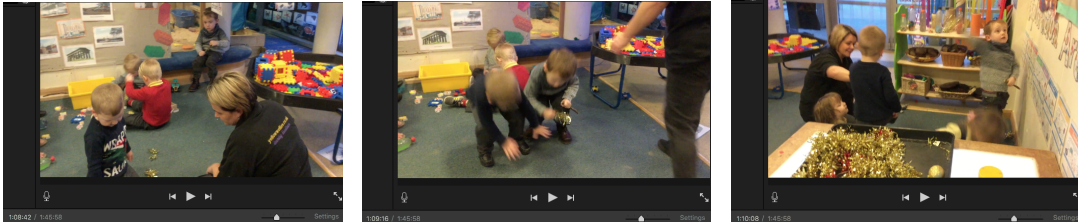
This period was a challenge to analyse. Initially Ben appeared to have lost some of his strategies to engage others. Considering each episode in more depth and reflecting back on previous episodes highlighted that Ben appeared to be operating in a changed community, where other children were leading activities alongside adults. I deduced that this provided Ben with challenge as he was having to negotiate new strategies to initiate interactions with multiple people. I am drawn to further consider whether the shift in levels of participation of other children, as they led activities with adults, provided Ben with newly central participants; perhaps challenging his perceived power.

This highlighted further the complexities for children as they find their position in a moving and changing community. Early in the period saw Ben attempting to join an interaction between an adult and a child [this was a child with SEND receiving focused support]. Ben was asked to wait his turn. As a result, he watched the rest of their interaction. This was immediately followed by an episode of Ben looking lost, appearing to not have any strategies to engage others. However, he followed his friend to another part of the nursery and then engaged in an activity which was strongly led by an adult.

### *Illustrated Findings*

The following illustration shows Ben attempting to join a different activity, which was being led by a child but had an adult involved.

#### *Illustration – Chucking Tinsel (1:08:37 – 1:10:10)*



*In this episode, Ben is watching Sam [adult] and D [child] playing a game led by D. D tells Sam to kick the tinsel.*

*Sam tries “I’m nearly there, yaaaay”*

*Ben joins them. Snatching some tinsel from the floor, D grabs most of it away. “Mine”*

*Sam “Ben can join us”*

*Ben “yeah”*

*Sam “watch D\*\*\* and he’ll show you what to do”*

*Ben “yeah” as he moves into place.*

*D “You have to chuck them on there”*

*Sam “chuck them now”*

*Ben ‘chucks’ his tinsel*

*-break in the video-*

*Ben pointing at something on the floor to Sam “that one’s dead”*

*Ben watches.*

*D dances around. Sam kneels on the floor, A [child] joins her, followed by D.*

*Sam throws the tinsel “See if we can hit the wall”*

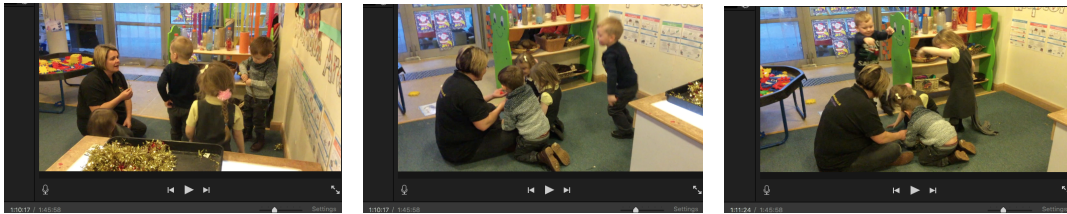
*D tries this with great enthusiasm. B and R join.*

*Ben watches, slightly swaying. Then he picks up several pieces of tinsel, watches once more then throws the tinsel at the wall.*

In this observation, I was drawn to interpret that Ben was using his body movement to join in the game, adding his voice once invited. He did not appear to be relaxed in the game.

The next illustration, which immediately followed the previous one highlighted that Ben appeared to be attempting to interact mainly with the adult, rather than the children.

*Illustration – Tinsel Spiders (1:10:11 – 1:11:56)*



*Ben is with Sam and three children [A, B & D].*

*Ben is exploring a stick*

*Sam to D “are these spiders, look? Eurgh. Sam’s nervous around spiders” as she throws it on the floor*

*Ben looks up at Sam then down at the spider.*

*Sam to D “Will it hurt me?”*

*Ben “noooo. No its gentle them”*

*Sam “It’s good to be gentle?”*

*Ben “yeah”*

*Sam is holding the pretend spider in her hand. A, B and D are standing in a curve in front of her. Ben is further back.*

*D “It bite ya”*

*Sam “It’s going to bite me?”*

*D “ya”*

*Ben approaches the group closer “It bite ya”*

*Sam continues to talk to D as Ben stands right next to her.*

*Sam “hey hey haaaaaay” continuing to talk to D*

*Ben falls onto her lap then falls off.*

*Sam “whoops”*

*Sam and D continue to interact laughing at being scared of the pretend spiders*

*Ben kneels in front of Sam, alongside the A and B and scoops lots of ‘spiders’ onto Sam’s lap.*

*Sam “noooooooooo” moving back*

*They continue this for a few seconds.*

*Sam is distracted by another adult.*

*Ben leaves at area and moves towards the louder adult, who is with J.*

Both of these illustrations are examples of Ben attempting to join existing interactions, between one child and one adult, also reflected in other observations in this period. This appears to have been challenging for Ben, as he struggled to negotiate his way into the activity. Reflecting on previous periods, where Ben favoured interaction with one person; I am drawn to question the complexity in joining an existing dyadic interaction, as a new consideration for Ben. Additionally, there were commonalities in his repertoires for adults and children in previous periods, more recently he appeared to have developed diverse

repertoires engaging in a wider selection of modes. He appears to have reached a crisis (Fleer, 2009), where he is unsure how to engage a mix of adults and children.

This was reinforced with a short episode which was observed with a sense of relief from Ben as he joined a near peer in a familiar interaction, with some success; using voice, artefact and body movement, as follows,

*Illustration – Pipe Guns Again (1:13:51 – 1:15:09)*



*Ben appears a little lost with what to do. He spots J connecting pipes and approaches him. Ben makes his own pipe gun “I’ve got one” directing his speech to the adult. J turns and looks at Ben. Ben waits as J puts his gun back together. J “pew-pew-pew” aiming past Ben then walking away. Ben follows “nee naw nee naw” They both move into the bathroom.*

In this familiar interaction for Ben, I saw him relax and successfully negotiate joining a child’s existing play.

Later in this period Ben was involved in an episode which was significant for Dan. In this episode, Dan used his speaking voice as a clear and direct strategy to interact; Ben was on the receiving end of this. Initially Ben turned away, rejecting Dan’s approach, but rapidly warmed to Dan, resulting in an extended, joint activity of rockets. On reflection, this appeared to have been significant for Ben too. Considering his recent difficulties in engaging strategies to join existing exchange between two people, he made a strategic leap when introducing Dan to another child who joined their interaction. Furthermore, Ben introduced Dan as his “best friend” in a clear display of empathy and understanding. This resulted in Dan and the other child continuing their interaction, while Ben moved away; perhaps illustrating Ben’s preference for dyadic interaction.



Further episodes in this period saw Ben in a group of three, on occasion with two children but also with one adult and one child. Both episodes demonstrate that Ben has a penchant for speaking with only one of them at a time.

Looking specifically at LPP, Ben was observed in every category from passive outsider to central/expert participant as he manoeuvred around people and activities concurrently with the other children doing the same. This reflects his intention to be a central participant but also his failed strategies which resulted in becoming a passive outsider. This period highlights children's agency in desiring to be a central participant, rather than it being predetermined role within the group, indicated by Lave and Wenger (1991).

Period Five (47 months old – 3 months later)

### *Summary*

Period five saw Ben engaging in multidirectional, multimodal interactions; holding a conversation which was interrupted; dealing with the new conversation; then returning to the previous, for example. He appeared to have returned to the centre of activities again. However, this time he was demonstrating that he was listening to other people and responding to them, with dynamic intersubjectivity.

Using his voice in complex conversation, Ben was giving directions, asking questions and making suggestions. He also used his body movements, actions, gesture, gaze and artefacts to reinforce his intentions, inspire others to get involved, support his meaning and direct play for the group. Ben was at the centre of his community, albeit asking for help from the adults when required.

## Illustrated Findings

### Illustration – Tidying up for 100 (1:27:37 – 1:29:59)



*Ben is playing on the floor with one other child. They are pressing computer keyboard keys and muttering between themselves.*

*Louise is playing 'hairdressers' close by with a group of children.*

*Another child nearby is overheard "can we go outside?"*

*Ben clearly hears him too. He stands up and approaches Louise "Louise. Can we go outside?"*

*Louise "you want to go outside?"*

*Ben "yes" nodding.*

*Louise "well, do you think we need to have a tidy first before we go outside?"*

*Ben "yeah" returning to his friend "we're going outside, we're going outside" Ben starts to tidy the area he was playing in. Walking back towards Louise "H\*\*\* wants to play in the house"*

*Louise "who's going to pick up H\*\*\*?"*

*Ben "Hmmm. I think its..... Sam" looking round and seeing Sam pass by.*

*Louise "Really? I thought it was my turn to pick up H\*\*\*. Can I pick him up?"*

*Ben "yeah"*

*L approaches and stands right in front of Ben "Ben are you coming playing?"*

*Ben "yeah. Going outside, need to tidy up" as he turns, returns to where he was playing and starts to tidy up.*

*Louise "Right. We do need to tidy up. Because there are lots of toys on the floor, aren't there? Do you think we should count and see how quickly we can do it?"*

*Ben, leaping "yeah, we need to count to one hundred"*

*Louise "one hundred?"*

*Ben "you need to go to one zero zero" as he writes the numbers in the air using his whole arm.*

*Louise "wow, I didn't know you knew that. When shall I start counting? One....."*

Ben appeared to be able to negotiate his way through the group, he responded to a child's idea of going outside, took it upon himself to ask the adult if they can go outside [using the term "we" in his request], he listened to instructions, added an idea of his own and shared the information with others. This showed an understanding of his dynamic surroundings and the various contexts and cultures in the nursery. His enquiry about a

child who needed collecting from school also demonstrated his awareness of the nursery day, making links to prior knowledge.

Looking at LPP Ben was considered to be the expert participant for most of the period, occasionally moving to core participant when collaborating others. He was perpetually initiating interactions, almost always with his speech, albeit with some gesture and artefact too. The LPP illustration below (page 168) does not fully illuminate the complexity of the interactions between the group in the period; being difficult to identify who initiated what, as conversations start, are interrupted, then restart.

Period Six (48 months old – 1 month later)

### *Summary*

I left Ben as he negotiated his own way around the nursery, involving himself in activities, leading and guiding adults and children alike. Using his whole body, his complex spoken language as well as use of artefacts, gestures and gaze, Ben knew what he wanted and used varying repertoires to engage in activities. He also showed empathy, supporting others to feel welcome, helping others in learning and changing his strategy when he needed to. He moved between teacher and pupil roles as he and his peers and adults collaborated in explorative and narrative play.

Period six saw Ben welcome a new member to the community. An adult joined the nursery for her student placement and Ben took it upon himself to 'show her the ropes'. He used speech, gesture, artefacts and body language to welcome her into his play, showing her how to work the imaginary ice-cream machine. Arguably, the pedagogy and culture in the setting facilitated Ben's expressions of agency, illustrated by his interactions and behaviours (Ball, 2013).

## Illustrated Findings

*Illustration – This is how we make ice-cream (1:33:14 – 1:34:47)*



*Ben is playing in the home corner. Another child is present [B] and an adult.*

*The adult [Millie] is a student and visiting us today.*

*Ben is pretending to make ice-cream from the tap and turns to Millie “what do you want to put on?”*

*Millie “Me?”*

*As B drops a container in the sink. Ben picks it up and uses it as if to put a topping on his ice-cream.*

*He takes it to Millie “Here you go. Anything.. anything you want, fudge and anything” as he waves his arm around.*

*Millie takes the ‘ice-cream’ “make my belly frozen?”*

*Ben “yeah”*

*Millie “shall I make you one now?”*

*Ben “Yeah”*

*He shows Millie how to do this, using his voice and pointing at the different imaginary functions. Going into some detail and elaborating on his ideas, he uses his voice and his whole body to explain; gathering additional artefacts to embellish their imaginary play.*

Beyond this episode, his language and body movement were expressive and exaggerated. He continued to move like he was dancing, shaking his head and tipping his body. Mum found it quite amusing as he appeared to be seducing the adult as he elaborated on his explanation, uses expressive language and moved his whole body to illustrate his narrative.

Ben’s narrative with the adult was abruptly interrupted by a child squealing and covering his ears. After a pause, Ben explained to her that “he squeals all the time” (Ben, 1:35:46). Ben clearly indicated that he had positioned himself as the centre of expertise in the community, having started to give instructions to indoctrinate a new member.

Later in the period, Ben was attempting to join an adult and a child, deep in conversation. This time he waited for an opportunity to get involved and used his voice.

*Illustration – I'm the biggest (1:36:46 – 1:37:58)*



*Sam [adult] is having a conversation with child [N]. Ben is sitting on a chair next to Sam appearing to be waiting for them to finish.*

*As N elaborates, engaging Sam deeply in a conversation about whether a horse needs a bigger or smaller blanket, Ben appears to be losing patience "biggerbiggerbigger".*

*Sam and N look at him.*

*"Bigger Ben?" says Sam.*

*N "And I feel bigger too"*

*Ben standing up "no. I'm bigger than you"*

*N "No, I'm bigger"*

*They get into a discussion, via Sam.*

*Ben "No, I'm bigger because I'm four old"*

I am drawn to consider that the skills he had shown in the previous period, of interacting with multiple people, had retreated. However, this strategy to initiate interaction appeared more considered in the manner in which he interjected. Previously, Ben joined in with artefacts or body movement followed by other modes of communication to maintain the activity. On this occasion, however I viewed that Ben was patiently waiting, but in the meantime, contributed to their conversation. As he provided explanation to the others for his understanding of why he was bigger, he appeared to remain an expert participant, instructing others even from the periphery of their interaction. Later in this episode, Ben appeared to be losing his patience in waiting for them to end their play; he took a pair of ear defenders, sat on a chair in front of Sam, placed them on his ears and shouted, "Little Sam" (Ben, 1:42:42) to gain her attention.

In the final episode, Ben was outdoors, leading an adult in finding minibeasts. Intermittently, he left to run around and find other things to do. On one occasion, he sat

on a seesaw; a younger child joined him but sat in the middle; he explained and showed her where to sit; she didn't respond so he left the area, running towards a friend.

I interpreted Ben as being able to deal with others empathetically; for example waiting for a turn, supporting others, teaching them and joining in their play while using a wide range of modes in his repertoires.

From an LPP perspective, Ben continued to negotiate his way through the community from a passive outsider to an expert participant. Typed illustrations do not fully illuminate the purposeful nature of this, as Ben positioned himself on many occasions, rather than finding himself there. This generates a fresh perspective of LPP, where children have agency and power to decide their own position.

#### Interpretation of Ben

Ben has been fascinating to observe. My initial view of Ben brought a gentle, calm child to the study. More in-depth consideration uncovered a child determined to follow his own path and explore in his own way without relying on others to achieve this. Illustrated through Ben's play choices and the nature of his interactions illuminated the small acts of control, agency and influence when within his stable periods (Fleer, 2009). The complexity of Ben's everyday social interactions offer a counter narrative to the deficit discourse of disadvantage.

Over each period, I have enjoyed watching Ben increasingly consider others' ideas and welcome them into his play, learning to listen to others and contemplate their opinions and preferences in his exploration.

The following chart illustrates the overall nature of Ben's social interactions in each period. Using a summative, holistic view, this shows the strategies that he adopted in initiating or responding to interactions during each period. It illuminates a shift in his approaches and responses to social interactions. In particular this highlights the shift from egotistical to more altruistic strategies adopted to engage with others. It also shows the

shift in complexity as Ben moved from dialogue on his terms to complex discourse in dynamic groups and subgroups. Ben also appeared to partially replace the use of artefact with voice, as his strategies developed and became more complex.

(Diagram 12) Ben - Summary of each period

Observation period	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
<b>Instigation targets</b>	Children (single)	Children	Adults and children	Adults and children (single)	Adults and children (group)	Adults and Children
<b>Initiation strategies</b>	Wide range of modes to engage others in his plans.	Wide range of modes. Focused on own planned play	Speech and humor with near-peer, wide range of modes	Increased use of speech. Unsuccessful in groups.	All modes of communication. Speech the primary mode.	Speech. Complex conversations, gave instructions
<b>Response source</b>	Adults and children (single)	Adults	Adults and older children	Adults and Children	Adults and Children	Adults and Children
<b>Response strategies</b>	Gesture, artefacts	Little interest in others. Used speech with adults	Increased use of speech with children. Gesture and artefacts	Focused on adults. Reluctant to respond to groups. Emerged responses from verbal children	All modes. Primarily used speech	All modes. Responded to other's needs
<b>Notes of interest</b>	Focused on own plan, reluctant to 'listen' or respond to others	Egocentric play. Interacts the same with adults and children	Ignored some children. More responsive to older audience	Avoided groups. Used complex language with individual children	Initiated in groups. Used complex language with multiple people	Led own position, welcoming newcomers



Like Leo, Ben had a strong preference to interact dyadically. On many occasions this was with Leo. This appeared to create a friendship and trust between them, which was regularly underpinned with humour and shared jokes. Through most of the study, Ben appeared to have an equal regard for adults and children, using similar repertoires for initiating with and responding to both. Ben was the only focus child to be observed operating as such, he is also the only child without siblings. This may be significant for Ben's repertoires.

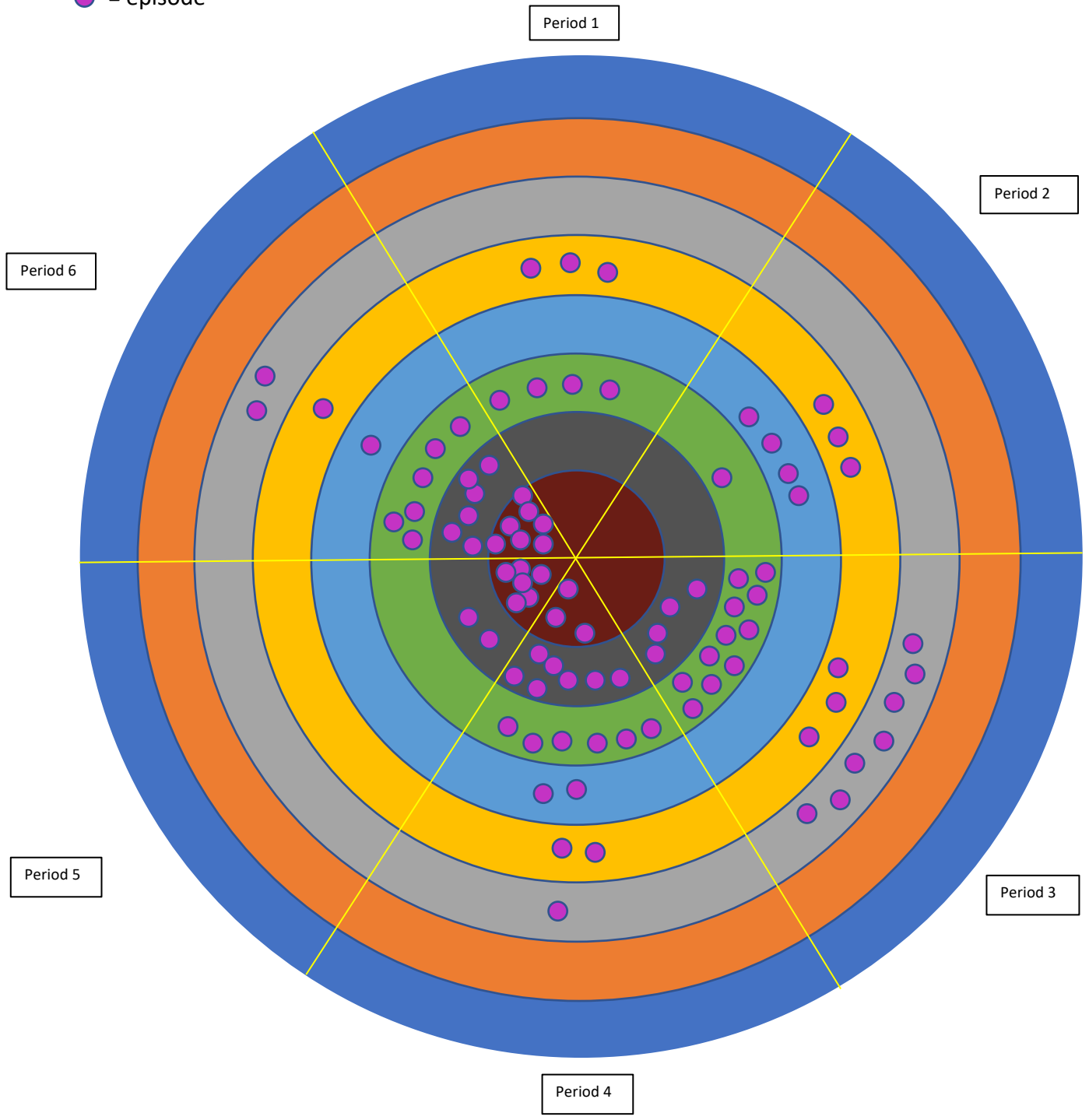
Yet, this rich, contextual knowledge in the diversity of cultures is absent from the political narrative, underpinned by the discourse of power. The direction of ECE pedagogy foregrounds the binary notion of advantage and disadvantage, reducing the visibility of these complex and culturally-situated experiences in favour of those which can be easily seen and measured.

Watching Ben welcoming an adult into the community was heart-warming. He appeared to thoroughly enjoy teaching her how to operate his imaginary machine and was able to leave his play frame to explain his friend's behaviour. Also, his introduction of two friends illustrated the depth of his abilities in social interactions. Ben displayed agency through his expertise (Lave & Wenger 1991) in welcoming a newcomer to nursery culture, a narrative which illustrates Ben as a carrier, creator and influencer of culture (Hedges, 2015).

The following chart illustrates my interpretations of his position in the group, through the lens of LPP. The wheel illustrates the gradual move for Ben towards the centre of expertise; finally reaching that in period four. However, Ben continued to operate within a wide scatter of positions, albeit not in a one-to-one with an adult or as a newcomer. Period five was an exception, reflective of the small number of episodes captured in that period.

(Diagram 13) Ben - Legitimate Peripheral Participation

● = episode



- Newcomer (passive activities, eg observer)
- One to one with adult/adult led no interaction with other children
- Passive outsider (isolated play)
- Peripheral participant (involved but not leading or fully involved)
- Marginalised member (ignored by others)
- Active participant (involved, being led or guided)
- Core participant (involved with responsibilities)
- Expert/central participant (leading activity and instructing others)



Ben has been a difficult child to analyse, his movements and strategies being nuanced with light-touches and hints of shifts. Both his independence and his desire for interaction has been consistent throughout the research period. Watching him develop strategies to listen and to share have been wonderful.

Thank you Ben.



## Alice Case Study Profile

### Alice's Pen Portrait

Age at start of the study	36 months
Family	One twin sister and two older brothers and mother.
Started Nursery	25 months old
Nursery Key worker	Sam
Attendance	two days and one afternoon per week
Qualified for two-year funding?	Yes
Gender	Female

Alice is a twin; they have two older brothers (15 and 20 years old). They live together at home with 'Mam' with regular visits and weekly sleepovers with 'Nana'. Alice enjoys spending time with Mam.

Alice also spends time with her father at his house on weekends. He also visits most days between 6pm and 8pm. Alice attends nursery with her twin.



### Mother's Perception of Alice

Alice's Mam described Alice as "[she] likes to be the centre of attention". Mam said that Alice had "been here before", describing that she knows everything and never has to explain something twice to Alice. Mam also described Alice as a "mother hen" and that she was just like her Nana. At home Alice enjoyed helping out with chores, such as caring

for the pet dog and helping with the washing. Discussing Alice's relationship with her siblings, she was described as being "domineering with her sister" and having great relationships with her brothers, helping each other and enjoying lots of cuddles. Alice and her sister played together frequently, enjoying imaginative play with lots of language and interactions between them. For example, playing shops; using a list and money in their play. Alice was described as using her speech a lot at home and being confident in making her thoughts and preferences known in the family. Alice enjoyed mimicking others she was regularly found to repeat things that mam had done or said when she was at Nana's house.

(Interview 27/06/17)

#### Practitioner's Perception of Alice

Sam was Alice's keyworker throughout the study. At the start of the study Alice was described as having "grown in confidence over recent months", after a steady start to settle in, and that she and her sister were together all the time, following each other around the nursery, although Alice was reported to have started to "move ahead" in all areas of her development and to be more independent; choosing her own activities and preferences at nursery. Where previously she would rely on her sister and/or an adult in her selections she more recently took the lead, being described as confident and independent, with sister following. Alice used her speech sparingly at nursery when she first started, but as her confidence had grown, this was "coming along". She was heard using her speaking voice in her imaginative play. In group play or routines, she was reported as 'hanging back' and asking adults for help or copying other children; allowing them to proceed first. This was also reflected in activities where other children were playing. Sam had no concerns for Alice's development.

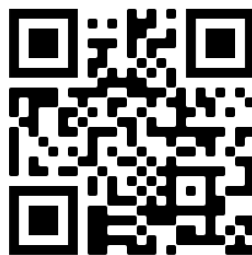
(Interview 27/06/2017)

#### *Analytic Comment On The Practitioner's Perceptions*

The practitioner refers to Alice's tendency to spend time with her sister, perhaps a physical indication of her connecting her home culture to nursery (Gutiérrez and Rogoff, 2003). The practitioner also indicates a bias towards confidence being displayed as

indicative of increasing independence and exhibiting preferences (Tsangaridou et al, 2013). Interestingly, confidence is also attached to speech in the practitioner's assessment, demonstrating an unconscious bias towards speech (Brooker, 2010) and away from the use of speech in imaginative play (Wenger, 2013). This could indicate the political power discourse in action, with the political narrative running through policy documentation, reaching the front line of pedagogy and impacting on the everyday views and decisions of practitioners.

#### Findings and Interpretation of Alice's Interactions at Nursery



Please use a QR code reader to access Alice's video, using the password provided.

#### Period One (36 months old)

##### *Summary*

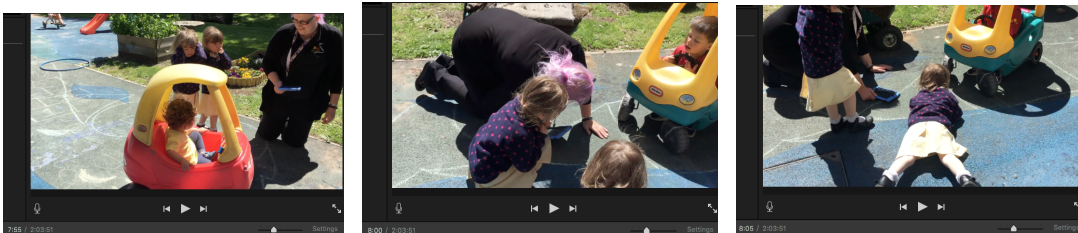
At the start of the study, Alice appeared to favour interacting with adults. She moved from one activity to the next, spending a few minutes at each; mimicking or watching adults. On occasions when she was exploring or investigating the resources or activity herself, she provided a narrative to the adult as she played; appearing to enjoy interacting with them. She would try things when an adult suggested it and she confidently communicated her own ideas and preferences using speech.

Alice appeared to favour interacting dyadically, when there was more than one child in a group, she waited patiently for her turn to interact with the adult. Alice appeared to favour using her speech in response to adults, but also used gesture, large body movements and gaze. She seemed sensitive to others' non-verbal modes of communication and also appeared to mirror the same mode.

### *Illustrated Findings*

I was drawn to consider whether Alice and her sister had an established communication mode, as they appeared to use very small, nuanced gestures with each other. Although interesting, for the purposes of this study, I have not focused on the interaction between Alice and her sister, although their interaction was considered in the wider context.

#### *Illustration – Under the car (0:07:50 – 0:08:10)*



*Alice and B are standing next to Laura who is watching a younger child explore a car. Alice tapped the roof of the car, directing her body towards Laura “me have a go” Laura was distracted by another child nearby. “are you stuck? How are you stuck? What are you stuck on?”*

*Both Alice and B moved to the other car*

*Laura was on the floor looking underneath the car “is something stuck under your wheels?”*

*Alice and B crouched to have a look. As B remained standing, Alice laid flat on the ground to take a better look underneath the car.*

In this illustration, Alice appeared to enjoy engaging with an adult. Although this episode did involve other children around her, Alice’s interaction and movement appeared to be channelled towards the adult. This episode continued for some time, with Alice and another child [L] taking it in turns to look under the broken car. Alice did not appear to be directing her movement towards the child but responding to the adult’s words. I am particularly led to this interpretation as Alice continued to look under the car while L pretended to unload the boot of the car, L appearing to be attempting to engage. Despite this, Alice did not acknowledge him, for example when he said “bye-bye” and left, Alice did not look at him, respond (Alice period 1, 0:09:06 – 0:09:22). Shortly after this episode, Alice did show some empathy and support for a younger child (approximately 18 months old), as follows,

*Illustration – I'm in the car (0:09:25 – 0:10:37)*



*Alice spots the empty car and gets in. She manoeuvres the car towards and around Laura [adult] singing “I’m in the car”.*

*The young child who was previously in the car stands and watches Alice, then opens the car door.*

*Alice looks at C, gets out of the car and says, “there you go”. Alice holds the door open for her and taps the seat. This appears to be an invitation for C to get back in. C gets in and Alice appears to check she is in before Alice leaves.*

This brief episode appears to demonstrate some empathetic interaction, as Alice not only gave the impression of having understood that the younger child desired the car, from her gestures, but Alice also used her own body movement, gesture and supportive language to hand the car back. This is reflective of the “mother hen” expression that Alice’s Mam used to describe her and has been interpreted as a mimicking gesture reflective of Alice’s experiences of home.

Considering LPP, Alice mostly operated in period one around passive outsider, with some peripheral and marginalised participation. I consider that Alice places the adults at the centre of expertise and mimics them (Wulf, 2013), creating a performance repertoire (Kress, 2001) with less able children as she moves herself into a position of authority, or aligns herself with adults.



Period Two (37 months old – 1 month later)

### *Summary*

This period has highlighted a complexity for Alice in her social interactions, one that is unique to Alice in this study; being the presence of her twin sister. Alice appeared to continue to favour the presence of adults, although this consequently led to expand opportunities for her to interact with other children.

Alice used a wide range of strategies to gain access to resources around children, rather than appearing to use resources as a strategy to initiate interaction with children. There were indications that Alice purposefully excluded children from her interactions, using her body position to reject them or by walking away, for example. However, Alice continued to interact with her twin (B), using speech, gesture, artefacts and body movement.

### *Illustrated Findings*

These interactions differed from the verbal-led strategies she used with adults. On occasion, Alice and B appeared to encounter each other through conflict, as they played in parallel, but a rapid change in allegiance was observed when Alice had a dispute with another child, illustrated as follows,

#### *Illustration – The precious pot of sand (0:21:39 – 0:25:34)*



*Alice is playing at a sand table, which has a thin layer of dry sand and lots of items of interest. Alice and her sister B are standing at the sand table and appear to be vying for sand.*

*Alice takes some sand from the area in front of B*

*B takes some back*

*Alice repeats this, looking at adult 1*

*B says, “uh oh” and takes sand from Alice’s pot. This is repeated.*

*Adult 1 “uh oh” as she looked at B*

Alice looks at adult 1, smiles and giggles as she continues to take sand from in front of B while B takes sand from Alice's pot, arms crossing in front of each other.  
Alice looks at adult 1 as she bangs the table before grabbing the sand.  
Adult 1 introduces a bowl "do you want this one to make it in?"  
Alice "nooooo. I have to make it for my Mammy"  
Alice continues to add sand to the pot while B removes it.  
Alice appears to get cross, nudging B away from the pot.  
Alice covers the pot with her right hand and continues to fill it with her left.  
B leans right over Alice and rubs her hand through the sand in front of adult 2, rubbing out a shape that adult 2 has just drawn.  
Alice copies this, while holding on to her pot.  
B repeats it.  
Alice "hang on , hang on"  
B puts more sand in the pot  
Alice covers the pot with both hands, looking at adult 1.  
Adult 1 brushes sand towards the other children.  
Alice rubs the table again.  
D says "no" and places her hands over the sand, pushing Alice's hands away.  
Alice briefly looks at D, stands up straight and covers her pot with two hands, looking at D.  
D makes marks in the sand with her fingers.  
Alice tries to rub it out.  
D "no" and pushes Alice's hands away.  
Alice covers her pot with two hands and looks at D.  
They repeat this again.  
Alice looks at adult 1.  
B leans over and rubs the sand, Alice joins her  
D "noo" as she draws a circle  
Alice briefly looks at adult 1 then rubs it out  
She is pushed away by D  
Adult 1 intervenes "look. You can draw there.." drawing a circle in front of Alice  
Alice and B draw another circle in this new area.  
D draws another circle in front of her. Alice briefly looks at it, dragging her finger towards the circle.  
D leans in towards Alice.  
Alice reaches out for the peg D is holding "Can I have that?"  
D pulls it away, then quickly grabs Alice's pot, handing over the peg  
Alice "No. Urgh" pointing at D leaving with the pot, Alice looks at adult 1  
B confidently and clearly says "pass it" reaching out her hand  
Adult 1 "Can you give it back?"  
B moves around the table and stands next to D.  
Alice stands still "I had it first"  
Adult 1 signals D to pass it over. Adult 1 takes the pot, introduces a second pot and shares out the sand between the pots, placing the original near Alice. B moves it to in front of Alice.  
They continue playing in the sand.

In this illustration, I am unclear as to whether Alice and B were vying for the attention of the adults present or attempting to engage the adults to referee their confrontation. There are indications that Alice was using her voice, body position and gesture to instigate an interaction with the adult.

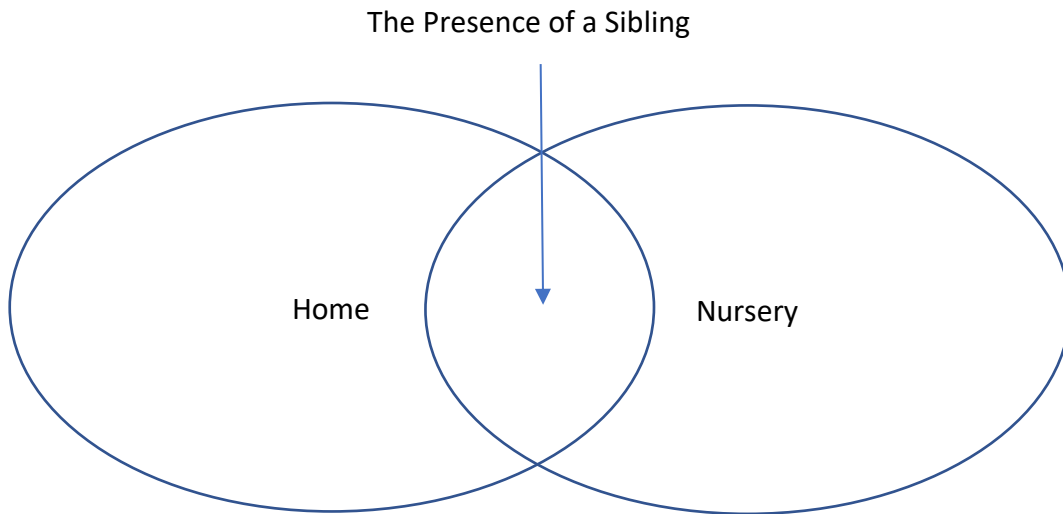
In this episode, when Alice decided to rub out another child's marks in the sand, provoking a response from the child, B joined in as if to support Alice in conflict. This was a rapid change of position from their previous bickering, where they appeared to be engaging the adults, to B leading the confrontation, giving clear verbal and gestural communication, until an adult got involved.

This illustration highlighted the complexity of the presence of Alice's twin sister while Alice was negotiating her own position in the group as well as learning and developing social interaction skills and strategies to establish that position. In the context of LPP, I am drawn to contemplate whether Alice had two 'groups' or 'cultures' present in her nursery day that she was having to negotiate within and manoeuvre between. Drawing on Hedges' (2015) work around the notion of children learning the repertoires of practice in a new dominant culture, Alice's position illuminates this notion as her home and nursery cultures are both present.

My understanding from Mam is that Alice was a core and expert participant at home; leading activities and giving instructions or involved with responsibilities, which was demonstrated in Alice's interaction with B at nursery. I observed her operating between interacting with adults with little interaction with other children and as an active participant in a group (being led or guided). However, there were moments when Alice showed glimpses of her position at home, when her and B had their interactions between them, which on occasion arose transitorily out of context.

The use of this simple illustration, below, attempts to elucidate the complexities in considering LPP for Alice, as she operated in nursery. I interpret that I observed her interchange between her position in her nursery community and her position in her home community.

Diagram 14 - The Cultural Presence of a Sibling



In the following illustration, (notably without the presence of B) Alice appeared to disregard another child while there was an adult present. I viewed that Alice was interacting with the adult, but when the adult moved away, Alice inadvertently continued the 'conversation' with a child until she realised that the adult had left.

*Illustration – Carwash Cones (0:31:09 – 0:32:14)*



*Alice is outdoors and receiving help from an adult in getting her waterproofs and wellies on.*

*Then she runs over to another adult, talking to her; telling of her plans to play in the water.*

*The adult is standing near a child [L] who is sitting in a car. There are cones in front of his car.*

*Alice spots the cones.*

*L "across the path"*

*Alice lifts some cones*

*L drives his car into the other cones on the floor "Five, six, seven, eight and nine, ten".*

*He then reverses a little [not looking at Alice]*

*Without looking at him, Alice sets out the cones in front of the car.*

*[Adult leaves the area]*

*Alice "Five hundred, three and four" as she stands back from the cones*

*L "Five, six, seven, eight" as he leans out of his car*

*Alice watches for a moment as L drives into the cones. Alice spins around [saying something inaudible] then leaves. Walking towards an adult sitting on the floor with some children*

*Alice encourages B to get some wellies on and play in the water. Alice waits for B.*

*Moments later L drives over to Alice, as she waits for B to get her wellies on.*

*L "the car wash is over there" he says in close proximity to Alice's face. She ignores him and moves onto a seat to wait for her sister.*

This episode led me to ask whether Alice was purposefully rejecting this child, when he attempted to interact while he was outside of her play frame (Kravtsova, 2008). Prior to this, considering the adult was inside her play frame, was Alice attempting to interact with the adult present rather than the child in the car and the interaction with the child being a consequence of this strategy?

I have raised the challenges that a LPP lens provides in Alice's complex web of communities and positions. What is apparent is Alice's desire to be an active participant alongside an adult, whom she holds as central, as she negotiates her time at nursery from one activity involving an adult to another. For moments, she was observed as being more central to her second community; consisting of her and B.

Period Three (40 months old – 3 months later)

### *Summary*

Throughout period three Alice appeared busy, rarely looking lost for things to do. This provided an excess of data, as Alice interacted much of the time. B was with her in many of the episodes, which initially proved challenging in terms of having a clear boundary around whether Alice was initiating or responding to interactions and whether strategies were Alice's or B's. Repeated viewing of the video data provided some clarity.

Alice appeared deeply engaged in activities, providing verbal narrative as she explored. Many of the activities were led by adults or near adults, who were dipping in and out of the frame as they dealt with multiple children. Initially it appeared that Alice was

vociferous, confident in a group and arguably a group leader. However, closer observation illuminated the direction of her interactions, almost always towards an adult or in the role of expert with B, in the absence of an adult. Two interactions illustrated a further element of Alice's strategies, which had been observed in prior periods, that of guiding or being considerate of younger children.

### *Illustrated Findings*

In this period, the older cohort of children had left for school, placing Alice centrally in the group albeit she appeared to be oblivious or disregarding of the children around her, save for small interactions with her sister B. However, she was observed mimicking other children in brief interactions, when no adults were present.

I was mindful of the differences in Alice's strategies for interacting with adults, with B and with other children. This drew me to review these scenarios in observed episodes. The following two illustrations were observed in direct sequence, from an activity being prepared by adults. I observed the children as they waited for the activity to start, partly without an adult and partly with an adult who helped them to prepare.

#### *Illustration – With and without adults (0:51:35 – 0:52:17) Part 1 (without adults)*



*The children are invited over to the creative area to paint with items found from the garden (sticks, pinecones, leaves etc). This activity was announced in the group meeting immediately prior.*

*Alice and B are waiting with their aprons on.*

*B “dingdingding” as she leans over the table and feels the paper on the table with large movements of her hands and arms.*

*Alice copies this, leaning right over [tummy on the table] and feeling the paper.*

*Two more children join the group.*

*As Alice leans across the table a child [N] bangs the table with her hand [to Alice's left]*

*Another child [C] also leans across the table, looking at Alice.*

*Alice sits up, looking at N's hands banging the table.*

*Alice "you need a apron on"*

*B "I got a apron on"*

*N leaves [to get an apron], Alice turns to watch her*

*B leans over the table again, swishing her hands across the paper. Followed by C.*

*Alice is looking down, leans over the table, rubs it with large arm movements, shouting "yeeey"*

*C does the same, Alice watching her*

*B does the same, Alice repeats this*

*B, this time taking her feet off the floor [like a parachute jump] repeats the movement.*

*Alice watches.*

*N reappeared with her apron on.*

*Illustration – With and without adults (0:52:18 – 0:53:15) Part 2 (with adults)*



*Behind Alice, Sam [adult] appears "ooooo"*

*Alice turns to look at Sam*

*Sam "do we need to have aprons on? Do you want me to tie them up for you girls?" walking past*

*Chantelle [adult] appears – speaking to Sam*

*Alice turns to Chantelle, stands up and spreads her arms wide.*

*Sam helps the children with their aprons.*

*Alice watches, looking a little absent for a moment.*

*B "I got a apron on"*

*Sam "well done you" Sam was helping another child and not looking at Alice.*

*Alice "I got a apron on" sticking her tummy out towards Sam*

*Sam "good girl. Why do we need an apron on?"*

*Alice "because the paint might go all over our nursery clothes."*

*Sam looking at Alice "and then what might we have to do?"*

*Alice "wash them" turning to Sam and then sitting down*

*Sam "wash them. Where do we wash them Alice? Shall I just tie this for you Alice"*

*Alice "yeah"*

*Sam "where do we wash our clothes. Oh shall we just" as Sam gets another apron for Alice and helps her remove the one she is wearing [this last sentence is quiet and unfinished but Alice responds by removing her apron, with some help]*

*At this point all of the other children are watching Sam and Alice*

*B "in the drier washer"*

*Sam "In the drier washer? What does it do?"*

*Alice "spin"*

*Sam "it spins? Does it?" Sam directs her eyes to Alice and shows a facial expression of surprise*

*Alice is grinning and bends her head down for Sam to put the new apron over her head.*

*Sam "does it spin up and down or round and round?" using arm movements to support the words spoken.*

*Alice "yes" with a smile on her face and bobbing her legs*

These illustrations provided a juxtaposition of scenarios with and without the presence of an adult, illuminating the strategies that Alice adopted. Without the presence of an adult Alice was responding to children as they mimic each other. Using large body movements and facial expression, they shared an interaction together. This was evidently halted when a child appeared without an apron; her attempts to join in the interaction were prevented as Alice instructed her to get an apron on. Without an adult, Alice appeared to take the central role, providing instruction to the younger child. Alice then, just as quickly as she had shifted from interacting as expert, shifted back, interacting with B and another child through large body movements and shared experience.

Part two is viewed as a noticeable shift for Alice, who interacted only with the adult, once present in the group. Additionally, it was notable that when the adult spoke openly to the group, Alice dominated the conversation, with some input from B. Alice did this by using her speaking voice and directing her body towards the adult. The other children watched this interaction, only B adding some words when Alice and Sam were focused on replacing Alice's apron.

Alice appeared particularly attuned to the adult within the second part of this episode, when Sam changed Alice's apron. I have watched this many times and cannot see or hear specifically any complete instruction from Sam. Alice appeared to know what Sam was meaning by her movements and a few words.



Interestingly, as the activity continued with Sam present, Alice appeared deeply engaged; painting a leaf and transferring it to paper as she told Sam what she was seeing “I’m gonna get my best colours” (Alice, period 3, 0:55:11). While this was occurring, another adult was speaking with a child behind Alice, Alice paused her work and turned to see what was happening, appearing attracted to the adult’s voice. Moments, later, when a child was verbalising loudly, Alice did not respond. This indicated that Alice was attuned to adults’ voices and appeared to ‘block out’ children’s voices.

Looking specifically at LPP, the high volume of interaction episodes is apparent [demonstrated in Diagram 16 below] and reflective of the level of activity of Alice at nursery. In period three, Alice operated mainly in the realms of active participant, where she was involved with some guidance. She did however have moments of being a passive outsider and peripheral participant. This is a challenging representation of Alice, as she was indeed very active, but because she gravitated towards adults; joining in activities that they led, she appeared to choose to be led, rather than lacking the strategies to lead. This was highlighted by moments in episodes where she was leading, as illustrated above. This starts to reveal the complexities of Alice’s interactions and the difficulties in selecting a single LPP code to an episode for Alice, as she operated in multiple communities, with differing levels of participation from one moment to the next.

I am led to further consider the positionality inferred in LPP theory. My initial interpretation of this was that an individual is placed at the periphery and the community bring them to the centre over time, as the individual learns from others around them. Alice leads me to consider the child as also able to choose to position themselves; not according to the skills they have but according the strategies they engage and the people in their immediate context.

Period Four (42 months old – 2 months later)

### *Summary*

In this period, Alice continued to use a wide range of strategies to engage in a high volume of interactions. She frequently changed her mode of communication, using her voice, moving her body, using artefacts and gesture while engaging in social interaction and during her play. She increasingly responded to other children's efforts to interact but occasionally ignored them.

On reflection, Alice had moved away from her sibling and increased her interactions with other children. Alice was also observed moving between activities alone more frequently. Whether responding to a child or initiating interaction, Alice positioned herself in those interactions as a central participant, where she then directed the activity or provided advice. When Alice did provide advice or instruction, this was reflective of mimicking adults, notably so when she situated herself next to an adult, facing the children, to appear to lead the singing, for example.

### *Illustrated Findings*

There were a number of episodes which led me to further regard the notion that Alice considered herself as a central participant, although on occasion it was less apparent on first observation. I was particularly drawn to an episode where Alice positioned herself outside, but in close proximity to an activity. In this activity, she momentarily leaned towards the group and gave verbal instructions to the other children. She appeared to be reinforcing instructions given to them by an adult, such as "need to share the Cellotape". She resembled a busy adult, watching over the children and checking their progress. This was followed by the following short illustration in which Alice indicated that she aligned herself with the adults, viewing herself as a central participant, a leader of activities.

*Illustration – Wrapping Instructions (1:03:01 – 1:06:03)*



*In a series of observations, Alice is involved in an adult-led activity, wrapping junk items. She is sitting just off to the side of the small group, her body facing partially towards B and partially towards the group. Alice is giving instructions, providing a narrative as she wraps a gift with B and sporadically informing Sam of what she is doing.*

*There are three other children in the activity and Sam [adult].*

*Alice “Now we need to wrap it. We need to wrap it up” taking the parcel from B to complete the task. Alice and B are looking at the parcel, not at each other.*

*B “and then there”*

*Alice – with the sticky tape “need to pull this, look”*

*Sam [adult talking to another child] “if we give that as a present, it will all fall out”*

*Alice looks up at Sam as she speaks, continuing to try to find the end of the sticky tape.*

*Later in the activity, Alice and B have been struggling to wrap their present; getting tape stuck on other items.*

*Alice “can you help us Big Sam? Can you help us?”*

*Alice sits, looking at Sam, momentarily waiting for a reply.*

*Sam “What would you like help with girls?”*

*Alice “We may, we need it all the Sellotape round” followed by a giggle.*

*Alice briefly smiles at Sam and waits for a reply.*

*Sam “All the Sellotape round?”*

*Alice “yeah”*

*Sam “F\*\*\*\*\* pressed it round and round the presents, like this” Sam showing Alice how to wrap the tape around the parcel, Alice watching.*

*Sam continues a conversation with F.*

*Alice appears a little absent, looking at the floor.*

*She then rolls out the tape as wide as she can then briefly looking at another child doing the same [the other child is with Sam]*

In this episode the intricate interactions with Alice appear to deepen; she had placed herself with B but on the periphery of the group of other children; she was giving instructions reflective of a central participant; yet she asked for help from an expert.

I was uncertain at this stage whether she did see herself as a leader of other children

or was excluding them from her interaction with the adults; the children being a separate 'community' for her. A later episode saw Alice as part of a large group of children and adults practicing their nativity songs.

*Illustration – Nativity Songs (1:06:04 – 1:10:28)*



*Alice sits to the side of the lead adult, facing the other children [all of the other children were facing her], placing herself in the centre of the activity. Alice answered the questions asked of the group and sang with a loud, confident voice, as well as carrying out all of the actions. On one occasion, she starts the singing before the adult starts, hands ready with the actions.*

This singing episode highlighted that Alice positioned herself leading the singing alongside the adult. Her body position and the nature of her actions indicated that she was presenting herself in an adult role in this context. Considered alongside the sticky tape episode demonstrated a clear leading intention.

The next illustration saw Alice engaging with other children with less involvement of adults,

*Illustration – I'm Gonna Draw (1:10:29 – 1:11:40)*



*In this episode a group of four children approach a writing table, behind an adult. Alice is in the group. Another child [H] is already sitting at the table colouring-in a picture in a book.*

*B sits next to H. Alice stands behind B.*

*Two younger children approach the other side of the table.*

*Alice moves around quickly and leans on the table [giving me the impression she is reserving a space for herself]*

*The younger children turn and leave.*

*Alice [to H, who is colouring] "I wanna crayon"*

*The other, younger child leaves the table but remains in the area*

*H "there's one" Alice is handed a crayon.*

*Alice "thank you"*

*B and H start drawing. Alice is leaning over the book.*

*A younger child returns.*

*Alice "I'm gonna draw... the crown"*

*B "I'm drawing [inaudible]" as Alice moves to sit opposite B*

*The three children draw. B & H are focusing on their drawing, Alice pauses to look at their work.*

*The younger child is attended to by Laura [adult] away from the table.*

*Alice looks up at them. Appearing to respond to Laura's voice*

*Alice looks down at the paper, then to B & H, and turns the page "la la laa la la laaaa"*

*H "hey" in protest*

*B helps turn the page, not looking up.*

*B & H start to draw on the new page.*

*Alice "I did this" indicating that previous work on the new page was hers.*

*H tries to turn the page again. With Alice's weight on the page, the page tears.*

*Alice gasps "H\*\*\*, you ripped it"*

In this illustration, despite an adult being nearby, Alice did not appear so clearly to desire to engage the adult, as she had in previous episodes, but she did appear to want to take a level of control over the activity. Her timing of hearing the adult speak immediately prior to her changing the activity, led me to consider whether she was drawn between her community of adults; her community of B and now a third community of children; wanting to be a central participant in these simultaneously. This is reflective of the use of language used inside the play and outside the play (Fleer, 2011); where Alice appears to jump from

frame to frame; shifting her participation; and altering her strategies for interacting according to her frame.

In the final episode of this period (Alice, Period 4, 1:21:41 – 1:27:12), Alice, B and another child play for quite a lengthy duration, taking it in turns to lay in a cot and sing 'rock a bye baby' to each other. Alice and B alternate between leading and being guided, depending who is in the cot. The third child appears marginalised at the beginning of the activity, but increasingly core as the episode endured and Alice invited her in. The power dynamics of this play was fascinating, as each of them moved in and out of their play frame to receive and give instruction, creating a dynamic flow of levels of participation.

Looking specifically at LPP, stresses whether Alice had moved towards the role of central participant, in the absence of the older cohort of children. Albeit, she has been observed operating in all stages of LPP in this period. I sensed that she had decided where she wanted to position herself; on occasion physically situating herself at the centre of the activity; some occasions leading the activity and on others swapping positions and roles in role play. Alice was more active in initiating interactions in this period than previous, notably so using her voice with adults. This was reflective of the nature of her being more central as a participant. Alice had indeed more frequently used voice, gesture, artefact and body movements, initiating interaction with both adults and children. On occasion, these had not been successful or sustained, reflected in the wide scatter of LPP positions she has been observed in.

Period Five (45 months old – 3 months later)

### *Summary*

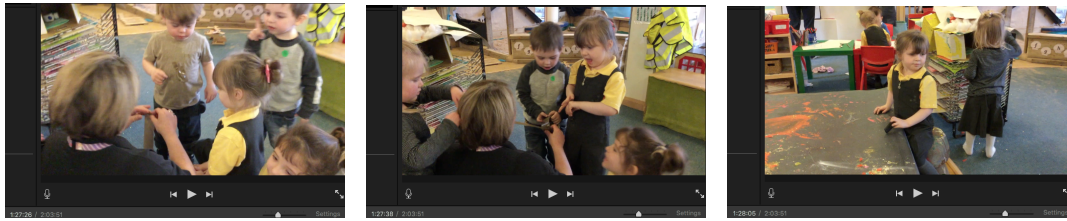
This was a challenging period for me to interpret, drawing me to observe Alice's interactions repeatedly and in more detail. Alice's strategies had changed, relying less on verbal interaction; both as an initiator and a responder. In this period the observations appeared quite different to the previous periods. Initially, I felt that I had not made a fair representation of observations for Alice. Returning to the full collection of videos in the period uncovered some interactions that I had previously missed, for example where Alice was in the background of another focus child video.

### *Illustrated Findings*

In this period, I observed Alice enjoying conversation with adults, elaborating on her answers to questions, but also appearing to be more considered in her interactions. Whereas previously she would answer questions from adults as though they were directed at only her, this period saw a slight change in this. She appeared to me more aware of whether an interaction was directed at her and she responded fittingly.

Using large movements, Alice did demonstrate that she was listening to both adults' and children's voices responding to them in context, for example continuing in play with the new ideas or narrations surrounding that play, rather than responding verbally, which she may have done previously.

*Illustration – Don't Run With Scissors (1:27:17 –1:28:16)*



*Alice is sitting close to Sam [adult], alongside A and D.  
D is holding the end of some sticky tape with Sam holding the roll.  
Sam, looking at Alice “If we are using scissors, what do we have to do?”  
D “Chop” D shows a chopping action with his fingers, Sam looks at him.  
Alice stands up  
Sam “No. Do we walk around with scissors?”  
D “No” Alice “No”  
Sam “No, do we sit down?” now looking specifically at Alice  
Alice starts to say no, but D says yes, Alice changes “N... yeah”  
Sam “Yeah. Why do we sit down with them?”  
Alice playing with her hair, “We have to be careful with them”  
Sam “Why?”  
Alice “Because, they hurt your fingers”  
Sam “They could do, couldn’t they?”  
Alice “Yeah”  
Sam “shall we go and have a look?”  
Alice moves over to the table and sits down, waiting for the others to arrive.*

Alice appeared to be ‘allowing’ other children to answer questions considering their answer and correcting her own reply. Although difficult to interpret from the illustration above, without seeing the whole interaction, Alice appeared to be more considerate and considered; giving some detailed verbal replies to questions; drawing on prior knowledge and experience. Alice appeared more patient with other children, waiting for her turn.

Capturing further observations highlighted a shift in Alice’s responses to and focus on adults. Further observations highlighted whether Alice was adopting different strategies; maintaining focus on her play while she responded to an adult’s voice as well as B’s voice and artefact. The following illustration, demonstrated that Alice was listening to other children and adults, then was able to use this information to elaborate on her play, reflective of Wohlwend’s (2009) mediated action and Vygotsky’s (1998) critical age, as young children move away from reliance on adults and towards children on a transition to independent actor.



Alice did interact with B in this sequence too, coming out of her play frame to give B verbal instruction. In a further episode, Alice indicated that she was listening to an adult but she paused her play rather than stopping and leaving, as she had been observed doing in earlier periods. This illustrated Alice's move away from focusing her interactions on adults, in particular in her responses to their speech, while she played.

*Illustration – Get off the road! Part 3 (1:33:26 – 1:34:28)*



*L “There’s a doctor”*

*Kim “Who’s a doctor? Is your man the doctor?” Pointing to a doll he is holding.*

*Alice stops and looks at Kim.*

*Alice then turns to L (who is behind her)*

*L “Aahhhhhhhhhh” waving the doll around*

*Alice turns back*

*Kim [talking to and looking at L] “You need to go and help, there’s been an accident”*

*Alice turns to the other way look at L*

*S walks to Kim and speaks to her [inaudible]*

*Alice turns to watch this conversation, while pushing her car left to right.*

*The children are making car noises – all different*

*Alice pushes her car “Shhhhhhhhhhh”*

*L leaves the ‘doctor’ on the road making a high-pitched “Errrrrrrrrr” sound. Alice runs her car over the doctor and pushes her car into him.*

*L gently moves the doctor.*

*Alice moves her car towards Kim, who is having a conversation with other children.*

Initially, I was drawn to consider whether Alice was ignoring the other children, but further observations illuminated that she appeared to be listening to others while continuing her own play, despite the conversations around her, notably conversations between other children and adults. She both initiated and responded to interactions with children, using and responding to more nuanced modes. This drew me to question whether this indicated a deeper understanding of social interaction for Alice and a wider range of strategies than

those considered prior. Alice responded to children, other than her sister, in play using gesture and speech without positioning herself at the centre of the activity.

Considering LPP Alice appeared less directive and central in this period. All of her episodes in this period were interpreted to be as an active, involved participant. Referring to a previous comment, she appeared to be more engaged in her play, not focusing her efforts on trying to lead the play; she seemed to have shifted her approach away from the adults and towards the children, listening to them and responding in her play.

Period Six (46 months old – 1 month later)

### *Summary*

In this final period, Alice demonstrated that she was able to draw on a number of modes to create appropriate performance repertoires for her audience. She appeared to select different repertoires to gain her desire from the interaction but also to engage or disengage others in the interaction. Her decisions appeared to be connected to the leader of the activity, or the central participant, where Alice seemed to respond appropriately to the central participant, be it her, another child, or a more complex scenario where the leader was unclear.

Compared to other periods, Alice appeared less reliant on adults and her sibling, taking her time to select an activity of her choosing; be it as part of a group or on her own. I was drawn to view Alice in the early stages of independent exploration, demonstrating agency by selecting whom she interacts with. With less reliance on her sister or on adults Alice had developed repertoires to interact confidently with whom she chose.

Alice's repertoires appeared to be more nuanced than others to interpret, where she responded to the situation, rather than perhaps approaching a situation with a fully formed strategy. However it appeared that behind that strategy was an understanding of social practices, evident in Kress' (1997) seminal work, where Alice selected modes of communication appropriate to her audience.

### *Illustrated Findings*

There is an extended set of outdoor episodes for Alice in this final period. While no individual interaction stands out as significant, the overall view of her time spent engaging in interactions is notably different from earlier in the study. I recall that Alice initially spent her time moving from adult to adult. In this period, she moved between people and resources, sometimes being alone for short periods, then initiating purposeful interactions. For example as she was poised to roll down the hill on a scooter “Watch out Kate, watch out B\*\*\*” (Alice, Period 6, 1:48:21) to ensure that she didn’t roll into us. Another example was when she arrived at the top of the slide and noticed that someone has tipped flour onto it. “Big Sam, why is there flour on the slide?”. After a pause, she slid down the slide anyway saying, “too fast” (Alice, Period 6, 1:49:52). In both of these examples, Alice used her speaking voice to direct an appropriate warning or question to an adult and B, momentarily pausing her play to do so, then continuing once the desired communication has been completed.

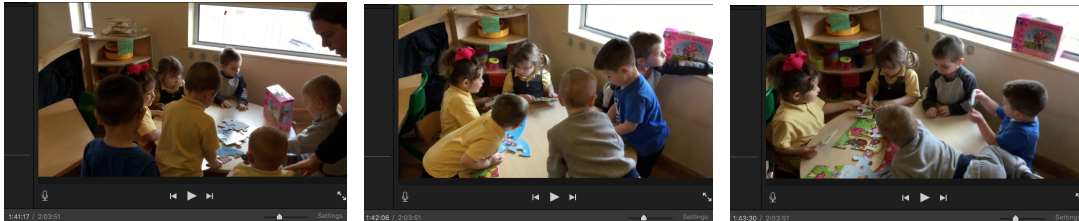
Considering Alice with children, other than her sister, the next two illustrations were interpreted as Alice varying her repertoire for different children and differing scenarios. In the first illustration she is involved in a group activity with complex interactions. In this activity a mature and able child assumes the lead, trying to control the activity despite Alice’s reluctance. In the second, Alice joins a younger and able child who has his own ideas for a game.

Both episodes see Alice in conflict, as she deals with a child who is trying to take control of the activity, but in each example that child is starting from a different level of participation; the first one where a child assumes leadership and Alice patiently tries to avoid conflict while maintaining her position in the activity and the second where Alice joins an activity then mimics the leader to get involved.

In both activities, Alice appears to use her whole body to respond to the activity, whether standing up to guard her jigsaw piece, sitting in a different place to access the equipment

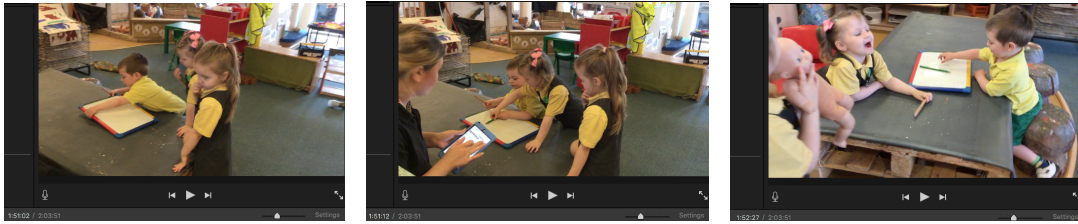
equally or moving an artefact away from an uninvited other. In all activities, adults are close by or absent and B is not engaged with Alice, although not far away.

*Illustration – I'm the boss of the jigsaw (1:41:09 – 1:43:32)*



*Alice is sitting at a round table with five other children and Louise [adult] nearby. Alice is sitting next to A. They are both keen to complete the jigsaw. A appears to have assumed the role of leader in this activity. The other four children are younger and play a peripheral part in the episode. Louise starts off the jigsaw, placing the box on the table and setting some rules. L loiters to the side, Louise invites him to sit, getting him a suitable chair. A & Alice start the jigsaw while the others are getting themselves settled. Alice "He pushed me. This one goes on here" placing a jigsaw piece. A takes the piece from Alice A "Let my do the top first" Alice gets another piece and holds on to it. A reaches for a piece and places it. A "Four" Alice, looking at A repeats "Four" R reaches over and tries to position a piece. A "No. R\*\*\*" taking the piece from him and placing it. A "R\*\*\* yeah, it does" A places the piece, it fits. She looks at Alice and they both giggle Alice "Right. Right R\*\*\*" A tries to take Alice's piece from her but Alice resists. Alice leans over the jigsaw to try her piece. A gently takes it from her to try. "No it not goes there". Alice snatches it back and stands up. Others are pulling the jigsaw towards them. A pulls the jigsaw back towards her. "Everyone stop" Alice "Share" A "Please can I have that one?" as she tries to snatch a piece away from L. Alice retries her own piece, taking the time to look at the picture and her piece in different places. The other children are grabbing pieces and trying to do the jigsaw. D tries to grab Alice's piece. She pulls away and places it correctly. A tries to push it into place, Alice pulls it away. A "Yeah, it goes" Alice turns it upside down and tries again. A "Wrong way"*

*Illustration – Pencil Race (1:50:57 – 1:52:37)*



*Alice and B are at the table with D [younger child] and Shannon [adult]. They have a small white board. D props one end up to create a ramp.*

*Alice looks on with a pencil in her hand*

*D rolls a pencil down the ramp.*

*Shannon “That’s clever”*

*Alice leans right over D to get her pencil on the top of the ramp.*

*D tries to grab her pencil. Alice pulls it away and places her pencil on the ramp. It rolls slightly*

*D “Ahhh”*

*Alice giggles*

*Shannon is called away. Alice does not look up at the call or at Shannon leaving the activity.*

*D rolls his pencil again*

*Alice leans in to try hers*

*D “Hold on”*

*Alice “let’s do both of them” as she leans over and places her pencil at the top “one, two three go” as they roll their pencils.*

*D’s reaches the bottom first*

*D smiles and shouts, “I did it, I did it” and waves a celebratory arm in the air*

*Alice leans back and looks at his face, smiling*

*Alice places her pencil at the top and nudges it. When it reaches the bottom “I did it, I did it” smiling and waving a celebratory arm in the air, mimicking D.*

*This is repeated.*

*Alice moves around to the other side of the table, appearing to improve access for both of them.*

*Both children take it in turns to roll their pencil down and celebrate “I did it” for a while*

In the first of these episodes, there are some complex and dynamic interactions, with multiple children. Alice appeared to deal with this by using her body position to block out or to engage other children. She used some gestural modes to make her preferences known in the context of her friend trying to control the jigsaw, but appeared to only take this so far, then allowed her friend to access the resources appearing to avert conflict.

In the second episode, Alice mirrored the actions, words and movements of a younger child; joining him in a pencil race that he initiated. She seemed to enjoy this activity, taking it in turns to have a go and to celebrate. In this episode, I interpreted the celebration as part of the interaction strategy. The complexity of this was not apparent at first observation, but further analysis and repeated viewing, juxtaposed with the jigsaw episode above, directed me to consider that Alice may have been aware of the feelings of her 'friend' and herself, in sustaining the interaction.

Focusing on LPP, Alice appeared to have a clear understanding of the role of a central participant; mimicking a leader to join an activity; being firm with others when she was the leader and by negotiating through nuanced interactions when a leader was unclear. I have interpreted the central participant according to the activity, rather than having a central participant in the group. This approach brings into question my initial interpretation of LPP, where a central participant is aligned to the group or culture, rather than a specific activity. As interpreted previously, this highlights the complexities of different groups or cultures within the nursery setting.

#### Interpretation of Alice

Alice has been a both a joy to observe and challenge to analyse. Her vocalic character and the presence of her sibling presented a confident, active and engaged child throughout the observations. However, focusing in on Alice illuminated a child with complex and challenging clashes of community, as her home culture and nursery culture collided.

Prior to analysing the observations of Alice, I had a sense that she started the study with a wide range of skills to draw on in her adopted strategies and therefore, had little progress or changes to make in the year. However, the year unfolded Alice's changing empathy for others and her ability to select appropriate modes of communication within targeted performance repertoires unfurled. Alice was a challenge to interpret, due to the presence of her twin in many of the episodes in earlier periods. I have attempted to understand Alice's position, despite her sister's presence, however this is perhaps reflected in the low number of occurrences deemed to be as a newcomer or as one to one

with an adult, as I felt unable to summarise in interaction as one to one when the sisters were together with an adult.

The following chart illustrates the overall nature of Alice's social interactions in each period. Using a holistic view, this presents the strategies that she adopted in initiating or responding to interactions during each period. It illuminates a shift in her approaches and responses to social interactions, in particular this highlights her move away from the reliance of adults and her sibling, towards other children. This move appears to also reduce her focus on adults, which regularly interrupted her play; as she appeared to be listening to them, easily distracted by their voices. It concurrently highlights a shift away from mimicking the same adults in her interactions towards mimicking children, followed by use of a wider range of strategies to both initiate and respond to children with empathy. In period six, Alice was able to use her full range of skills to engage others and join in play.

(Diagram 15) Alice - Summary of each period

Observation period	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
<b>Instigation targets</b>	Adults & sibling	Adults	Adults and children	Adults and children	Adults and children	Children
<b>Initiation strategies</b>	Speech and whole body. Mimicked adults.	Speech, with adults, sibling and in play. Used adults to referee with sibling.	Dominated group conversation with adults. Gave instruction to children.	Positioned herself as an adult. Used speech, body, gesture and artefacts.	Complex speech. Artefacts with children	Speech. Complex conversations
<b>Response source</b>	Adults and some children	Adults	Adults and younger children	Adults and Children	Adults and Children	Children
<b>Response strategies</b>	Ignored most children. Showing empathy for younger children.	Conflicted with sibling. More isolated play.	Ignored children when adults are present. Sensitive to less-able children	Speech, body movements and artefact	All modes, increased use of artefacts. More considered responses.	Speech, role play, giving and receiving instructions
<b>Notes of interest</b>	Preference for one to one. Little interaction with children	Used voice in play, engaging adults and sibling less	Started to mimic children. Acted as an adult in the group	Highly active. Asked adults for help, <u>marginalised</u> children.	Elaborated on conversations. Welcomed children into conversation	Fully engaged in own play narrative with peers.



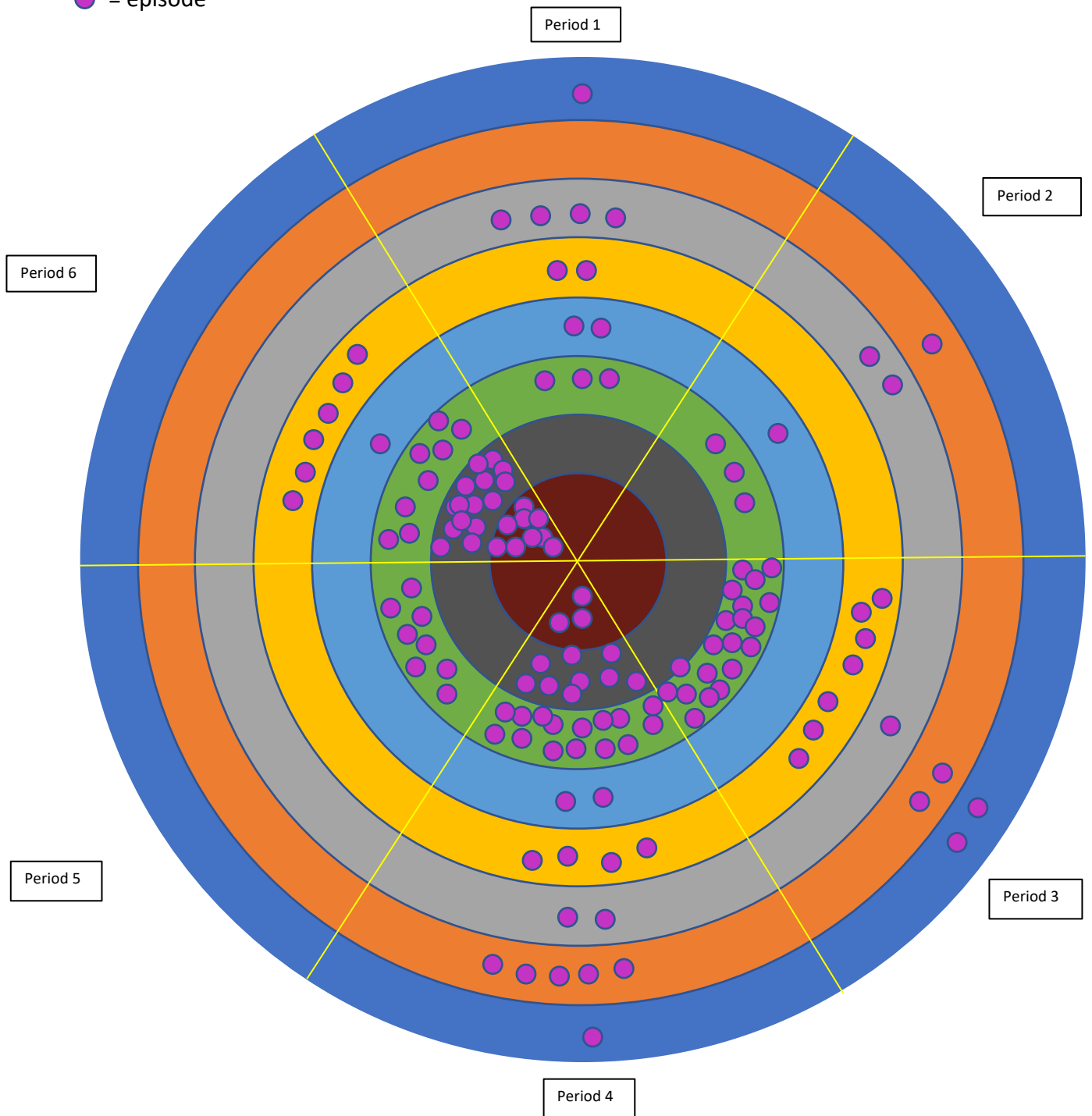
The illustration on the following page presents the movement of Alice around the group, through the lens of LPP. Drawing on a LPP lens changed the frame of reference away from skills and towards the adoption or use of those skills in context. As a result, I am led to question whether her abilities at the start of the study had masked some of the challenges that Alice has endured, in learning about the presence of other children and her place in their community. Observations of Alice's modes of communication illuminated a significant shift in Alice initially relying on adult initiated interactions, towards Alice using a wider range of strategies to initiate interactions using speech, gesture and artefacts with children as well as adults. Reflecting on period six irradiates Alice's widened use of strategies, drawing on multiple modes to create appropriate repertoires to initiate and respond to both adults and children equally. It highlighted her penchant for using her speaking voice and also changing her performance repertoires designed to engage her intended recipient. It also uncovered the initial absence of Alice using artefact or gesture in her interactions with adults, both responding and initiating.

In earlier periods, Alice was clearly aligned with adults, initially only attracted to activities where an adult was present. There were episodes of isolated play, as well as being a peripheral participant and marginalised. However, she was also an active participant throughout each period, which does reflect her energy and levels of interaction throughout her time at nursery. This presents Alice's position in the group as more complex than it may appear initially. The apparent influence over her twin sister, demonstrated through small aspects of control, was not observed between Alice and other children. This brought into view the significance of the context and the receiver of performance repertoires.

Period two saw Alice either being heavily involved in activities, isolated or one to one with adults. This period saw Alice disregard other children in her interactions. In contrast, period six shows a marked increase in Alice's shift to active, core and expert participant for many of her observed episodes; reflecting the confidence that she developed in selecting successful strategies to either engage others in her play or to respond to others who attempted to interact with her. Period six also illuminated a shift away from her twin, as she explored as an individual and used all of her skills to negotiate her interactions.

(Diagram 16) Alice - Legitimate Peripheral Participation

● = episode



- Newcomer (passive activities, eg observer)
- One to one with adult/adult led no interaction with other children
- Passive outsider (isolated play)
- Peripheral participant (involved but not leading or fully involved)
- Marginalised member (ignored by others)
- Active participant (involved, being led or guided)
- Core participant (involved with responsibilities)
- Expert/central participant (leading activity and instructing others)



Reflecting back on the observations of Alice, what is apparent is the manifestation of mimicking others, notably adults, into her final term in nursery. Not until she made a shift to mimicking children did she appear to realise an interest in her near-peers and was able to negotiate different roles and levels of participation, according to the context. This indicates an increased reliance on others. However, Alice's advanced levels of speech, obscured her struggle with agency (Ball, 2013) in the presence of her sibling. The outward indicators of good speech would suggest a good level of development using the EYFS (2017). This suggests an unconscious bias of the practitioner towards speech, fuelled by policy documentation (Brooker, 2010). The cultural and contextual nature of Alice's experiences were not apparent outside of this study, as confirmed by both Alice's parent and key worker. The tools given to practitioners (EYFS outcomes) highlighted Alice as a confident child, able to demonstrate her ability to use her speech with adults and to interact with other children.

The manifestation of her experiences and the richness of her engagements through a multimodal and a LPP lens, highlighted the significance of that which cannot be easily measured with a universal, normative narrative of learning and development. This brings into question the binary notion of advantage and disadvantage, such as can speak and can't speak, or is able and is unable, so apparent in Government policy. The power of the political discourse, informed by assessing children using measurable outcomes, is highlighted and problematised in this case. For Alice, this resulted in her struggles being veiled in favour of the success of her visible and auditable speech.

Thank you Alice.



## Summary

This chapter has presented cases of four pre-school children over three academic terms, spanning two academic years. Threads have been drawn between cases and briefly connected to existing literature. The following chapter 'Discussion' explores those threads further, presenting several perspectives which contribute to knowledge and aid understanding of pre-school children's social interaction strategies and how these change over time.

## Chapter Six - Discussion

### Introduction

The aim of the study was to explore the strategies that children adopt as they negotiated social interaction in a pre-school setting and also how this changed over time, with consideration for them becoming the older cohort of children in the setting over the study period. Building on these aims, the study identified the complexities in identifying social interaction in young children and opened up a broad view of the modes of communication by engaging in a multimodality. Using the theoretical lens of legitimate peripheral participation illuminated challenges for young children as they embarked on applying their skills in a complex social structure amongst peers who are also doing the same. This lens illuminated aspects of agency in children's play as they initiated and rejected invitations to interact.

In this chapter I will discuss the findings that emerged from my interpretation of the data, presented in the previous chapter, and address the research questions, as follows,

### Main Question

What is the nature of social interaction of disadvantaged children in a mixed-age pre-school?

### Subsidiary Questions

- 1) What strategies do children adopt when initiating or responding to social interaction?
- 2) Does this change over time?

The previous chapter presented the findings and interpretations for the four individual focus participants with some connections made between the findings and the wider literature. This chapter presents a synthesis of the findings in relation to the research questions.

## Overview

Legitimate peripheral participation (LPP) from situated learning theory (Lave & Wenger, 1991) was used as the theoretical lens through which to observe the children and multimodality used as an analytical framework to broaden the view of interaction beyond speech. Using observation and audio-visual recording methodology created a vast amount of rich data; allowing me to witness and interpret the messiness of children's lives and the complexity in their interactions in the everyday contexts of their pre-school experiences.

What is the nature of social interaction of disadvantaged children in a mixed-age pre-school?

The nature of the children's social interaction strategies are explored throughout this chapter and were found to be rich and diverse. Through the study the children were also found to display a move to not only a more complex and intentional range of modes but also an agential approach to their interactions, as they selected how and with whom they interacted.

The nature of social interaction, which is explored further below, draws on a number of concepts and key findings. Firstly, the importance of the others in the social interaction was found to be significant. The dynamic interplay between two pre-school children who are learning to interact created a changing landscape. Relationships were significant, as well as the repertoires of the individuals engaged in the interaction. Power interplay in relationships highlighted the complexity of attempting to 'measure' this. Drawing from Bakhtinian theory (Dentith, 1995), illuminated the impact of the context on the nature of children's social interaction. Significantly, this included the presence or absence of adults in the interaction.

Drawing on the LPP lens uncovered dynamic shifts between master and apprentice, where the children demonstrated agency in their position in the group (Canning, 2019) amongst peers, through their actions of making individual choices, contributions, interactions and behaviours (Ball, 2013). Moreover, transitions from dyadic to dynamic interactions highlight agentic intentions from children. This presents children as complex negotiators

of their place in a group dynamic, enacted through reciprocity and power sharing. This signals a need to problematise linear arguments that infer there is a monodirectional shift from unable to able (Fabian & Dunlop, 2002).

The emerging performance repertoires of children, explored further below, demonstrated a diverse range of multimodal tools at children's disposal from the beginning of the study, with increasing complexity of their application to a social interaction situation. This brings into question the socio-political narrative of the linear adoption of skills and the intent focus in policy on speech acquisition above other modes of communication as a prerequisite for literacy (Kress, 1997). This 'middle class' measure of success problematises the nature of the early years outcomes and their intent on driving a neoliberal view of school readiness (Kay, 2019). Freeing the focus away from speech highlights the diverse nature of children's social interaction strategies, illustrating the misalignment with the political discourse and human experiences.

The case of Alice highlighted the complexity of cultural brokering between home and nursery and its influence or impact on performance repertoires. Alice displayed a high level of competence in her speech, which was interpreted as a high level of social interaction abilities, informed by the EYFS (2017) learning outcomes. However, this masked an additional complexity for Alice, as a challenge in cultural brokering, as her home and nursery cultures collided. I interpreted this as extending her speech-led repertoire at the expense of a peer-influence repertoire of multimodality. However, the focus on speech in the learning outcomes created a blind-spot to the unveiling of this. This further highlights the problematic nature of the deficit discourse creating a narrow view of child development.

Embracing the wider view of communication, informed by the theory of multimodality, led this study to adopt an interpretation of a conceptual framework of performance repertoires. Illustrating an agential application of modes from children presents a complex and dynamic view of teacher and learner. This challenges the limitations of existing measures of success, where a homogenised view of children and child development limits the visibility of children's agency in their everyday interactions (Gallacher, 2008),

perpetuating the middle-class dominance through socio-economic allegiances (Foucault, 1977). It limits the visibility of children's 'voice', contribution and significance to the early childhood education culture, creating a blind spot to diversity, perpetuating marginalisation (Kay, 2019), contributing to the perpetuating gap between empowered and disempowered (Kortright, 2003).

Moving on to the sub questions,

What strategies do children adopt when initiating or responding to social interaction?

These data illuminated the diverse range of modes that the children drew upon when establishing multimodal repertoires for initiating or responding to social interactions. Despite having speech to draw upon, the children did not always choose this mode of communication with their peers but developed complex performance repertoires of gesture, gaze, body movement and use of artefact. Their choice of modes illuminated the reciprocal significance of others around the children, including adults and peers, and highlighted the complex contextual and dynamic contribution that each child made to the group by bringing in their own knowledge, concepts and ideas as well as learning from and with others. This data brought to the fore the power of play and the power in play of pre-school children.

The diversity of children's social interaction strategies was apparent from the start of the study. Diversity in the modes used by each child as well as diversity in differing strategies adopted between peer to peer interactions and adult to child interactions. Strategies early in the study included playing in isolation, actively avoiding other children; seeking out a single peer with gesture and artefact; seeking out adults with speech and body movement; and joining in activities using gesture and gaze. All of the children were reported by parents and practitioners to have a wide range of modes available to them from the start of the study. However, early observations in the study revealed that children were selective in the modes they used in different scenarios, for example there was an absence of speech to initiate peer to peer interaction for some children. This supports the findings of Flewitt's (2003, 2006, 2011) work and the notion that children



speak more at home, engaging different modes in different physical spaces. In the findings of this study, I have viewed this notion as children communicating in performance repertoires – having a set of modes that they draw upon for differing scenarios related to physical space, cultural context and audience. Valuing the children’s experiences and preferences to assert their agency, in their every-day social interactions, widened the lens. Considering the child’s context holistically and the nature of agency revealed the children as curious, competent, participant and able beings (McNair & Powell, 2020).

At the start of the study the findings indicate that all of the children engaged in dyadic interactions, some with peers and all with adults. Children were observed actively ignoring or ostracizing peers who attempted to interject or exclusively directing interactions towards an adult in a group while actively excluding other children from that dyadic interaction. These dyadic strategies were adopted by all of the children in adult and child dyads but some of the children also used this strategy with peers.

Does this change over time?

In contrast, towards the end of the study, in period six, all of the children interacted in variable sizes of group and employed a wide range of modes available to them in their peer to peer interactions. There were also notably more frequent and sustained interactions with peers and fewer interactions with adults. The diversity of multimodality between the children narrowed as they drew on a wider range of communication modes in their performance repertoires. Additionally, all of the children in the study continued to differentiate their performance repertoires with adults and with peers, demonstrating embodied and multimodal expressions of agency within their interactions, as adults demonstrated a preference for speech. Further analysis illuminated a consistency throughout the study, with little change in how they interacted with adults, mainly responding to and using speech.

## The Significance of the Others

Period three, immediately following the older cohort of children leaving for school, presented a transitional phase for children. I interpreted this period as an unstable crisis period (Fleer, 2009) as previous key receivers and initiators were suddenly absent, exposing the significance of the 'others' in the success of children's social interaction strategies. This revealed insights about the social dynamics and agential interplay for children's interactions, illuminating children's reliance on having a more-responsive interaction accomplice or collaborator. This highlighted the significance of the cyclical nature of cultural reproduction (Corsaro, 2003) in the pre-school year displayed through less reciprocal interaction. For example, Dan lay on the back of the chariot and waited for a younger child to 'drive', however, he just left. Overall period three saw reduced success in gaining a response from peers; frequent use of large body movements; more humour in engagements; more ignoring or rejecting of peers; less speech and children being more selective of who they interacted with. This period supports the notion from Fleer (2009) of a crisis between stable periods discussed in the literature review and illustrated below.

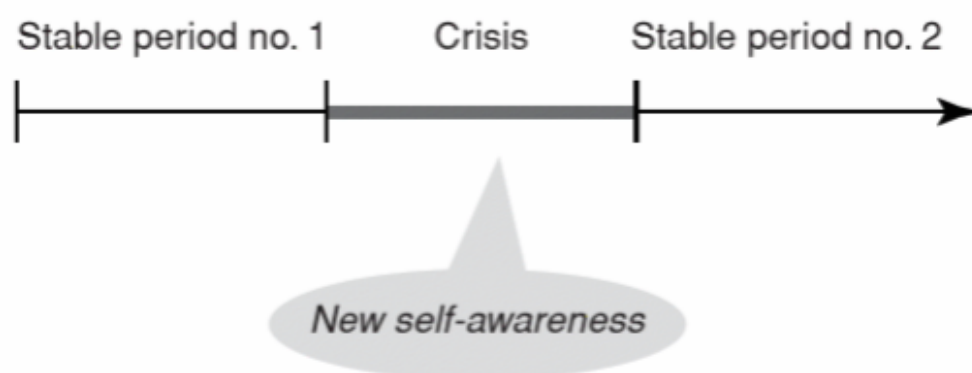


Diagram 2 New Self Awareness (Fleer, 2009; 172)

Drawing on Fleer's concept, the breadth of multimodality used in 'stable period no 2' suggests a significant transition period in the pre-school around the mid-point of the study, also reflective of Rogoff's (2003) notion of children bridging between meanings by increasing alternative modes of communication beyond speech.

Focusing on LPP, the illustrations presented in diagrams 9, 11, 13 and 16 within the previous chapter represent the changes in children's positions in the group over time. In particular their tendencies to operate as central or expert participants towards the end of the study, in contrast to their earlier tendencies to be passive outsiders or peripheral participants (where they were involved by not leading or fully involved). These findings support the theory of LPP (Lave & Wenger, 1991) where learners move towards the centre of expertise, as they are immersed in their situated activity of pre-school. Initial consideration anticipated that the position of master would infer a position of power. However, the complexity of children's interactions observed in this study problematise the simplistic trajectory that is presented within the original LPP theory. For example, diagram 9 shows that whilst Dan moved towards the centre of expertise between periods one and six, he also continued to operate within most of the LPP positions. Similarly, Leo started the study as an active participant and throughout the study, extended his position to a wider range, from passive outsider to central participant. This pattern of participation is also reflective of Ben and Alice's interactions during the duration of the study.

These findings build on the LPP notion of moving from the periphery towards the centre of expertise, shifting the view to a widening and dynamic range of levels of participation. This led me to draw on Canning's work of power dynamics (2019) and consider the children's power and agency in these positions and to reflect upon the extent to which they may have influence over their position in the group.

Returning to the original data highlighted some unexpected insights into the children's position in the group in each period, which amounted to power and agency. LPP provided an engaging lens to this study and brought to the fore the relationships between children's position in the group, reliance on adults and use of modes, but what it did not illuminate was the children's agency in selecting their position; once they had 'reached' central participation. What was apparent was the children's dynamic and purposeful shifting of positions, with children having reciprocal influence on theirs and others' situations. In play

this changed regularly and with fluidity, as children negotiated positions; where they gave and received suggestions and instructions from others; and where they situated themselves depending on the activity. This complex and dynamic shifting of positions appeared as a collaboration of culture, where children had influence on their own and their peers' LPP positions.

This is an innovative reworking of situated learning theory in the context of early childhood education with peer to peer learning, where children bring their funds of knowledge together and teach and learn from each other in a complex and dynamic web of participation. This notion has potential implications for practice and for the role of the adult, which will be discussed in the final chapter. This blurs the lines between master and apprentice in LPP and also in the empowered and the subordinate. The original theory infers a clear master, expert or leader and multiple apprentices or peripheral participants. This study identifies a fluid, dynamic movement of positions of children between master and apprentice. Additionally, the children exposed their influence in their position in the group and the fluid and complex movement between master and apprentice. For example, in the super-hero play at the end of the study the Dan, Ben and Leo exchanged positions fluidly in their play; giving and receiving instructions; setting and changing rules of the game; and when asked to be gentle in their play, Dan took it upon himself to find out more about the problem and disseminate this to his friends. In another example, Ben decided to show an adult student how to make ice-cream. His confident, flirtatious repertoire expressed a position of master, despite the student given him clear instructions at 'tidy up time' earlier. Alice demonstrated her alignment with adults as she positioned herself as master, despite achieving a lack of response from others. In 'I'm the boss of the jigsaw' Alice and another child both displayed a desire to be the master, causing some conflict. These examples illustrate the dynamic intent of children to switch positions between master and apprentice, teacher and learner towards the end of the study.

## Transitions from Dyadic Interactions

The data from all children identified a preference for them to engage in dyadic communication for much of the early stages of the study. For many interactions this was frequently with adults using speech and has been interpreted as a familiar cultural interaction, particularly in the context of what is seen to hold 'value' in educational policy narratives. This interpretation stems from considering the adults in both cultures of home and pre-school, with the likelihood of adults initiating interaction using speech in both situations, thus bringing speech as an understood or familiar mode of communication to bridge the two cultures.

Some children did interact with peers from the start. This was also dyadic, interacting with one person at a time, but was primarily without speech, reflective of other studies reviewed in the literature (Flewitt, 2006; Tizard & Hughes, 1984). For example, Leo and Ben had a friendship, which was highlighted by their parents. Ben took quite some time to attempt to engage Leo in 'come and play dinosaurs', using multiple modes, which ultimately failed. During this effort, he did not initially respond to another child who was attracted by his invitations. Leo turned his back to a child in 'Lego Table' as he was interacting with Ben, despite them all playing silently around a table. The exception to this was Alice who used speech with her twin sister in her dyadic communications throughout the study. This is itself significant and will be explored later.

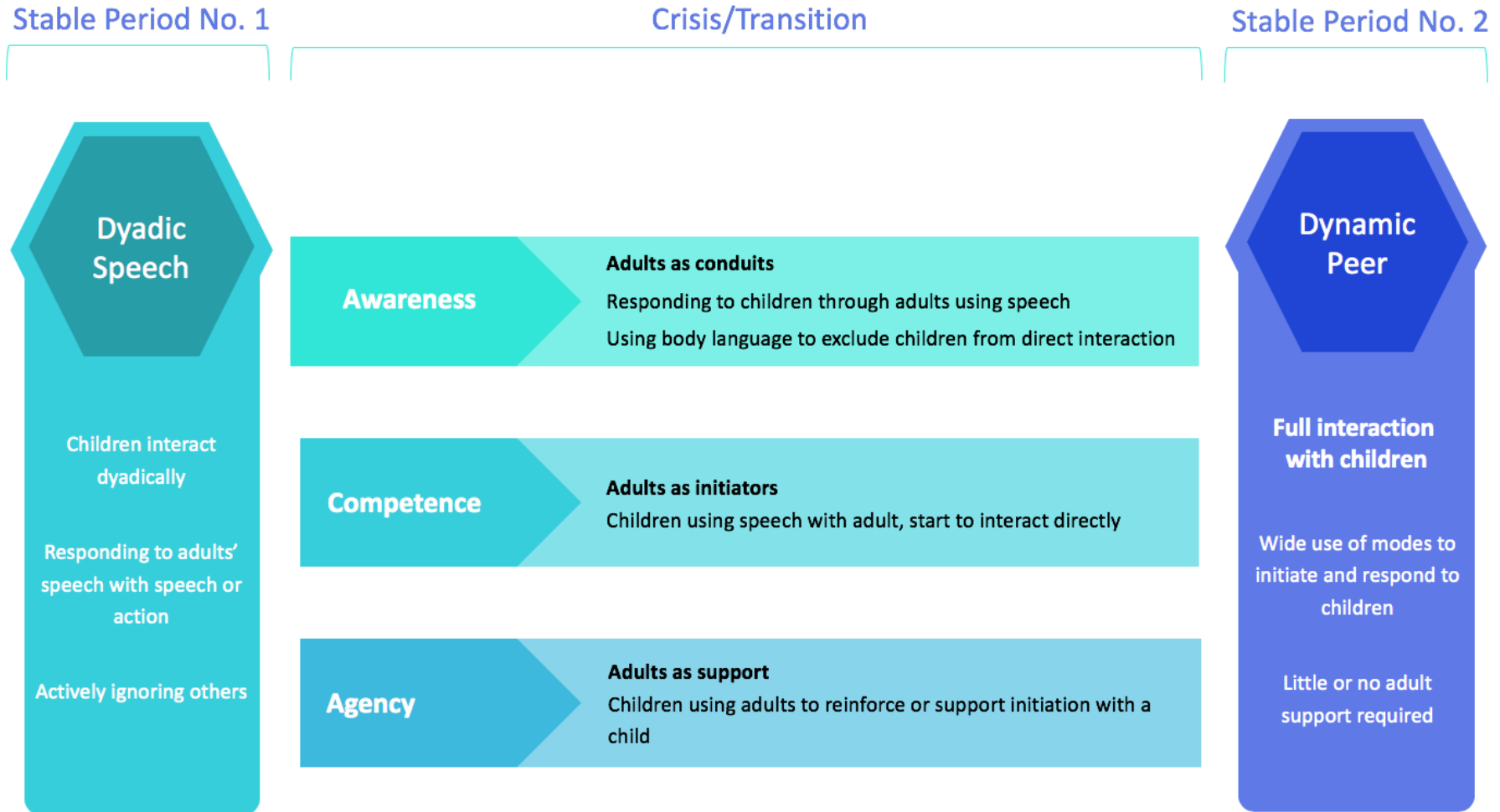
Further analysis of earlier episodes unearthed an intention for children to interact dyadically and to exclude others from the interaction, by way of ignoring or using body position to disregard, for example. Considering the demands of children in negotiating their place in a group dynamic, I have interpreted this as children having multiple modes available to them but not yet understanding the complexity of their application in reciprocity, power sharing or exchange of ideas (Fabian & Dunlop, 2002). Furthermore, the preference for dyadic interactions was not conditional on the mode of communication. For example, one child used the same strategies to initiate interaction, whether it be with an adult or a child, but did not respond to any third party for a number of periods. Another child had clear speech from the start and used this with adults. He

blatantly disregarded other children for quite some time, then slowly developed interactions with children, firstly individually and then in groups. This is reflective of the dyadic nature of parent and child intersubjectivity in a home culture and the challenges that young children encounter as they enter a more complex group dynamic, reflective of Geertz' (1973) seminal work. It also reflects the work of Wohlwend (2009) where children were found not to have the cognitive ability to negotiate complex webs of interaction with multiple people.

In contrast, all of the children in period six were engaged in multidimensional, dynamic interactions. They were active, responsive, multimodal and directive in their co-construction of events and episodes. This left me questioning what occurred between the first and the final period? Drawing me to the work of Fleer (2009) and the crisis between stable periods; a crisis period which spawns a new self-awareness (see diagram 2 above).

Considering the significance of period three where the older children left for school and the study participants were left 'lost' and without purpose for some weeks, I was drawn to consider this as creating a crisis period, or as suggested in the literature review, perhaps 'transition' is a more suitable term. Drawing on the conceptual critical age framework of Fleer (2009) and analysing the data again, the following illustration was created to demonstrate my interpretation of the detail within the crisis or transition period of new self-awareness, demonstrated in the shift from dyadic speech to dynamic peer;

Diagram 17 - Breakdown of Crisis/Transition – Move from Dyadic to Dynamic



This illustration presents a conceptual framework to demonstrate a number of potential transition intersections between dyadic speech and dynamic peer. It highlights the significance of the adults for children in this process'

- Adults as conduits – as the children start to realise self-awareness they 'use' the adults to channel their intentions and desires.
- Adults as initiators – as the children start to develop competent interaction strategies, the children use speech with adults to engage them in initiating indirect action from other children.
- Adults as support – as the children develop agency and confidence, they use the adult as a support for reinforcement or direct initiation.

These elements, although appearing linear are of course more multifaceted than the illustration presents, with failures and successes along the way. Interestingly, children's repertoires also encompass a transition from dependence on adults towards independence, which I will discuss later. This conceptual framework has implications for practice, which will be discussed in the concluding chapter.

Returning to LPP, this framework draws on the notion of the adults being a consistent central presence, while the children make sense of their changing cultural context, as they learn how to interact with each other. The adults appear to position themselves as master during stable period one, while the children are positioned apprentices. However, as the children establish themselves within the physical space and move into the conceptual third space, the children embody the cultural context and move themselves, while influencing each other, away from the position of apprentice into a dynamic, fluid, complex series of interactions with peers, where shifts to and from central participant are active and purposeful.



## Emerging Performance Repertoires of Children

The data demonstrated that the children had a wide range of multimodal tools at their disposal, such as speech, gaze, body movement, use of artefacts and gesture. However, as reflected in other studies explored in chapter three (eg Tizard, 1984; Flewitt, 2003), the children did not use them all in the pre-school setting earlier in the study. The range of modes selected changed over time for all children in the study in increasing complexity. Initially, children used speech when interacting with adults and it took most of the children a number of half terms before they used speech with peers when initiating interactions.

For example, Dan rarely used his speech with peers at the start of the study, despite having a rich verbal repertoire, until a peer spoke to him first. Following this significant episode, he was immediately observed actively and frequently using his speech with peers. This transformative moment appeared to open up the possibilities of their new-found shared language, which flowed freely from this point onwards. Dan was observed from then on using speech to initiate interactions, reflective of Beraldo et al's (2016) work of cooperative awareness of person to person communications through play.

Moreover, there was not a simple linear adoption of increasing modes. On occasion, children used complex non-verbal modes of communication with peers prior to using speech, added speech to their repertoires and then went on to engage in targeted non-verbal modes with less verbal children. Again, using Dan as an example, he was observed late in the study engaging a non-verbal child through artefact and gesture (Dan, period five; illustrated findings 'a line of animals'). Children appeared to be becoming increasingly sensitive to their audience when engaging modes of communication in their repertoires. Another example was Leo appearing to learn through 'trial and error' in selecting a range of modes in his forming repertoires (Leo, Period Five; Illustrated findings; 'White Hat', 'Look over your shoulder' and 'Knocking bottles off') as he used diverse strategies to initiate interactions with different people. Additionally, on occasion interactions with less-able children appeared indicative of a performance, suggesting mimesis of their

experiences of adults speaking to them, such as bending down, hands on knees, head tipped and use of gentle language tone.

Over time, it became increasingly apparent that the children were expanding their selection of modes of communication within their repertoires with a more refined choice of appropriate modes for their audience, resulting in increasing engagement. Towards the end of the study, all of the children developed, extended or enhanced their modes of communication with their peers, appearing to refine their repertoires. Interestingly, their repertoires with adults changed less so over the study period, with speech dominating these repertoires, supported with artefacts and large body movements throughout the study. This was briefly alluded to in the above section in the context of moving from dyadic interactions to dynamic and complex with peers.

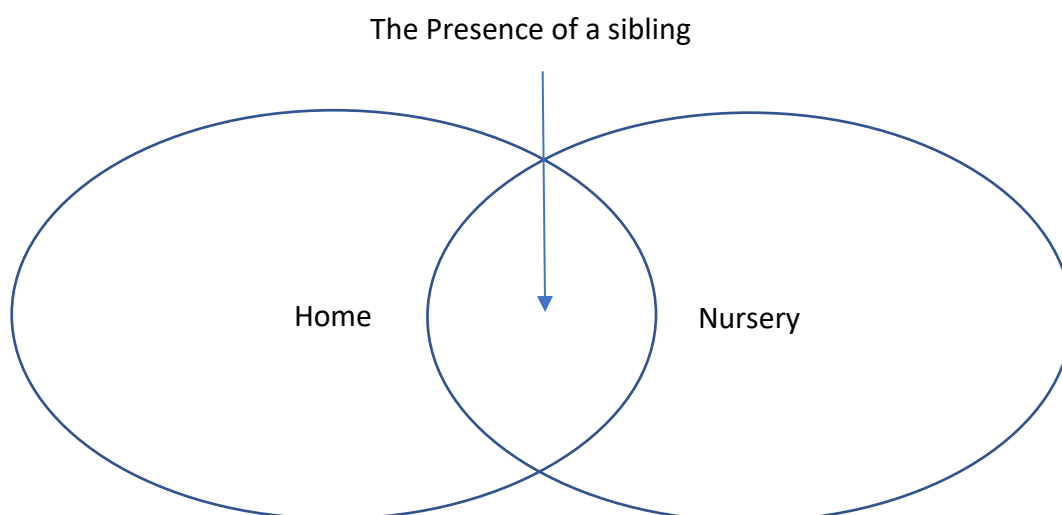
#### Cultural Broking with Performance Repertoires

One significant set of observations, worthy of note in this study, are of Alice and her twin sister. Alice was a challenge to observe through a LPP lens due to the presence of her twin. Her twin was an important part of Alice's social interaction experiences throughout the study, frequently featuring in the data collection and together they provided an insight into children's embodiment of culture. However, LPP is a learning theory based on learning through immersion in a cultural context and my interpretation of Alice viewed her as frequently being pulled out of that immersion into her home culture, due to the presence of her sister. Drawing on Fler's (2011) work on inside and outside of play resonated with me as I observed Alice using distinct performance repertoires with her twin in contrast to other peers. Alice changed her repertoires fleetingly from one moment to the next as she interacted with her twin and with others. This was dynamic and frequent, giving the appearance of Alice shifting her presence between her home culture and her nursery culture. Alice appeared to be active in shifting between performance repertoires prior to being aware of her audience in her selection. Although this appears to be contradictory, the change was nuanced and interpreted as a set of mimicked strategies, which over time became more refined in her desire to initiate interactions, rather than respond to a situation.

Alice aligned herself with adults for longer in the study than the other children. I am led to question whether the presence of her sibling 'held' her in her home conceptual space and thus a speech-led repertoire, preventing her from entering her nursery culture entirely, and therefore deterring her development of a peer focused, multimodal, dynamic repertoire found in the others.

The illustration used in the literature review provides a simple concept which demonstrates the complexity for Alice, as her two conceptual spaces collided.

Diagram 14 – The Cultural Presence of a Sibling



Further drawing on the notion that speech can be a first language of home, is highlighted in the repertoires used by Alice when interacting with her twin. Alice demonstrated a clear indication that she had one repertoire for inside play and one for outside of play (Fleer, 2011), the latter interacting with her twin on many occasions.

Reframing the above conceptual framework and viewing the intersection between the two cultures as a bridge spanning home and nursery, supports and modifies Yahya and Wood's (2016) conceptual third space towards the embodiment of those cultures for Alice. This results in Alice presenting a hybrid of identities in a single physical space as she moved and negotiated two identities through differing repertoires. Interestingly, Alice

was viewed as progressing well in her communication, as her speech and language were strong. This challenges the notion of speech being a rigorous indicator of children's progress and development in communication and language.

This concept would be an engaging piece of future research. In particular, bringing together the concept of differing performance repertoires of children's cultures.

### Conceptual Framework of Performance Repertoires

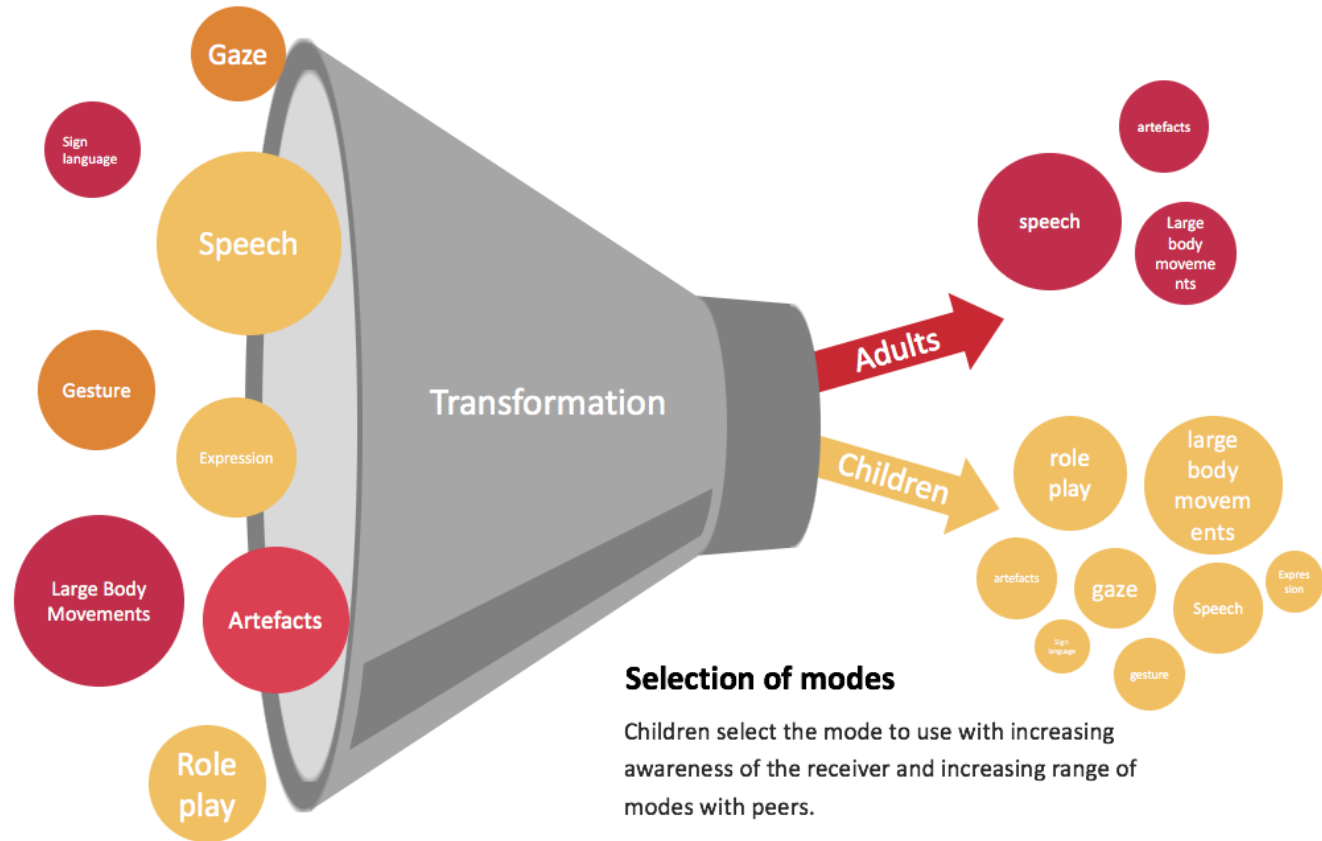
The following illustration (Diagram 18) presents a conceptual framework of performance repertoires, influenced by Wohlwend's (2009) activity model. Using data from this study, modes of communication available to the children at the start of the study are presented on the left, with the size of the dots representing an illustrative view of the children's use of each mode, in relation to other modes. On the right the modes of communication selected by the children at the end of the study are presented, divided according to the audience of adults or children in pre-school. The illustration highlights the distinctive modes or mediational means that the children drew upon within their performance repertoires at the end of the study, in contrast to the start of the study. For example, the illustration shows the regular use of speech with adults, whereas between peers the prevalence for role play and large body movements is apparent.

Diagram 18

# Performance Repertoires

## Multimodality

Children enter nursery with a set of communication modes adopted in the home culture with adults and siblings



This conceptual framework is also reflective of Dyson's (2003), work where there is a differentiation between the official space of teaching and learning in school and the unofficial space of peer interactions at school' where children produce their cultural practices and friendships through expressive interactions. This further illustrates an extension of the theoretical perspective of LPP beyond a central expert and opens up a debate around a broader view of communication, where children are their own experts in the broad selection of modes they choose to interact with. This presents a complex and dynamic view of teacher and learner, or expertise and peripherality, as the children embody the culture of pre-school and interact through differing and changing performance repertoires.

The notion of the children's peer community learning performance repertoires outside of, or despite of, pedagogical intent supports Lave and Wenger's (1991) theoretical perspective beyond the realms of production and reproduction of social order. Furthermore, this notion supports the concept of diversity in children's social interaction strategies beyond the reproduction of adult-centric speech' bringing into question the homogenisation of educational assessment in the English early years foundation stage curriculum, highlighting the notion of an assessment gap, not an attainment gap.

## Conclusion

This chapter has explored a number of conceptual frameworks and matters of interest alluded from the research findings, as follows:

- The significance of the others, creating a new dynamic view of LPP
- A revised view of LPP, considering children's power and agency
- Transitions from dyadic interactions
- Emerging performance repertoires of children

Legitimate peripheral participation (LPP) has provided a lens from which to view children's learning in a social context. It has illuminated the significance of others in that context, their influence on pre-school children's engagement in social interaction, their stimulus

on children's use of multiple communication modes and their significance in children's creation of performance repertoires. Moreover, an innovative view of LPP as a complex and dynamic exchange of expert and apprentice has been presented, as children use their power and agency to manipulate and shift their position as they influence and respond through activities and events.

All of these concepts mutually influence each other, reflecting the messiness of children's lived experiences. It is hoped that together they illuminate the value of children's agency in teaching and learning and augment the value of multimodality in children's emerging social interaction strategies.

This research brings into question the privileging of speech which underpins English pedagogy, influenced by the political discourse, suggesting an extension of the value of communication to embrace the multimodality and diversity of children's interaction strategies.

This brings into question the simplistic, binary notion of disadvantage and advantage in the political discourse, suggesting a lack of sophistication in government policy in refining a more complex notion of diversity and heterogeneity within the cultural situatedness of families and children, reflective of Rose' (1989) notion of the child hierarchies. The binary notion of disadvantage and advantage not only simplifies a very complex notion of people but also masks the diversity of cultural practices. In turn, the political discourse has informed and influenced pedagogy and practice, through the policy documentation levers, to narrow the view of child development, through homogeneous assessment, influencing practice away from the holistic constructions of the child in the context of their relationships with others.

In the following, concluding chapter, I will summarise this thesis and explore the implications for practice and policy as well as theoretical and methodological implications.

## Chapter Seven - Conclusion

In this chapter I will reflect on the thesis and use this opportunity to consider implications for future research and publications.

This thesis represents a case study of four children, based in a pre-school setting established in a Children's Centre in one of the most disadvantaged areas of England. The aims of this research were to bring empirical data to the narrative of disadvantage and to widen the view of children's interaction strategies, in an attempt to redirect the deficit discourse of the educational gap towards a discourse of diversity. One aspect of the education gap reported is around social interaction; for example lack of speech and social skills (Mathers & Smees, 2014), which guided a focus for this thesis.

Underpinned by viewing knowledge as socially constructed, the research took an interpretive paradigm to uncover and value the complexity and messiness of children's lives in pre-school, with a view to problematise the political homogenisation of children's communication. This research draws on holism and multimodality, providing a broader view communication and to encompass and consider the wider context of children's social interaction strategies. Using ethnographic influences, quasi-naturalistic observations of children were carried out, which were recorded audio-visually and those recordings shared with parents and practitioners. The study period spanned two academic years to reveal changes over time, notably including a period when the older cohort of children left the setting for school.

The following research question and sub questions were posed and addressed,

### Main Question

What is the nature of social interaction of disadvantaged children in a mixed-age pre-school?



### Subsidiary Questions

- 1) What strategies do children adopt when initiating or responding to social interaction?
- 2) Does this change over time?

By observing children through a LPP lens, using holistic multimodal analysis, this research produced a vast amount of rich data, providing an insight into pre-school children's everyday interactions. The main findings discussed were,

- The reciprocal significance of the others in the learning environment
- A revised view of LPP, considering children's power and agency as they influence theirs and others' expanding positions in the group
- Children's predilection for dyadic interactions and the significance of adults to support the transition into group interactions
- An insight into pre-school children's emerging performance repertoires and the differentiation between peers and adults.

Overall, the research findings offered new insights into the notion that children adopt a wide range of strategies as they engage with peers and adults in their group setting through performance repertoires. Changes over time highlighted a differentiation in peer to peer culture and in adult child interactions and brought to the fore the notion that adults nurture a speech-led pedagogy, whereas peers nurture a wider repertoire of multiple modes.

Findings supported the notion of children contributing to the culture of their pre-school, which highlighted not only their agency but also their influence on their own position as teacher and learner. This expands the theoretical frame of legitimate peripheral participation, as the children influence and manoeuvre dynamically between participation stages, rather than starting on the periphery as a newcomer and moving towards the centre of expertise. These findings have implications for policy and offer new insights for practice.

I will reflect on key elements of the research process and bring to the fore my contribution to knowledge, including implications for practice and policy, theoretical and methodological implications and potential future research.

## Reflections on the Thesis

### The Literature Review

The literature review was a very long and challenging process, spanning four years. The cyclical nature of my work required me to engage with the literature throughout the process. However, some of my early findings and drafts in year one did not reflect my thoughts and knowledge by year four. I am drawn to accept this as a positive indication of my changing thinking. One key emergence which problematised my norm was to question measurements of educational success and the nature and causality of this creating the notion of the education gap. Prior to this I had focused my professional efforts on closing the gap, failing to question the gap. This then raised my awareness of the political construct of the deficit discourse around disadvantage, which motivated me to turn away from assessment tools, to celebrate diverse achievement and ensure that practice was focused on individual children. This encouraged me to turn my attention towards the children, with less regard for judgements around parenting and social class.

### The Theoretical Lens

#### *Legitimate Peripheral Participation*

The literature guided me to the theoretical framework of Legitimate Peripheral Participation (LPP) from Situated Learning Theory (SLT) (Lave & Wenger, 1991). LPP was present in many publications, underpinning studies on children's interactions, play and multimodality. It positioned the research and the children in a social situation and in a learning situation within a group context.

The use of LPP was a valuable tool in this research, it positioned the children in the centre of the frame, to gain more focus on their lived experiences and the significance of others

in their learning. This was particularly useful in cutting through the complex group interactions to isolate initiation and response, while providing contextual participation data. This lens made the familiar strange, which I felt was necessitated by my insider position. This thesis offers an expanded notion of LPP, within which child agency and the fluid, dynamic nature of children in a group situation is recognised and in which children are positioned as having agency and competency to select roles and modes of interaction in particular social contexts. This is a contribution to theoretical knowledge, explored further below.

### *Multimodality*

Multimodality demanded a lot of me when considering it as an element of the research. Other contemporaneous ECE researchers have used a social semiotic multimodal lens to explore the embodied nature of communication in young children (Potter & Cowan, 2020). For this study, multimodality was used holistically to broaden the view of communication. The demands of this study influenced by holism were contradictory of other multimodal studies, which are fixed on the minutiae of children's communication, for example focusing on the slightest shift in eye gaze, reflective of its foundation in social semiotic linguistic analysis. This analytical methodology was incongruent with the research paradigm in this study; being interpretive and influenced by holism. However, the work of Kress (1997, 2009) clarified the use of multimodality in this study as a widening of the communication landscape in a diverse early years culture.

This released my thinking towards valuing all modes of communication and influenced my questioning of the imposed inflated value of speech. This then freed my thinking when selecting what to observe. It allowed me to just observe, not to select because something I judged to be significant was occurring. I found myself noticing interactions in the background of my observations, both as I watched the videos back alone and with practitioners and parents. These morsels of clips created a mosaic-like picture of each child's interactions and how they changed. This was almost impossible to express fully in the constraints and boundaries of a written thesis.

Taking a holistic view of multimodality inspired me not to transcribe the video data, as explained in the methodology chapter, but to leave the data intact. This is where this study differs from other similar studies. My interpretation was that transcription would have mitigated the holistic perspective, supplanting rich, dynamic, complex and culturally situated interactions for unsatisfactory separated modes. This is also expanded below.

## Research Methods

### *Audio-Visual Methods*

The use of audio-visual methods was invaluable in this study to record the holistic, complex, culturally situated interactions between children. The initial episodes were observed and recorded; with the recordings used to play back and watch with practitioners and parents. The ability to return to the original data was powerful in the analysis process. This drew me back to the original episode, where each were reviewed holistically. This enabled me to bring deep and rich data to my interpretations by repeatedly returning me to the core data, to enable me to make meaningful and contextual holistic analyses.

### *Video Playback with Practitioners and Parents*

The video sharing with parents and practitioners was useful but not as expected. I had anticipated a distinct set of data for practitioners and for parents. However, what did unfold was a joint analysis process, where we influenced each other as we observed the children together. This is reflective of this study, where the co-production of interactions are difficult to define and present, as much as the meaning and source of children's interactions are difficult to define and present. As with the data, this messiness and the nonlinear interactions are at the heart of this study.

### *Data Presentation*

A difficulty for multimodal research is the challenge of data representation. Although this is not a multimodal study per se, the challenge persists. The multidimensionality and volume of data provided challenge in both its presentation and representation. I decided

to present holistic data, being video clips of observed episodes, supported by pen illustrations and still images from the video reel.

Presenting the video data is problematic in both technical challenges of providing access to such vast data but also for ethical consideration of future access. Although ethical consent has been given from all parties to share this data, I have limited the access to this data to examiners and doctoral supervisors. This is reflective of the challenges of ongoing consent from young children and will be limited in time. This, I believe is an opportunity for further research.

### Limitations of the study

#### Sample Size

This study draws upon data from a small sample size and its case study nature prevents generalisations from being drawn from the data. However, the compensation for this is the depth and richness of the data and the focused insight into children's agency. It is hoped that this study and future dissemination will generate debate and contribute to critical discussions regarding the narrative of disadvantage in early childhood education.

#### Written Words from Holistic, Multimodal Data

A further limitation was the bias towards the written word in a written thesis. It is hoped that links to audio visual data for examiners and with the use of still images to reinforce the written illustrations go some way to placing the reader closer to the data source. The messiness and complexities of this study provided multilayers of challenge, as the direction of the study could have followed many courses. Providing clear and concise interpretations in a structured and meaningful way, as the complexity of interpretations and findings unfurled, within a word count limitation, was challenging.

The high volume of data added to the challenge. Representing such large volumes of data brought into question the purpose of data or analysis representation within the thesis. I

questioned whether the presentation of data was to evidence or to present the analysis processes. As much of the analyses in this study were cerebral, the presentation of data and layers of analysis remain only partially present. It is my intention that the use of various modes has gone some way to provide clarity and transparency.

## Contribution to Knowledge

### Implications for Practice and Policy

As a small-scale case study, the findings of this study should not be considered and applied as a generalised truth. However, the depth and richness of the study has enabled me to provide in-depth and original insights into young children's social interaction which problematise the dominant discourse of disadvantage. The lens of this study provides a critical view of disadvantage making the familiar strange and igniting debate on what we hold to be our truths about early education. To this end, the following conclusions are matters which generate professional debate and warrant further consideration.

### *Assessment*

The Early Years Foundation Stage (EYFS) (DfE, 2017) is the statutory framework from which all early year providers in England are required to follow. It is presented as setting 'the standards that all early years providers must meet to ensure that children learn and develop well' (DfE, 2017; 5).

Considering multimodality in the early learning goals and the early years outcomes presented in the EYFS (DfE, 2013b), there is little explicit reference to children using modes other than speech to communicate, save for one outcome which indicates the use of gesture alongside simple vocabulary 'use gestures, sometimes with limited talk, e.g. reaches towards toy, saying "I have it" (Speech, 22-36 months; 8). However, multimodality is implied in other areas of learning, for example 'Seeks to gain attention in a variety of ways, drawing others into social interaction' (making relationships, 8-20 months; 19) and 'initiates play, offering cues to peers to join them' (making relationships

30-50 months; 19). Whilst there are many positives with the EYFS, there appears to be a lack of clear indication for practitioners to acknowledge and value multimodal interactions. Additionally, 'other' modes of communication beyond speech are used when assessing the development of children do not have speech, informing a deficit discourse of multimodality.

The extent to which the children in this study used multimodality, and the degree to which this provided an insight into their social interaction repertoires, illuminated the creative, and complex dynamics of peer to peer interactions. The focus on mulitmodality has placed value on other modes of communication equally to speech and presented a wider notion of communication. This leads me to recommend that policymakers give consideration to revise the EYFS assessment tool to promote multimodality as an opportunity to see the diverse and complex currencies that children adopt beyond the limitations of speech.

### *Children as Experts*

Considering multimodality as the language of children I am drawn to ask whether early years practitioners are influenced by the 'middle class' parenting referred to by Kress (1997) and are consequently failing to identify opportunities to support children in creating their own autonomous ways of communicating. The nature of the case-study setting's free-play and reflexive pedagogy, which resulted in limited adult-directed intervention in the observations, gave me the opportunity to locate young children's interactions with a delineated contextual space between education and peer cultures. Alongside this, the significance of the others in children's social interaction repertoires revealed the importance of the setting's pedagogy, where extended periods of time for children to choose to play alongside an adult, alone or with peers was available. This provided children with agency and opportunities to experiment with their repertoires.

This finding illuminates the significance of others in the learning space and warrants further discussion in in providing children with opportunities to interact independently and in groups with peers. Additionally, within the findings of the significance of children's fluid and dynamic movements between expert and peripheral participant, further

discussions around nurturing opportunities for children to explore varying levels of participation would be thought-provoking.

### *Practitioners' Use of Multimodality*

Adopting a wider view of children's social interactions at pre-school, beyond the means by which they learn skills (such as holding a pencil, taking turns and kicking a ball), has allowed the breadth of their contextual experience and the depth of their adaptability in social interactions to become visible.

Leo drew me into an alternative view of his behaviour and opened up the notion of him desperately trying different performance repertoires to communicate. The nuanced shift in thinking warrants further discussion for practice. More specifically, my interpretation of this is that practitioners may be focused on helping children to develop strategies to interact with adults (which also reflect the interaction culture of home). With pressure to assess speech, I am led to question whether practitioners are missing an opportunity to support children to interact directly with peers. This concept, shown in diagram 17 (page 208) illustrates the need for a discussion to raise the profile and value of peer to peer multimodality in pre-school environments alongside a focus on speech and to create greater opportunities for adults to engage multimodality in their pedagogy, to nurture children's performance repertoires. The notion is that by adopting a multimodal approach themselves when interacting, practitioners could help children to mimic and adopt a wider multimodal repertoire inside and outside of play, with peers and adults.

This notion has implications for further research to illuminate opportunities to adopt multimodal practice.

### *Broadening the Lens to Challenge the Discourse*

This thesis began by problematising the political discourse for ECE within which young children's social interactions are situated. The positioning of children as disadvantaged, with direct links throughout policy documentation to their likely delayed development, of



their characteristics, actions and behaviour, were illustrated and brought to the fore to challenge.

The language of policy was found to have infiltrated everyday practice, through the language of pedagogy. The view of development within the study setting, and the measures of success or otherwise had been undermined and channelled towards a homogenised view of communication, hiding modes of communication behind behaviour, fuelling the deficit model further. Manipulated language would flow freely in the study, fuelling the perpetuation of the deficit discourse of disadvantage, reflective of the power discourse of Foucault as 'all utterances or texts which have meaning and which have some effects in the real world' (2004; 6).

I had hoped that this thesis would uncover a broader, multimodal repertoire of communication, beyond speech, but I didn't anticipate it uncovering the homogenisation of children through the EYFS (2017). This was the power of discourse in action, fuelling the education gap by failing to acknowledge the brilliance of the children's agentic and multimodal repertoires and the ways in which they negotiated their way through the complex social interactions of the everyday.

The study highlighted the value of having a critical engagement with policy discourse. In particular, in taking the time to adopt a broader view of social interaction; valuing the complexity of other modes of communication, in particular those modes used more freely between children.

Our practice has been challenged. Some aspects of practice which appeared dyed in the wool of ECE became evidentially far from ideal. For example, having group time to support children's communication and language now presents itself as one of the least opportunistic situations for a young child to use their multimodal repertoires. Having practitioners who always use their speaking voice to help children to extend their vocabulary, is now balanced with practitioners joining the children in their multimodal interactions, helping the children to communicate in their preferred mode while practicing their complex and dynamic group interactions.

This study has uncovered the diversity of children's multimodal repertoires and given them gravitas and value within our pedagogy. The children have taught us to be more diverse in our modes of communication, to allow us to enter the multimodal world of the pre-school children.

## Theoretical Implications

### *Legitimate Peripheral Participation*

A LPP lens has been applied to view a child-led, mixed-age pedagogy, which unveiled a deeper understanding of the agentic, dynamic and complex nature of children's peer to peer interactions, of their agency in power dynamics and in their contribution to the culture of their pre-school. This theoretical perspective and application has uncovered the significance in peer to peer learning and exposed some shortcomings of adults in the latter stages of that learning.

This informs a contribution to theoretical knowledge, by expanding LPP beyond the notion of definitive expert and peripheral participants. This thesis presents an extension of LPP, where children with power and agency expand and influence their available LPP positions over time and move their positions dynamically.

## Implications for Methodology

### *Holistic Multimodality*

The holistic perspective with the use of multimodality as a pedagogical lens bring another approach to methodology. This has implications for widening the lens of multimodality in research beyond the minutiae of subtle gesture and eye gaze for example, to a broader view of modes within a cultural context.

This approach also influenced the move away from transcription to place the researcher repeatedly back into the data, maintaining a holistic perspective.

This absence of a visual product from data analysis was problematic in its limitations of data presentation. For this study, this resulted in key episodes being presented to supervisors and examiners for transparency. This does have implications for ongoing ethical assent or dissent, especially in light of the age of the participants in this study.

Further discussion is warranted to understand approaches available to multimodal scholars in analytical approaches and data presentation.

### *Quasi-Naturalistic Study*

A key study method adopted from the start was the quasi-naturalistic approach to observing children. As an insider researcher, I accept I was in a position to observe children as they play and communicate naturally, within the context of an early years setting.

Prior to commencing this study, I had questioned the impact that research may have on young children when participating in adult-led research conditions. For this study, to observe children's naturally occurring interactions, it was key for my research to join them, not for them to join me. To this end, I am confident that the children have brought their own performance repertoires to the discourse.

It is recommended that using methods to facilitate children in bringing their naturally occurring interactions to research and policy be considered in the wider research field of education.

### *Implications for Future Research*

#### *Cultural Disparity*

Returning to the inspiration of the study, namely the deficit discourse around disadvantage, brings me to the first recommendation for future research. The homogeneity of educational progress in early childhood, fuelled by the political narrative of curriculum, performativity and inspection, requires problematisation and questioning.

The challenge here is to confront large-scale, quantitative research, which holds power in politics, with rich, complex data that foregrounds children's everyday interactions and relationships.

This research builds on the literature, suggesting a disparity with some children's cultures and the culture of education, being dominated by that of the middle class. This research presents a setting culture, influenced by and adjusted by the children within it.

The education gap narrative indicates a gap in early years which has potential to affect children's future education and career outcomes. It is recommended that further research be carried out with a broader view of communication and social interaction in assessment to problematize the education gap and open up the narrative of a gap in homogenised assessment practices.

## The Final Word

I started this thesis wanting to learn more about children, to take the luxury of time to really see them, taking a step back from the day to day of managing a nursery. Research which embraced observation, always seemed so rich and such an indulgent pursuit, I was quite intrigued. I also felt that the children's experiences of their everyday was lacking in the deficit discourse of disadvantage; with texts creating a picture of deprivation and even neglect. This of course was not my whole experience; albeit some of my experience.

I was not expecting to learn so much. Of course, reading the literature of such an influential team of giants was always going to be inspirational and insightful; nudging my thoughts and directing my gaze, but the children taught me so much more. They taught me the value of listening with my eyes; of hearing their body language and their gaze; of valuing their beloved artefacts beyond attachment. Mostly, they taught me to truly value them through a child's eyes; to adjust my thinking away from interacting in an adult's world towards valuing their culture, their interactions and their space.

Writing this thesis has presented many challenges, not least learning a new language of academia; this is quite a contrast to spending days with three and four-year-olds. Also, capturing a high volume of such rich data was quite a feat to work through. I had not anticipated the complexity of methodology and my engagement in it quite to the extent I did. This was slow, methodical, painful learning, and to my surprise, thoroughly enjoyable.

I will take my doctorate forward as an advocate for children's interactions. I hope to inspire others to value the individual child and the culture that children not only inhabit but also create as competent, agential social actors. I will encourage practitioners to embrace children's social worlds and joint them in engaging in their preferred mode of communication; then to look what we can do to facilitate learning.

Word count 70,851.

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## Appendices

Appendix A – Table of Observation Periods and Meetings

Appendix B – Coding Spreadsheet Illustration

Appendix C – Multimodality Tags

Appendix D – Ethical Approval

Appendix A – Table of Observation Periods

Dan		Observation period	Parent Discussion	Practitioner Discussion
Focus child consent	09/06/2017			
Child consent activity	09/06/2017			
Initial meeting			21/06/2017	21/06/2017
Period 1		12/06/2017	21/06/2017	21/06/2017
Period 2		11-17/07/2017	26/09/2017	26/09/2017
Period 3		09-14/10/2017	07/11/2017	14/11/2017
Period 4		7/12/2017- 09/01/2018	02/02/2018	09 & 23/02/2018
Period 5		27/03/2018	20/04/2018	10/04/2018
Period 6		25/04/2018 – 07/05/2018	25/05/2018	23/05/2018

Ben		Observation period	Parent Discussion	Practitioner Discussion
Focus child consent	09/06/2017			
Child consent activity	09/06/2017			
Initial meeting			28/06/2017	21/06/2017
Period 1		09/06/2017	28/06/2017	21/06/2017
Period 2		12/07/2017	04/10/2017	18/07/2017
Period 3		10-19/10/2017	17/11/2017	21/10/2017
Period 4		07/12/2017 – 10/01/2018	09/02/2018	09/02/2018
Period 5		28/03/2018	31/05/2018	31/03/2018
Period 6		26/04/2018 – 10/05/2018	31/10/2018	05/06/2018

Leo		Observation period	Parent Discussion	Practitioner Discussion
Focus child consent	09/06/2017			
Child consent activity	09/06/2017			
Initial meeting			26/06/2017	21/06/2017
Period 1		09/06/2017	27/06/2017	21/06/2017
Period 2		17/07/2017	21/07/2017	11/09/2017
Period 3		10-19/10/2017	25/10/2017	20/10/2017
Period 4		07/12/2017 – 09/01/2018	23/02/2018	23/02/2018
Period 5		27-28/03/2018	20/06/2018	12/04/2018
Period 6		25/04/2018 – 10/05/2018	No meeting	13/06/2018

Alice		Observation period	Parent Discussion	Practitioner Discussion
Focus child consent	15/06/2017			
Child consent activity	15/06/2017			
Initial meeting			15/06/2017	21/06/2017
Period 1		12-15/06/2017	27/06/2017	21/06/2017
Period 2		11-18/07/2017	07/09/2017	03/08/2017
Period 3		05-19/10/2017	24/10/2017	24/10/2017
Period 4		07/12/2017 – 09/01/2018	25/01/2018	01/02/2018
Period 5		27/03/2018	10/04/2018	10/04/2018
Period 6		26/04/2018 – 10/05/2018	25/05/2018	30/05/2018

## Appendix B – Coding Spreadsheet Illustration

		Dan		Ben		Alice		Leo													
		MM	LPP	MM	LPP	MM	LPP	MM	LPP												
period 1	500																				
file 1	501																				
	502																				
	504 a				62	D			0	C											lego play B & L playing in the lego together with older children. Quiet parallel play for most of it
	b				62	D			71	D											painting at table
	c				34	F			90	F											mark making table
	505				34	F			62	F											interactive screen with laura
	506				2	D			2	D											tuned away from snack table
	507								1	E											snack
	508				1	F			1	F											making playdough
	509				1	F			1	F											making playdough
	510								111	E											cake after sleep
	511																				more cake
	512								51	G											
	513																				N using older child to get involved
	514																				
file 2	517																				
	518																				
	520				0	C															Dan lightbox
	521				0	C															Dan lightbox
	523				35	C															charlie steels Dan's dinosaur
	524				25	C															transferring water to sand tray
	525				0	C															
	527				26	D															tubes on arms
	530				34	C															lego at the table
	531				1	C															sam leading
	533																				group time stickers
	534				1	D															small group time
file 3	535								0	C											snacktime
	543								0	A											interactive game
	544								12	D											group time exercises
	546								4	E											group time songs
	547								4	C											outside
	548								0	C											outside
	549				1	D			1	D											outdoors Alice going from one adult to another
	550								51	C											outdoor bikes
	551								0	E											sore knee
period 2	553								0	C											twins no speechs and
file 4	554								1	E											students sand tuff tray
	555 a				0	D															moving from the mattress
	b				1	E															joins the group
	556				51	G															Dan tells a story
	557				51	G															
	558				0	C															
file 5	561								0	E											group time singing and sign
	562				0	E			0	E											playing with pipes
	563				0	E			0	E											playing with pipes, ignoring them trying to attract thers
	564				21	D															more pipes
	565				62	E															ham e camer with J
	566				62	D															role play
	567				22	F															role play appears to be trying to play with the older children- being selective
	568				2	D															lacking friend in a cupboard
																					small group time

## Appendix C – Multimodality Tags

<b><u>Multimodality</u></b>	<b><u>Allocated Code</u></b>
<b>Respond to adult – adult speaks</b>	
Verbal – both using spoken word	1
Gesture – child uses only gesture/action in response	2
With artefact – child responds to adult with the use of an artefact	3
No response from child	4
Child moves away	5
<b>Respond to adult – adult uses gesture</b>	
Verbal – child uses spoken word	11
Gesture – child uses gesture/action in response	12
With artefact – child responds to adult with the use of an artefact	13
No response from child	14
Child moves away	15
<b>Respond to child – other child speaks first</b>	
Verbal – both using spoken word	21
Gesture – focus child uses gesture/action only in response	22
Sign language – focus child uses sign language in response	23
With artefact – focus child responds to child with an artefact	24
No response from child	25
Child moves away	26
<b>Respond to child – other child uses gesture only</b>	
Verbal – focus child uses spoken word	31
Gesture – focus child uses gesture/action in response	32
Sign language – focus child uses sign language in response	33
With artefact – focus child responds to child with an artefact	34
No response	35
Moves away	36
<b>Focus child Instigates interaction</b>	
<b>Instigates with an adult</b>	
Focus child uses language to instigate interaction	50
Unsuccessful	52
Gesture – focus child uses gesture to instigate	60
Unsuccessful	62
Sign language – focus child uses sign language to instigate	70
Unsuccessful	72

With artefact – focus child uses an artefact	80
Successful	81
Unsuccessful	82
<b>Instigates with another child</b>	
Focus child uses language to instigate interaction	90
Unsuccessful	92
Gesture – focus child uses gesture to instigate	100
Unsuccessful	102
Sign language – focus child uses sign language to instigate	110
Unsuccessful	112
With artefact – focus child uses an artefact to instigate	120
Unsuccessful	122
<b>No interaction</b>	130

## Appendix D – Ethical Approval



Downloaded: 13/07/2020 Approved: 11/05/2017

Katharine Jones  
Registration number: 140228863 School of Education  
Programme: Doctorate of Education

Dear Katharine

**PROJECT TITLE:** How do social interactions of children change over time in a mixed-age pre-school?

**APPLICATION:** Reference Number 012782

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 11/05/2017 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

University research ethics application form 012782 (form submission date: 10/05/2017); (expected project end date: 31/07/2020).  
Participant information sheet 1028924 version 4 (10/05/2017).  
Participant information sheet 1028923 version 2 (30/04/2017).

Participant information sheet 1030633 version 1 (10/05/2017). Participant information sheet 1028925 version 5 (10/05/2017). Participant consent form 1028927 version 3 (10/05/2017). Participant consent form 1028926 version 3 (10/05/2017).

The following optional amendments were suggested:

There are still proof reading errors. Maybe there is some systems problem that I am unaware of - but the errors are still there. You must ensure that your work is carefully checked - if you don't get into the habit of doing this assiduously you will have problems at thesis stage.

If during the course of the project you need to [deviate significantly from the above-approved documentation](#) please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter. Yours sincerely

David Hyatt  
Ethics Administrator School of Education

Please note the following responsibilities of the researcher in delivering the research project:

The project must abide by the University's Research Ethics Policy:

<https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/approval-procedure>

The project must abide by the University's Good Research & Innovation Practices Policy:

[https://www.sheffield.ac.uk/polopoly\\_fs/1.671066!/file/GRIPPolicy.pdf](https://www.sheffield.ac.uk/polopoly_fs/1.671066!/file/GRIPPolicy.pdf)

The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation. The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.



The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.