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**Encountering Pedagogical Documentation in Early Childhood Education
Through a Theory/Practice Lens**

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Abstract

Pedagogical documentation is understood as a long-established practice in Early Childhood Education and Care (ECEC), which serves multiple functions for children, parents, educators, and policy makers. It is simultaneously a saturated field, with a robust body of research and literature; a wicked problem, which presents multiple challenges in practice; and a phenomenal tool, which enables the visibility of pedagogy and learning. This study set out to see documentation differently, shifting the gaze from positioning documentation 'as' and instead to understand what it 'does'.

To understand documentation differently and to materialise its effects in practice, the study draws on posthumanism (Ferrando, 2020), new materialism (Lenz Taguchi, 2010) and the agential realism of Karen Barad (2007), which acknowledges the agency of all matter and the performativity of pedagogical documentation. A post qualitative methodology (St. Pierre, 2011) or form of inquiry allows the familiar topic of documentation be explored using intra-views as method with two separate sessional-based settings, re-conceptualising the scope of what constitutes data, and thinking with theory as a process of analysis.

This study exemplifies documentation as a material-discursive apparatus, arguing that it has greater performativity than is currently suggested in the literature. It has demonstrated that in putting theory to work, new perspectives on curriculum and pedagogy, children's positioning and learning, and team working can and have emerged.

The study contributes to new understandings of documentation, unfolding the ways in which practice is materialised through theory and offering possibilities for transformative

pedagogies in early childhood. Ultimately, it follows in the footsteps of new materialist thinkers to evidence how documentation matters, and how new connectivities emerge when the theory/practice divide is minimised.

Acknowledgements

An old adage says that it takes a village to raise a child and the rock band U2 advise “sometimes you can’t make it on your own”. This study is not a solo effort. It has been completed with the support of many academics, colleagues, friends, and family, for whom I am very grateful.

I would like to thank Louise and Anna for their support and kindness through the process. With their assistance I have built confidence in my academic thinking and writing. I will always be grateful for their continued patience and wise guidance.

I am eternally grateful to the managers and staff in the settings who engaged so generously in the professional conversations, and to the children who kindly offered their work and stories to the absent researcher. I have gained more from those conversations and professional relationships than can be written here.

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Ann, John, and Conor have been with me from the start, and Sorcha has encouraged me at those critical moments of uncertainty. Finally, my gratitude goes to John, who has supported me through the Doctorate, as he has done along each stage of my academic journey. Without him, I would not have completed the journey.

List of Tables, Images and Diagrams

Tables

<i>Table 1</i>	<i>Staff profile, Castleview</i>
<i>Table 2</i>	<i>Staff profile, Seaview</i>
<i>Table 3</i>	<i>Schedule of visits</i>
<i>Table 4</i>	<i>Analytical approach to data</i>

Images

<i>Image 1</i>	<i>Confused pathways</i>
<i>Image 2</i>	<i>Jack's depiction of photosynthesis</i>
<i>Image 3</i>	<i>Colours of Autumn</i>
<i>Image 4</i>	<i>Artist's impressions of Autumn</i>
<i>Image 5</i>	<i>Under the microscope</i>
<i>Image 6</i>	<i>The whiteboard</i>
<i>Image 7</i>	<i>Mark drawing rain</i>
<i>Image 8</i>	<i>Stepping back</i>
<i>Image 9</i>	<i>First point of contact – the orange marker</i>
<i>Image 10</i>	<i>Mark - a posthuman boy?</i>
<i>Image 11</i>	<i>Entanglements – boy/whiteboard/marker</i>
<i>Image 12</i>	<i>The wolf and his sharp teeth</i>
<i>Image 13</i>	<i>Mark's creation on the whiteboard</i>
<i>Image 14</i>	<i>Fairy doors</i>
<i>Image 15</i>	<i>Paint and fingers</i>
<i>Image 16</i>	<i>Paint and hands</i>
<i>Image 17</i>	<i>Paint and mouth</i>
<i>Image 18</i>	<i>Paint and arms</i>
<i>Image 19</i>	<i>Exploring junk materials</i>
<i>Image 20</i>	<i>Painting together (Michael and Hannah)</i>
<i>Image 21</i>	<i>Anna's moonscape</i>
<i>Image 23</i>	<i>The yellow table</i>

Diagrams

<i>Diagram 1</i>	<i>Legislative and policy structure of ECEC in Ireland</i>
<i>Diagram 2</i>	<i>Study summary</i>
<i>Diagram 3</i>	<i>Conceptual development of the study</i>
<i>Diagram 4</i>	<i>Components of the theoretical framework</i>

List of Abbreviations

ACECQA	<i>Australian Children's Education and Care Quality Authority</i>
CECDE	<i>Centre for Early Childhood Development and Education</i>
CPD	<i>Continuing Professional Development</i>
CPL	<i>Continuing Professional Learning</i>
DCEDIY	<i>Department of Children, Disability, Equality and Integration</i>
DCYA	<i>Department of Children and Youth Affairs</i>
DE	<i>Department of Education</i>
DEEWR	<i>Department of Education, Employment and Workplace Relations</i>
DES	<i>Department of Education and Skills</i>
ECEC	<i>Early Childhood Education and Care</i>
EYEI	<i>Early Years Education Inspections</i>
NCCA	<i>National Council for Curriculum and Assessment</i>
NVQ	<i>National Vocational Qualification</i>
QRF	<i>Quality Regulatory Framework</i>
QQI	<i>Quality and Qualifications Ireland</i>

List of Appendices

<i>Appendix A</i>	<i>Legislative and policy requirements (Ireland)</i>
<i>Appendix B</i>	<i>Learning record templates</i>
<i>Appendix C</i>	<i>Ethics approval</i>
<i>Appendix D</i>	<i>Participant information sheet/PLS educators</i>
<i>Appendix D.1</i>	<i>Information sheet/PLS parents</i>
<i>Appendix E</i>	<i>Consent form – Educators</i>
<i>Appendix E.1</i>	<i>Consent form - Parents</i>
<i>Appendix E.2</i>	<i>Assent form - Children</i>
<i>Appendix F</i>	<i>Seaview – Transcript of professional conversation – 20.5.2021</i>
<i>Appendix G</i>	<i>Seaview – Transcript of professional conversation – 12.11.2021</i>

Declaration

I, Marlene McCormack, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means).

This work has not previously been presented for an award at this, or any other, university.

A handwritten signature in black ink that reads "Marlene McCormack". The signature is written in a cursive style with a large initial 'M'.

Marlene McCormack

Table of Contents

Abstract.....	i
Acknowledgements.....	iii
List of Tables, Images and Diagrams.....	iv
List of Abbreviations	v
List of Appendices	vi
Declaration	vii
Table of Contents	viii
CHAPTER 1: Introduction	1
Introduction to Documentation	3
Problematizing Documentation	3
Policy Context for Documentation.....	4
Personal and Professional Context	9
Research Significance	12
Structure and Chapter Overviews	13
CHAPTER 2: Literature Review.....	15
Documentation and Pedagogical Documentation	16
From Observation to Documentation	20

Perspectives, Practices and Tensions in Pedagogical Documentation	23
Pedagogical Documentation as Providing Accountability.	25
Pedagogical Documentation as Making Learning Visible.	28
Pedagogical Documentation as Assessing Learning.....	33
The relationship between assessment and documentation.	38
Pedagogical Documentation as Supporting Parental Engagement	40
Strategies in sharing documentation.	41
Positioning of parents within the documentation process.....	45
Pedagogical Documentation as Supporting Professional Practice	47
Challenges in enacting documentation.	48
Challenges in using documentation collaboratively.....	51
Pedagogical Documentation as Democratic Practice	53
Pedagogical Documentation as Intra-Active Pedagogy	58
Pedagogical Documentation as a Material-Discursive Apparatus.....	62
Concluding Remarks.....	66
CHAPTER 3: Conceptual Framework or Thinking with Theory	70
The Influence of Experience on the Conceptual Framework.....	76
The Influence of Literature on the Conceptual Framework	77
The Influence of Theory on the Conceptual Framework	79

Posthumanism.....	81
Putting posthumanism to work.....	85
Agential Realism.....	89
Ontoepistemology.....	92
Putting agential realism to work.....	95
New Materialism/Materiality.....	97
Concluding Remarks.....	99
CHAPTER 4: Methodology.....	101
A Post Qualitative Methodology.....	101
Troubling qualitative and post qualitative methodologies.....	103
Research participants - pen portraits.....	107
Study design.....	111
Intra-view as method.....	112
Troubling the interview.....	112
The intra-view.....	114
Troubling data in post qualitative methodologies.....	115
Troubling data analysis.....	120
Diffractive analysis.....	121
Thinking with theory.....	123

Sticky stories	124
Validity and Reliability	126
Ethics	127
Concluding Remarks	130
CHAPTER 5:	133
Story 1 – Documentation and curriculum as performative agents	133
Agential Realism, intra-action, agency and performativity	134
Story of photosynthesis	136
Stories and colours of autumn in the curriculum	138
The journey of Documentation	139
The entanglements of curriculum	141
Intra-active pedagogy	145
Under the microscope	149
Curly roots and the kindness of trees.....	152
Changing the relationship.....	152
Concluding Remarks.....	156
CHAPTER 6:	160
Story 2: The whiteboard, the posthuman child and time.....	160
Diffracting the posthuman child	163

Mark a posthuman child	164
A new materialist lens	167
Spacetime mattering	170
Rethinking pedagogical time - The case for slow pedagogy	174
Concluding Remarks	178
CHAPTER 7:	180
Story 3 –Entanglements with paint: a diffractive analysis	180
Background.....	181
Entanglements	186
Emerging communications and connections	187
Expanding perspectives on special needs?	190
Reading the encounter through a posthuman lens	192
Reading the encounter through a new materialist lens	193
Documentation: A diffractive reading.....	195
Concluding Remarks	197
CHAPTER 8:	202
Story 4 – Reading affect and care diffractively through documentation.....	202
Diffracting stories	203
Materialising care through the camera	212

Care beyond the preschool	214
Materialising care through a table	216
Concluding Remarks.....	221
CHAPTER 9: Concluding.....	225
Summary of findings and implications for practice	227
Performativity and mattering of documentation.....	227
Re-thinking curriculum	229
A pedagogy of materiality	230
Learning as relational	232
Reconfiguring identities and positionings	233
Re-framing time in ECEC.....	235
Re-positioning care and affect in ECEC.....	236
Re-focusing lenses on theories/methodologies of the post	237
Tensions in using ‘post’ theory/methodology	240
Limitations or considerations.....	244
Language and concepts.	244
Covid-19.....	246
Contribution and future directions	247
Concluding Remarks.....	250

References	253
Appendices	314

CHAPTER 1: Introduction

My enquiry explores pedagogical documentation through a series of intra-views with educators in two Early Childhood Education and Care (ECEC) settings in the suburbs of Dublin. The aim of the study is to think differently about documentation, to evidence its performativity and to illustrate its potential as a material-discursive practice.

To realise these aims, the study is positioned within a posthuman frame, underpinned by new materialism (Lenz Taguchi, 2010) and influenced by the agential realism of Karen Barad (2007), all of which are explored in greater depth within the study. These theoretical leanings set out to disrupt concepts of the primacy of humans (Ferrando, 2020) and to acknowledge the vibrancy or liveliness (Bennett, 2010) of material as non-human matter. The study will draw Barad's (2007) thinking on the distributed nature of agency across the human (educator) and non-human (documentation) world, which has relevance for this research. Thus, the study will argue that documentation, as non-human matter, matters.

My theoretical approach to the study has influenced the choice of methodology or perhaps the methodology has reached out to me, and so the research draws on a post qualitative approach (St. Pierre, 2014), which puts theory to work plugging it into the data (Jackson and Mazzei, 2012) as a process of analysis. The concept of plugging in allows connections emerge within the study as I read the data and think with the theory.

I am interested in what new knowledge or insights emerge in the intra-action of educators and documentation. Coming to the research question has not been straightforward, rather it has been a messy (Lather, 2013, p.642) process. In framing the study, I wanted to go beneath the surface, to gain some understandings of what documentation does in Early

Childhood Education and Care (ECEC) or what are its effects. These were valid lines of enquiry but in engaging with the thinking of Lenz Taguchi (2010) and Barad (2007), I realised that as a starting point I needed to explore my own epistemological/ontological beliefs and to come to recognise the entangled nature of everything as proposed by posthuman and new materialist thinkers. I recognise that in undertaking the study, I too am an integral and constitutive part of the entanglement as I work to make sense of the theoretical/philosophical concepts.

Barad (2007) proposes that theorising is generated through material-discursive encounters, and so my engagement with books and journals, pens, highlighters and notes, which materialises questionings and learnings (Romano, 2023), seem to be an important part of the research process. Hence through this study my thinking/reading, learnings and wonderings are interlaced and exposed. Consequently, the research question emerged, ‘what new knowledge and insights are generated in the intra-action between educators and documentation?’. Recognising the significance of my own learning journey through this study, a secondary research question asks ‘what are the effects of putting post qualitative methodologies and theories to work in early childhood research?’. An intentional feature of this thesis is the inclusion and exposure in each chapter of sense-making as I go. It seems important to trace developments over time as Barad (2007) suggests that the past is never closed off, it is entangled with the present. In other words, my thesis and thinking in the present cannot be separated from previous understandings and what has gone before.

Introduction to Documentation

Documentation, which forms the core and catalyst for this study, is an established pedagogical practice in early childhood. It is complex in its generation and effect.

Chameleon-like documentation is context and lens dependent, appearing differently as though looking through a kaleidoscope.

Documentation is understood within this study as performative material and non-human matter (Lenz Taguchi, 2010), which includes photographs, video, and audio recordings; narratives and displays (Clark & Moss, 2011). Documentation in early childhood can be conceptualised along a continuum, from basic operational record keeping, which is a legislative requirement in many jurisdictions, to pedagogical meaning making in practice, which focuses on children's learning. Documentation becomes pedagogical in what it does, not what it is, in its analysis (Fleet, 2017), as it informs curriculum and enables children's learning emerge or become visible (Rinaldi, 2006). While documentation is a common practice internationally, it takes many forms and serves multiple purposes depending on the curriculum of the setting and the broader national policies under which it operates.

Problematising Documentation

Research and policy position pedagogical documentation as a critical issue because of its potential to respond to multiple emerging agendas. As research indicates, documentation can be considered as a means of making children's learning visible (Rinaldi, 2006), but also as a way of assessing learning (Basford & Bath, 2014); as a mechanism of accountability (Emilson & Pramling Samuelsson 2014), and as a way of engaging parents (Karila & Alasuutari, 2012; Rintakorpi, et al., 2014). The very flexibility that renders documentation as

adaptable and powerful, also leaves it vulnerable and trapped by the sometimes-competing demands of policy and practice (Basford & Bath, 2014, p.28). Documenting in early childhood is not without its challenges. These challenges frequently appear for educators when policy changes in curriculum are enacted and sometimes with little consultation (Löfgren, 2017). In these cases, documentation becomes a tool to satisfy external agendas, sometimes at the expense of local practices, where educators struggle to reconcile competing demands. At the local level, documenting can be an enriching experience for educators, children, and families, but it can also be a burden or a mundane tick-box exercise. So, while the discourse is strong, tensions surrounding documentation exist and frequently remain unchallenged and unexamined (Alvestad & Sheridan, 2015).

Documentation may appear at first glance to be a saturated field of scholarship, but there has been little consideration of how it can effect or transform practice (Rintakorpi & Reumano, 2016; Alasuutari & Kelle, 2015).

Consequently, this study is important in that it explores the performativity of documentation when data is plugged into and read through a series of theoretical lenses, generating new insights and understandings of children, of learning and of the relationships between human/non-human matter. Documentation is not generated within a vacuum, and it is entangled within an historical and political context.

Policy Context for Documentation

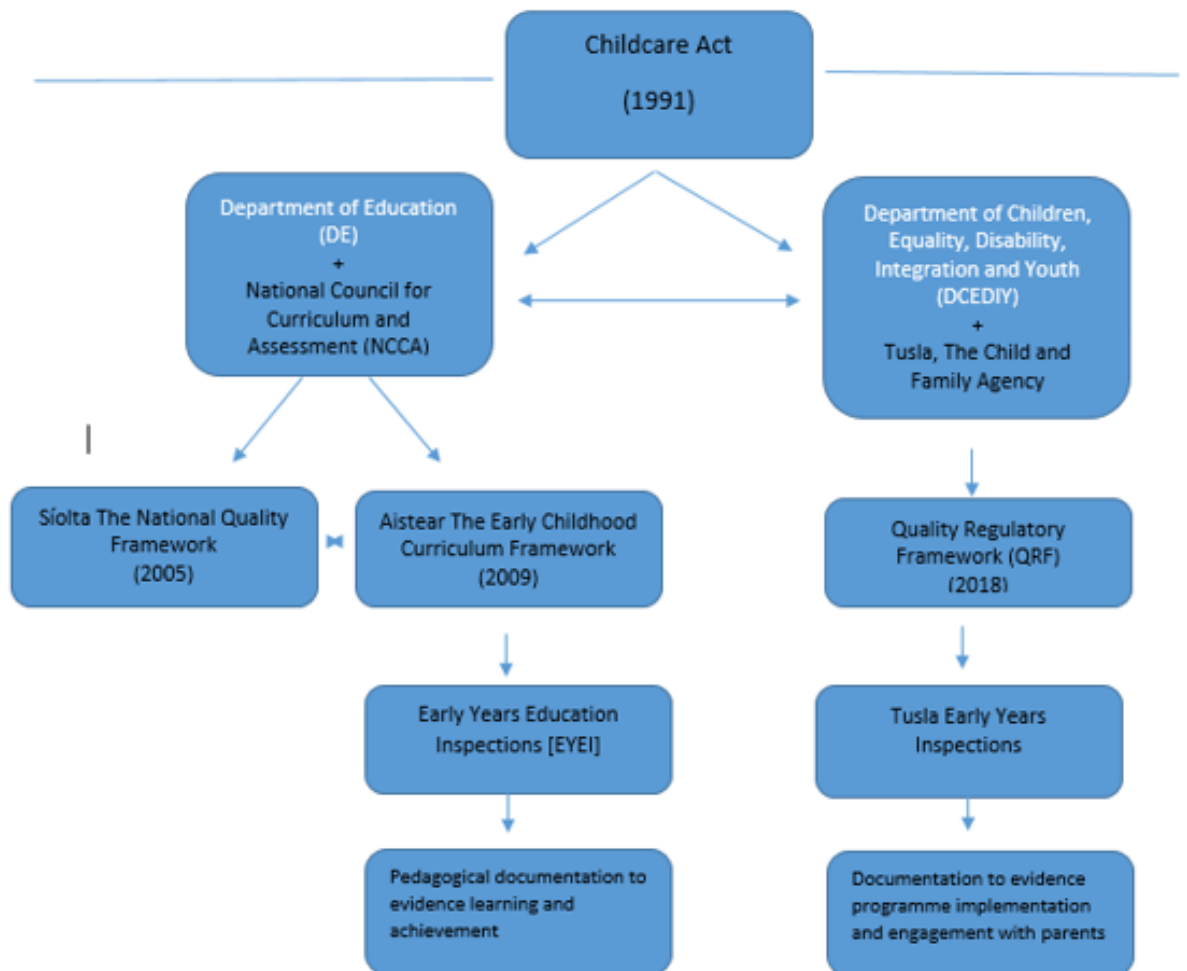
The policy context for early childhood education in Ireland is both busy and relevant in considering the requirements of and for documentation. The argument is made that policy influences practice (Ball, 1993) and so the political and legislative context of ECEC in

Ireland directly and indirectly shapes documentation requirements and practices. While documentation requirements that relate to the operation of ECEC settings is well embedded in legislation, the regulatory gaze (Osgood, 2006) from an educational perspective has been light touch. This situation is in no small measure due to developments in the field over the past two decades, namely, increased investment by Government year-on-year and, significantly, the structure and evolving governance of the early childhood sector.

The context of ECEC in Ireland is that it operates under a key piece of legislation, the Child Care Act (1991), and is organised within a split system model whereby responsibility for the care and education of young children is divided and governed by two different departments or ministries (Kaga et al., 2010). This development has been criticised (Bennett, 2006; Hayes, 2008; OECD, 2004; Urban, 2021) as it reflects among other things a deeper issue which juxtaposes the needs of parents for childcare and the rights of children to early education. Consequently, the early childhood system in Ireland has remained “fractured across the welfare (childcare) and educational domains” (Hayes, 2008, p.33) and as suggested by Hayes (2010, p.67), “the quality of early years’ services is more likely to be compromised where there is limited consideration given to children’s needs and rights and where care and education are viewed as separate issues”. Within the split system, two separate Government Departments have responsibility for policy enactment, administration, and inspection of the sector, namely, the Department of Children, Disability, Equality and Integration [DCEDIY] (formerly Department of Children and Youth Affairs [DCYA]) and the Department of Education (formerly Department of Education & Skills [DES]) (Diagram 1). Both Departments, DCEDIY and DE have an inspection role in respect of documentation.

Diagram 1:

Legislative and policy structure of ECEC in Ireland



The Department of Children, Equality, Disability, Integration and Youth (DCEDIY) and its allied agency Tusla (The Child and Family Agency), are concerned with all aspects of child protection and the healthy, safe delivery of ECEC services. The requirements and operation of settings are prescribed within the Quality Regulatory Framework [QRF] (Tusla,

2018) and monitored through the Tusla inspection process. While the inspection process requires completion of considerable paperwork by the setting, the focus of this documentation is firmly on health, safety, premises, governance and the evidenced implementation of policies and procedures (Tusla, 2018). Within the QRF, which operationalises the Child Care Act (1991), there is a requirement for settings to conduct ongoing “observations to create a complete well-rounded picture of each individual child”, and to ensure they are shared with parents (Tusla, 2018, p.42). The emphasis on observations within this regulatory framework is as a means of evidencing a preschool programme and communication with parents.

In parallel with the DCDEI, the Department of Education (DE) (formerly Department of Education & Skills [DES]) is responsible for the pedagogical workings of early childhood. Two key policies lie at the heart of this work, Síolta the National Quality Framework for Early Childhood Education (Centre for Early Childhood Development and Education [CECDE], 2006) and Aistear, the Early Childhood Curriculum Framework (National Council for Curriculum and Assessment [NCCA], 2009). Both frameworks guide pedagogy and value documentation as it relates to children’s learning. In 2015, the DES established a system of Early Years Education Inspections (EYEI), which for the first time began to examine the educative elements of provision in ECEC settings across 4 main areas, namely, environment/context; pedagogical processes; children’s learning experiences and achievements, and management and leadership for learning (DES, 2018). Educators are now required to document children’s learning, development, and achievements with regard to their individual interests, needs, approaches, and cultural backgrounds (DES, 2018). An emerging consequence of the DES/DE requirements is that through the inspection process considerable

influence is exerted on the nature and purpose of documentation practices in ECEC settings. In short, the requirements of policy and inspection regimes (Appendix A) shape pedagogical practices on the ground.

It is evident that, in a fast-developing policy environment where sectoral infrastructure is being developed, pedagogical documentation has not been a primary focus for Government or Department officials. The advent of a national Early Childhood Curriculum (Aistear) (NCCA, 2009), a National Quality Framework (Síolta) (CECDE, 2005) and, more recently, the Early Years Education Inspection regime, begin to conceptualise documentation within policy and practice as a means of accountability and as a mechanism for planning and assessment. The ECEC system in Ireland is a work in progress (Urban et al., 2017) and one that attracts much criticism in terms of its structure and funding (Urban, 2019). This has consequences for pedagogical practices (Urban, et al., 2011).

However, in spite of the late development of the sector and considering the current shortfalls within the Irish early childhood education system, there appears to be a silver lining. Ball (1993, p.12) suggests that “policies do not normally tell you what do; they create circumstances in which the range of options available in deciding what to do are narrowed or changed, or particular goals or outcomes are set”. This holds true within the Irish context where a framework approach, adopted by the Government across the range of early childhood policies, has resulted in a non-prescriptive system which facilitates localised practices in general and more specifically diverse ways of documenting children’s learning. It appears as though the benign neglect of, or open approach to, pedagogical documentation in early childhood has created a space to consider its role and value base within the educational

system at this time of change. The opportunity now presents itself, within this study, to examine the many ways in which pedagogical documentation is enacted and understood.

Personal and Professional Context

I have come to this study strongly influenced by my personal and professional context. As the Placement Coordinator on an early childhood undergraduate programme over several years, I became increasingly interested in the area of pedagogical documentation. Visiting students on placement, I was aware of the time, effort, and energies that educators put into children's documentation, but also of the challenges involved. A number of years ago I visited a setting in June after the children had left. Tables were strewn with open scrap books or journals; there were markers, Pritt sticks and hundreds of photos on a central table and there was a sense of manic activity as educators checked in with one another, 'have you a photo of Robert at the zoo?', in an effort to have a memory of a particular event included in each child's booklet. I wondered about the purpose of the documentation and the glossy, smiley photos. Would the children recognise their own books and what might they think about the depictions? What benefit were the books to the parents beyond the joy of seeing their own child and how could this time be justified by the educators as they stayed late into the evening to bring the school year to a successful close. Above all, I wondered about the stories behind some of the photos, what the images might be saying or suggesting about the children. I felt the powerlessness of the documentation, when treated merely as collated information. These wonderings related to more than one setting, this was more than a one-off experience. Talking to managers and staff over time, I understood that they felt a pressure

to complete documentation, not primarily as a way of exploring or sharing children's learning but often as a means of proving value to the parents, justifying the fees they paid, and preparing evidence for inspections.

It is these wonderings that led me to this point in relation to documentation practices in the sector and inform my motivations. However, it was another experience that drew me to a posthuman, post qualitative frame. My epiphany moment occurred as I watched a film, 'The Matrix', over twenty years ago. It is a popular cyber story of mankind imprisoned within a virtual world created by artificial intelligence. In watching the film, I came to the realisation that there are many ways to see and understand the world. I began to see that my natural default position in life was to accept and not question what was in front of me.

These two moments, the chaos of the early childhood educators completing documentation books and the questioning of taken-for-granted realities, have indirectly led me to this point and have influenced this study. The Matrix experience has brought me to a space which calls into question my ontology and epistemology. What do I understand as reality? Do I see documentation as agentive non-human material? Does knowledge exist, waiting to be discovered; is it co-constructed or does it emerge only through intra-action? These questions highlight how my 'values, biases and world views' (Cohen et al., 2011, p.225) are active within the study. From a practice perspective, I know the educators who have engaged with the study. I work closely with them and am with them in heart. I identify with them. I am, in Barad's (2007) words, entangled with them and as St. Pierre (1997, p.178) suggests, I am both "identity and difference, self and other, knower and known, researcher and researched".

My challenges within this study are many: to fully understand the concepts and language of the paradigm I have chosen for the research but, more importantly to use theory to think with the data (Jackson & Mazzei, 2012, p. vii), and to apply a diffractive lens in listening to the data (Murriss, 2016). I see this study as a work in progress, as a “building site” (Braidotti, 1991, p.2) with multiple elements that offer infinite possibilities in shaping the final outcome of the project. I also conceptualise my research journey as a web of connections (Image 1), which at one level appear chaotic and meandering but which also suggest freedom and an openness to changing direction.

Image 1:

Confused pathways



(Pollock, 1949)

The ideas in this post qualitative study have, as with Iris Duhn (2020), touched me, while at the same time they cause me many “moments of bafflement” (Spivak, 1993, p.248).

I am comforted by Lather (1996, p.528) who suggests that “reading without understanding is required if we are to go beyond the imaginary”, and that not being able to understand is an ethical imperative. Barad (2007, p.233) writes that her understandings of the world are written into her bones and consequently my ontological/epistemological positionings within the study are explored, along with my evolving understandings of documentation, in an effort to integrate new insights into my very core. What I bring to the study intra-acts with the documentation, the educators, the wider setting and is mediated by the Irish policy context.

Research Significance

Responding to the research questions is a work in progress and represents “slow scholarship” which Osgood (2020, p.53) suggests is about deeply immersing yourself in new concepts, theories, and philosophies. This study is busy and ambitious, in that it attempts to map my growing understanding of philosophy and put theory to work with the purpose of seeing documentation differently. However, as Osgood (2020, p.47) suggests, “research and writing is not about having answers but is rather about becoming open to questioning and making connections that we may not have considered or noticed before”.

The study will, contribute to a growing body of scholarship that uses new post-qualitative methodologies and posthuman/new materialist theories to explore documentation differently in order to generate new knowledge or understandings of this practice which is central to early childhood pedagogy. It also aims to prompt new insights through a series of exemplars which will emerge when theory is put to work and documentation is viewed through a range of philosophical/theoretical/methodological lenses. This research approach

endeavours to minimise the theory/practice divide, highlighting the need for a strong and diverse theoretical base in early childhood education. Adopting this approach to the research will also allow me to experiment with a post qualitative methodology. The charge could be made that in seeking to understand and make ‘post’ (posthumanism, post-qualitative, new materialism) theories relevant, I have inadvertently diminished or negated their complexities, but I am working in this study to write about what troubles me (Nxumalo, 2020) or intrigues me. Many of those working with ‘post’ theories or methodologies urge novice researchers to use emerging concepts (Malone, 2020) and lines of inquiry (Myers, 2020), to stay with difficult writing (Duhn, 2020), which is what I am attempting as I bring my own experiences, ontology, and epistemology to the study.

Structure and Chapter Overviews

This study is presented in nine chapters. Chapter 1 has set the scene, outlining and providing a rationale and a policy context for the study. Chapter 2 explores the body of literature to understand the practices and tensions of documenting pedagogically. The chapter frames ‘documentation as’ to signify the complex and multi-faceted ways of seeing how documentation is positioned by a broad range of actors, but it also considers what ‘documentation does’. Chapter 3 maps out the conceptual framework for this dissertation, which examines the influence of experience, literature, and theory on the work. Strong influences are evident from Ferrando (2020) (Posthumanism); Coole and Frost (2010) (New Materialism), Barad (2007) (Agential Realism) and Lenz Taguchi (2010) (Intra-action). Chapter 4 focuses on ‘Putting Theory to Work’ to examine in detail the methodology,

ontological/epistemological beliefs that inform the study. Chapters 5, 6, 7 and 8 plug the data in the form of four sticky stories (Moxnes & Osgood, 2018) into differing elements of Barad's agential realism theories. When plugged into the theory, new insights emerge from and through the documentation which have implications for pedagogical practices in early childhood education. Chapter 9 draws the dissertation to a close, identifying the learning, limitations and recommendations of the study and signposting future research directions.

CHAPTER 2: Literature Review

Underpinned by a posthuman, agential realist and new materialist framework and drawing on a post qualitative methodology, this thesis sets out to respond to the primary research question ‘what new knowledge and insights are generated in the intra-action between educators and documentation’? The aim of the study is to think differently about documentation, to evidence its performativity and to illustrate its potential as a powerful intra-active pedagogical practice. To recognise the new knowledge that emerges through the intra-connections is to look wider than documentation and educators. Documentation occurs within a shifting landscape of policy (e.g., accountability), practices (e.g., assessment) and human/non-human relations (e.g., parents, children, educators, videos, pens, journals). The broad base of current literature analysed within this chapter offers a contextual snapshot of how documentation is understood and put to work.

Consequently, this chapter aims to map out what documentation is and what it does, critically reviewing the relevant literature to gain a thorough understanding of documentation and its enactment from multiple perspectives, which will inform the post qualitative research design. Material for inclusion in this chapter has been identified through a search process that draws on peer-reviewed journal articles over the last two decades and recent publications from across the globe. Irish research on the topic is not evident either through journals, publications or theses search engines.

Through the literature, this chapter will build the argument that documentation has agency and is performative in how it is positioned, used, and understood by a range of audiences. This review highlights the complexities and challenges of enacting or doing

documentation, thus making a strong case for its importance within the Irish context, where little is known but possibilities exist to influence future practices within a developing pedagogical system.

My analysis of the literature firstly untangles current research offerings, signposting what documentation is/as, how it is used and who it is for, framing it as a form of accountability, as a means of making learning visible but also of assessing it, as a mechanism to support parental engagement, and as a focus to transform professional practice. The second part of the analysis shifts its gaze to the ‘doings and becomings’ of documentation, reviewed through the lens of posthumanism and new materialism and focusing on documentation as democratic practice, as intra-active pedagogy and as a material-discursive practice.

Documentation and Pedagogical Documentation

The focus of this thesis and literature review is on documentation, an umbrella term that includes pedagogical documentation. Both terms are used interchangeably within the literature and within this study, but the words have different connotations and origins within the landscape of documentation. The language of documentation varies in how it is understood but meaning matters because “power is exercised through language in ways which are not always obvious” (Talbot, et al., 2003, p.5). It is therefore critical at the outset of the study to be explicit in the terminology used.

Documentation or documenting in ECEC can mean reporting (e.g., an audit or summative report of a child’s progress), record-keeping (e.g., details of nappy changing or sleep patterns), or recording (e.g., capturing events such as the Christmas party or summer outing). Documentation can refer to a wall display of photos, or an individual portfolio,

journal or scrap book, though these forms are typically considered as being basic or superficial (Fleet, 2017). Katz and Chard (1996, p.2) develop the concept of documentation further by suggesting that it “typically includes samples of a child’s work at several different stages of completion: photographs showing work in progress; comments written by the teacher or other adults working with the children; transcriptions of children’s discussions, comments, and explanations of intentions about the activity; and comments made by parents”. This understanding of documentation is endorsed by Mac Naughton and Williams (2008, p.296), who understand it “as a teaching technique related to gathering and organising information to provide a written or pictorial record of children’s learning”. Positioning documentation as a teaching technique suggests that it is an individual activity, where the balance of power and decision-making processes lie with the educator or teacher. Consequently, these perspectives on documentation highlight a sense of individualism or separateness, with the teacher, child, and parents all potentially positioned as discrete subjects making separate and unconnected contributions to the overall project.

In contrast, pedagogical documentation is a term first used by Dahlberg et al. (1999, p.144) to describe the “practice reflection and democracy in relation to young children’s learning in the Reggio project”. Situated in the Tuscan north of Italy, the region of Emilia-Romagna is home to the world-renowned Reggio project. The project has developed a distinct philosophy, set of principles, ideals, and practices (Edwards et al., 1998) in working with young children, families, and communities and has come to influence and inform pedagogical documentation thinking across the globe. The philosophy of Reggio Emilia emerged in a post-World War II context, with the local community recognising that a future democratic society (Felstiner et al., 2006) could only be realised through education for all

children from birth, thus echoing Dewey's (1916) belief that education is the midwife of democracy. Those who had lived through the war in Reggio Emilia sought a different type of education for their children. Founded and led by Loris Malaguzzi (1920-1994), the Reggio approach supports children rights (Spaggiari, 1998), seeing children as critical thinkers and as competent actors (Rinaldi, 2006). A central tenet and practice of education that is core to the Reggio philosophy is that of documentation. Reggio has pioneered thinking and practice in relation to documentation, understanding it not as reports, observations, collections, or portfolios, but as a process of "reciprocal learning" or "reasoned interpretation" (Rinaldi, 2006, p.57). In short, Reggio foregrounds documentation as way of children and adults learning together, rendering the learning visible and thus opening it to "reflection, dialogue, interpretation and critique" (Moss, 2019, p.85). Building on and disseminating these beliefs and approaches to pedagogical documentation over eight decades, Reggio has influenced and continues to influence thinking and practice globally and hence is a pertinent starting point in this review. However, it must be recognised that documentation is value-laden, emerging out of distinct ontological, epistemological, and political contexts. So, while Reggio Emilia has been to the fore in the pioneering of pedagogical documentation, it has over time developed across many countries in different forms and is accepted as a well-established practice in early childhood education.

Various terms are currently used and understood across the globe in relation to pedagogical documentation (Bejervås & Rosendahl, 2017), namely educational documentation (Rinaldi, 2006) and pedagogical narration (Berger, 2013). Arthur et al. (2015, p.258) bring documentation to the next step and suggest that "pedagogical documentation provides a record of children's experiences and learning that facilitates

discussion among children, families, and educators and analysis of children's learning from diverse perspectives". Drawing on the Reggio principles, pedagogical documentation can be understood as collaborative inquiry, which is a "way of working that encapsulates teachers and children as co-researchers" (Fleet et al., 2017, p.1). Oliveira Formosinho and de Sousa (2019, p.44) see pedagogic documentation as the memory and traces of the "lived experiential learning", which happens to take the form of narrative. This understanding of documentation sees it representing children's embedded learning, and like Carr (2001) it also values narrative as a means of following and tracking children's emergent plots and stories. Hoyuelos (2004, p.7) attributes to Malaguzzi the suggestion that pedagogical documentation quite simply offers the possibility to "discuss everything with everyone" (teachers, children, parents, and other professionals) and always aims to explain and make meaning (Cadwell, 2003; Wong, 2006). Framed in these terms, pedagogical documentation seems to be a simple idea, but "its application, is anything but simple" (Dalhberg & Moss, 2010, p.xiii). At its heart, pedagogical documentation can be considered in terms of content and process.

The content of pedagogical documentation and documentation is similar in that it is the matter or material which captures ideas, thoughts, and language, concretising the work in ECEC (Dahlberg, et al., 1999). There are many wide-ranging forms of documentation within the educator's tool kit: observations, portfolios, Learning Stories, individual development plans, and standardised documents or formats. These can all be considered as multi-documentation (Alasuutari, 2010, p.42), which draws on a mosaic of methods (Clark & Moss, 2011): narratives, videos, sound recordings, and photographs.

The core content of documentation and pedagogical documentation is common, but it is the enactment and processes of using the material that differentiates both approaches. As

a process, pedagogical documentation signifies the use of the material for “reflection, dialogue, interpretation, and critique” (Moss, 2019, p.85). Ultimately, it is the use of the material that differentiates pedagogical documentation from documentation, that is, pedagogical documentation offers the opportunity for children and adults alike to re-listen, re-see, re-visit, and re-cognise the events or experiences that have taken place (Rinaldi, 2006 p.58). It is through the process of doing and reflecting that, “the documentation itself becomes the 'stuff' of understanding—ideas, theories, hypotheses, feelings, deductions, and intuitions...” (Rinaldi 2001, p.87). In terms of process, pedagogical documentation can also be defined or considered as an attitude towards teaching and learning, as a mental habit and way of being or thinking (Picchio, et al., 2014; Sharmahd & Peeters, 2019). So, while pedagogical documentation relates to the practices and processes of working with children, it is deeply embedded in the beliefs, values and mind-set that motivates the educator to pursue this path of inquiry.

From Observation to Documentation

The move from documenting to documenting pedagogically reflects more than a change in terminology or practice, it signals an epistemological shift in how knowledge and knowing is understood and this differentiation is important for this study. In practical terms, the epistemological shift sees a move from the adult recording what is considered to be important and valuable in terms of children’s development and learning, to listening to children, supporting them to make their thinking visible (Rinaldi, 2006), and using this as a starting point for documenting and other pedagogical practices.

Observation is a core and well-established tool of documenting. From an epistemological standpoint, observation emerges from a tradition of developmental psychology that sees the adult observing and assessing the child against milestones or against “a general schema of developmental levels and stages” (Dahlberg et al., 1999, p.146). Consequently, observing and documenting in this way, which is located within a modernist perspective, assumes that an objective, external and standardised truth exists about a child’s development which can be accurately recorded. In contrast, pedagogical documentation is about trying to make sense or meaning of what is seen in context and what is happening in terms of children’s thinking and teacher’s practice. It adopts a postmodern perspective that assumes there is no single truth or way of observing and documenting children’s learning. Rather, the process of documenting pedagogically is permeated with doubt and uncertainty (Rinaldi, 2006, p.70), as adults endeavour to understand children’s thinking and meaning, which is co-constructed in the relationships between teachers/adults and children.

Pedagogical documentation has distinct historical roots and has evolved within changing paradigms. There is a long tradition in early childhood education of documenting or capturing information that is important in terms of children’s learning and practice (Emilson & Pramling Samuelsson, 2014). Bartholomew and Bruce (1993) highlight that debates in relation to record-keeping and documentation are not new. A tradition of Baby Biographies in the 18th century (Pestalozzi and Darwin as cited in Irwin and Bushnell, 1980), acted as a precursor to pedagogical documentation and established naturalistic observation as a valued practice. Baby Biographies gave way to the Child Study movement (Piaget & Inhelder, 1969; Navarra, 1955) that focused on tracing children’s development over time based on specific developmental domains. In both these traditions, objective observation remained a

hallmark of work with young children (Broadhead, 2006) and was underpinned by developmental psychology. Informed by observations, teachers aimed to identify the developmental level of children and use this information effectively to provide practical activities and curriculum guidance (Johansson, 2007).

A significant shift occurred early in the 20th century as Athey (1990, p. 30) and others began to question the “one-way transmission of information” within these genres of documenting. Bennett and Kell (1989) highlighted that while teachers/educators were concerned with assessing the products or outcomes of children’s work, they rarely considered the learning processes used by children. Adults were positioned as the expert and objective observers, while children’s voices were absent (Darbyshire et al., 2005) and their participation in observation or research was negligible. The positioning of adults and children within the observational process has begun to change and, in more recent times, children’s participation in documentation has become well established from a theoretical, methodological, and rights-based approach (Clark, 2005; Michaels, 2003).

More recently, influenced by the work in Reggio Emilia, pedagogical documentation is emerging as a collaborative endeavour or process. This development, in viewing pedagogical documentation from a socio-cultural perspective, is significant as it establishes understandings of learning as a collaborative process and repositions the teacher from one who transmits knowledge to one who co-constructs meanings with others (Freire, 1970).

These changing perspectives reflect significant practical and theoretical shifts in the framing of documentation over time. The language has altered from documentation to pedagogical documentation and the paradigm has changed from a modern to a post-modern

and socio-cultural perspective, where the fundamental positioning and power of adults and children within the documentation process have transformed. While these changes and new understandings have been happening at a theoretical level, the daily practices of enacting documentation within early childhood education and care are not without challenges and tensions.

Perspectives, Practices and Tensions in Pedagogical Documentation

There are multiple perspectives on documentation and its role in pedagogical practice. The audience or participants include children, educators, parents, communities, and policy makers, all of whom have differing requirements and exercise influence within the documentation process, shaping its enactment. The literature is clear that, in practice, pedagogical documentation is complex to enact and is required to serve multiple agendas and masters, depending on the policy context, the setting's ethos, and the educator's goals. Edwards et al. (1993, p.249) contend that, "if done properly, good documentation can serve all masters simultaneously, from individual assessment to curriculum planning to instructional accountability". However, there is also a cautionary note in that, "there is a risk in attempting to have educational [pedagogical] documentation serve multiple functions" (Harcourt & Jones, 2016, p.83) as it can potentially lead to a reductionist approach in an effort to serve all masters at once. Both competing, broad ideas suggest that the purpose of an audience for pedagogical documentation is a contentious issue and one that will re-appear throughout this study.

An alternative perspective suggests that documentation is neither neutral or inert, rather it is performative in that it influences and shapes perceptions of children's learning and practice within the setting. These dual perceptions of documentation, on one hand as being a focal point for a wide audience of human actors who see its value in satisfying multiple agendas, and, on the other hand, as being powerful, non-human matter, in how it reflects and provokes reactions, offering possibilities to see things differently and generating new insights to learning and practice, are recurring themes within the body of literature.

It is generally acknowledged that policy sets the overarching framework for documentation, that, at a local level, practices are enacted, and meanings are ascribed to pedagogical documentation, and that documentation is located within particular sets of epistemological beliefs concerning the nature of learning and ontological understandings of children (Formosino & Pascal, 2016). Given these taken-for-granted assumptions, but understanding that multiple perspectives exist, it is important to trouble embedded practices (Dahlberg et al., 1999) and to problematise pedagogical documentation. The argument is made within this chapter and study, that documentation is performative and when viewed through multiple lenses it diffracts, like light through a prism, emerging "as" a something else and as a doing.

Several cross-cutting perspectives emerge from the literature that frame the ways in which documentation is positioned and understood. Within this chapter pedagogical documentation is interrogated as providing accountability, as making learning visible, as assessing learning and giving voice to children, as engaging with parents, and as supporting professional practice. The literature on documentation is also examined through a lens of posthumanism/new materialism, which understands it as democratic practice, as intra-active

pedagogy and a material-discursive apparatus. Together, these multiple stand points will unravel the processes, power, and tensions in documentation, offering deeper insights to its enactment, which will inform this study.

Pedagogical Documentation as Providing Accountability.

Documentation has become a key issue for policy and practice in many countries (Liljestrand & Hammarberg, 2017; Valberg Roth, 2012; Basford & Bath, 2014), and is inextricably linked with quality and accountability. The subject of quality in ECEC has long been at the heart of a global debate and continues to be high on national agendas (Moss, 2019). The benefits of quality early childhood education and care are well established in literature (Melhuish et al., 2010), but understandings of quality are problematic as it is a highly contested concept (Picchio et. al., 2014), with many critics highlighting that concepts of quality emerge from “narrow research paradigms and perspectives” (Fenech, 2011, p.108). Nonetheless, quality in policy, practice, and provision is sought by governments in response to research that affirms that quality is vital in ECEC (Sylva et al., 2004), that the need for quality is corroborated by neuroscience evidence (Shonkoff & Phillips, 2000), and that quality ultimately provides the possibility for a return on public investment (Heckman, 2011). Because of this growing evidence base, there has been increased interest and investment in ECEC (Lloyd & Penn, 2012), along with a corresponding demand for accountability. While this movement is driven at a global level, it has implications at a national or local level (OECD, 2011). There are many mechanisms for monitoring accountability in ECEC but one that is emerging across jurisdictions is that of pedagogical documentation, which has become “a way for governments to exercise direct control over the practitioners working with young

children” (Basford & Bath, 2014, p. 199), as a means of controlling the curriculum, as a way of driving academic progress (Hatch & Grieshaber, 2002), or as an approach to driving a culture of school performativity (Roberts-Holmes, 2015). In being part of an agenda for accountability, the practice of pedagogical documentation changes and shifts from a means of democratising practice or making children’s learning visible to a means of external monitoring and control (Kalliala & Pramling Samuelsson, 2014).

Pedagogical and documentation practices in the global context are “increasingly bounded” by regulatory requirements (Dahlberg & Moss, 2005, p.9), which ultimately impact on educator’s professionalism. Changing requirements in Swedish policy for example, have seen an “injection of competition, marketisation and managerialism in the national education system” (Löfgren, 2015, p.639), which has left ECEC educators “uncertain about their work with documentation and how to meet demands of accountability” (Löfgren, 2017, p.138). Increasing external emphasis on the need for systematic documentation of educational activities in preschool (Folke Fichtelius, 2013) positions educators in a tug of war situation, compelling them to balance policy demands from above with internal professional approaches.

Similarly, in Australia the introduction of an Early Years Learning Framework (Department of Education, Employment and Workplace Relations [DEEWR], 2009) and the National Quality Framework and Standards (Australian Children’s Education and Care Quality Authority [ACECQA], 2012) has created uncertainty in relation to documentation requirements (Harcourt and Jones, 2016), confusion in relation to the roles of educators/teachers (Leggett & Ford, 2013), and has left educators wondering about “how much, when and who is it for” (Robertson & Shepherd, 2017, p.3), ultimately positioning

documentation as an administrative burden (Harcourt & Jones, 2016). The introduction of a statutory curriculum in England was noted to skew the ability of practitioners to observe (Daniels, 2012), and this has resulted in documentation and assessment “even more strongly framed within a regime of accountability, measurement and readiness” (Basford & Bath, 2014, p. 121).

Thus, the literature highlights that challenges arise for educators where policy developments are introduced that require accountability but that lack collaborative engagement with those working directly with pedagogical documentation (Löfdahl, 2014; Elfström Pettersson, 2015). Where a lack of coherence between national accountability and local practices exists, multiple dangers arise, such as educators being unclear as to how to relate documentation to curriculum goals (Alvstad & Sheridan, 2015, p. 377) and the undermining of professional legitimacy (Alvehus, 2012). The literature also reflects a loss of confidence on the part of educators where policy frameworks prescribe the format of documentation and determine what counts as quality (Cottle & Alexander, 2012).

Where documentation is understood primarily as a tool of accountability, there are typically prescribed outcomes to be met by both educators/teachers and children. These predefined approaches or outcomes can lead to the educator being viewed as a technician, trained with a specific skill set to meet policy requirements (Moss, 2019). This perspective of the professional working with pedagogical documentation is at odds with the concept of the educator as a professional (Moss, 2014, p.45), reflecting and making judgements as a core part of his/her work (Biesta, 2017). Consequently, it appears that in terms of pedagogical documentation and in light of policy demands, educators are required to manage the sometimes-competing policy/practice balance that, Grieshaber (2008, p.514) suggests, is

challenging and can only be done if educators engage in “some theoretical rule bending, breaking and making”. In short, tensions exist between what is required by policy and what is required in practice for good educational experiences. Teachers/educators must know how to work or manage the system to satisfy the policy gaze (Ozga, 2008) and at the same time be skilled pedagogically to co-construct meaning with children. Mediating or managing tensions between policy and practice demands highly skilled educators who can navigate the documentation landscape.

The literature posits that policy changes relating to curriculum and documentation across many countries, create uncertainty and can undermine the professionalism of educators, leading them to wonder if they are “doing enough” and if they are “doing it right” (Ball, 2006, p.148). A strong culture of accountability can also lead to unease and can result in documentation being superficial and misunderstood (Basford & Bath, 2014, p.217). In this frame, documentation becomes focused for policy makers and inspectors (Plum, 2012, p.496) as a target audience, rather than a means of making learning visible to children, parents and educators, which is a key tenet underpinning the Reggio approach.

Pedagogical Documentation as Making Learning Visible.

Pedagogical documentation is foregrounded within research as a means of making learning visible (Cagliari et al., 2016; Carr & Lee, 2012), but that is dependent on how learning is understood, how children are seen, and how children’s voices are heard within the documentation process.

How learning is understood by the educator influences the nature of documentation and what specifically is captured. There is always a danger that a narrow or transmissive

(Freire, 1970) view of learning will limit and put boundaries on what the adult can see. There have been and continue to be many perspectives on the processes of learning. Tarpay and Mayer, (1978) identified learning as any relatively permanent change in behaviour (or behaviour potential) produced by experience. Kagan and Segal (1992, p.197) later recognised that, “learning is a process – with the human organism actively interacting with the environment”. Piaget (1923) foregrounded development as a precursor for learning. In other words, the child’s capacity to learn was determined or influenced by their developmental stage. This thinking gave rise to discovery learning in ECEC practice, which emphasised children’s spontaneous interactions with their environments and a lesser role for the educator in intervening in the process. In contrast, Vygotsky (1978) perceived learning as a socio-cultural activity in that children learn with, and from, others and consequently the role of language and scaffolding in supporting children’s learning was emphasised. Others such as Rogoff (1990) see learning primarily as a cultural practice, with children learning what is valued within their community or society. Giudici, Rinaldi and Krechevsky (2001, p.43) see learning more loosely, as the “emergence of that which was not there before”. Rinaldi (2001, p.341) equates learning as an educational experience with an educational endeavour whether it involves adults, children, or both and Carr et al., (2010) frame learning as being situated and relational. Deleuze and Guattari (1987) bring a broader view of knowledge and learning to bear using the metaphor of a rhizome, which grows somewhat aimlessly, to explain their thinking. The rhizome has no hierarchy of roots, trunk or core and branches. Rather, it grows in all directions with no pre-determined form and flourishes where conditions are supportive. Within this frame, learning is understood not as a linear progression (Dahlberg & Moss, 2005, p.117) where knowledge is systematically built on previous knowledge, but, like

the rhizome, learning is viewed as being multi directional and unpredictable. From the perspective of Barad (2007), learning is a relational and participatory process. Learning and the generation of knowledge emerges through the process of intra-action, which will be explored in chapter 3.

Emerging from these many perspectives, learning can be positioned as a process that primarily aims to make meaning and is conceptualised as social or co-constructed, with knowledge being generated in interactive and intra-active contexts. If, as the literature suggests, learning is complex, then the approaches used by teachers/educators to render learning visible must also be sufficiently open and flexible to do justice to children's thinking and meaning making. Teachers/educators must be alert to, and skilled in, noticing, recognising, and recording (Carr & Lee, 2019) learning that emerges in the ordinary daily moments of ECEC life. Where teachers/educators move from being knowledge brokers, mediating or driving learning, to understanding how children think (Bjervås & Rosendahl, 2017), they engage in a pedagogy of listening (Rinaldi, 2006), which forms the basis for pedagogical documentation.

The concept of a pedagogy of listening stems from Reggio thinking, where listening is “a premise of every learning relationship” (Rinaldi, 2006, p.114) and where it is more than an action or activity but instead is a way of being. In the pedagogical context listening means listening with the senses, being sensitive to the patterns that connect, being aware of the child's physical movements and nuances, interpreting sounds and language, and observing social initiatives. This notion of listening becomes very pertinent for pedagogical documentation, which requires adults to be open to children, to abandon certainty and to give time to “listening to thought” (Rinaldi, 2006, p.15), to capture and make visible their

learning. Documentation is proposed as a way of listening that helps adults to learn about children (Rinaldi, 2006, p.21), but it is also a reflection of listening where educators have slowed down and recognised the many ways in which children confidently and competently express themselves. Listening to children helps educators to understand the relationship between what children learn and how they learn (Oliviera-Formosinho & de Sousa, 2019, p.47). Where listening is understood as a broad concept or metaphor for openness, it means that adults suspend judgements and are attending and attuned, even in the silences to gain insights into children's thinking. Listening and observing are the cornerstones of pedagogical documentation and require that a culture or context of listening is created within the ECEC setting that affirms or legitimises children's contributions.

Through documentation a picture of the child is produced for audiences that are internal and external to the ECEC setting. In so doing, what is intentionally made visible is that which the adult chooses to foreground, positioning the educator as the dominant actor in the process. Documentation has, therefore, a powerful role in framing the child. It has the potential to present a specific picture of the child. Again, concern about the positioning and image of the child in pedagogical documentation is addressed by educators in Reggio who were the forerunners in seeing and understanding children as being strong, competent, and critical (Cagliari et al., 2016). These ideas are shared by many (Fleet et al., 2017; Bath, 2012), and position the child as agentive within the documentation process. Through their work, Reggio propose that what is believed and projected about children through documentation becomes a very real factor in "defining their social and ethical identity" (Rinaldi, 2006, p.83). Perceptions of children as being competent and agentive began to seep into the literature, while documentation as a powerful pedagogy was emerging beyond

Reggio (Emilson and Pramling Samuelsson, 2014, p.178). These developments coincided with a focus on the rights of the child, and in particular on the rights of children to have their voices heard in research (Alasuutari, 2014) and in matters affecting them (Pascal & Bertram, 2009; Kampmann, 2004), that had, and continues to have, significant implications for pedagogical documentation. Through a rights-based lens, it is the responsibility of the adult to be open in listening to the hundred languages of children (Giudici, et al., 2001), and in engaging them directly in documentation as a pedagogical imperative.

While current literature highlights the role of pedagogical documentation in making children's learning visible, the extent to which it may be more honoured in the breach than in the observance is unclear. The values and beliefs of educators/teachers within the culture and context of the ECEC setting guide how learning is recognised and recorded, and this has significant implications for the use of pedagogical documentation (Rintakorpi & Reunamo, 2016, p. 2). Equally, the concept of the competent child may be partially "lost in translation" (Alasuutari, 2014, p.255) with gaps between the rhetoric and reality of practice.

In unpacking the notion of listening to the voice of the child through the documentation, James (2007, p.265) highlights that it is not straightforward and that, ultimately, "it is the adults who retain control over which children's voices are given prominence and over which parts of what children say are to be presented". This raises ethical issues of whose voice is heard, what is chosen to be documented, and what it says about the child (Cooley, 2007). The notion of voice can be considered another broad, inclusive concept but one that is not limited to narrative or verbal contributions. Consider infants and toddlers, whose voices can be heard in gestures and movement. It is this expansive understanding of voice that Barthes (in Sheringham, 2000, p.297) describes as "life

as text". Facilitating voice within the documentation process requires adults to attribute meaning to the unspoken exchanges between children and to believe that they have a right to be heard and represented (Dahlberg & Moss, 2005).

Because the power of the adult is always present, interpretations and representations of children's voices are situated (Spyrou, 2011, p.160) within a local context that is very much influenced by the values and attitudes of the educator. The danger is that within the documentation process the child can be objectified (Sparrman & Lindgren, 2010). That is, documentation can be developed alongside but not with the child, which results in a one-sided narrative and interpretation. There is also a risk that the image of the child can be constructed by others in the absence of her/his voice, and in so doing the child's learning as interpreted by adults is rendered visible for multiple purposes to a public audience (family, community, and other professionals). A significant challenge in considering documentation is that it is not limited to making visible that which already exists, rather it also makes things exist precisely because it makes them visible (Giudici, et al., 2001).

Pedagogical documentation has a fundamental role in making learning visible for children and parents, but it also becomes important because it has political value, which is closely linked with concepts of curriculum and assessment.

Pedagogical Documentation as Assessing Learning.

The links between documentation and children's learning are well established in literature and in practice. What is less developed is the role of documentation in the assessment process and so this section briefly considers assessment in early childhood and its relationship with pedagogical documentation.

Assessment is generally understood as, “all those activities undertaken by teachers [educators] and by their students [children] in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged” (Black & William, 1998, p.2). This well-quoted definition highlights that both educators and children have an active role in assessment, that it is a collaborative process. It also proposes that assessment is not an end point but that it provides information to the educator and the learner, which ultimately brings about changes in practice. While Black and William (1998) suggest that assessment modifies the teaching and learning activities, it is also possible and desirable that the understandings of self of both educators and children are modified or informed because of this process. Assessment should be a source of feedback which addresses not only the activity, or “what I teach as an educator”, but also says something about the educator as a professional and “how I teach”. Feedback should also strengthen children’s sense of self, competency, and identity as a learner. Assessment as it relates to young children is a broad, value-laden term, with multiple definitions, meanings, and approaches that are fundamentally entwined with purpose and curriculum. In providing a brief overview, the literature often considers assessment in terms of assessment of, for, or as, learning, or more simplistically as being summative or formative in nature (Black & William, 2009; Linstrom, et al., 2011).

Summative assessment or assessment of learning tends to refer to what children know or have already learned at a point in time. In this way, it is backward looking in that it demonstrates what is known but does not readily indicate the thinking processes or how the child has come to know, nor does it facilitate feedback to the learner which might influence future endeavours. Consequently, this form of assessment typically is decontextualised and

has a focus on grades or is criterion referenced. Because development in early childhood is dynamic, uneven, and context dependent, summative assessment primarily highlights children's developmental gaps (Hooker, 2019). Traditionally summative assessment in early childhood has been associated with development and has focused on established tools of screening and diagnostics to determine how children are progressing in relation to others of similar age. Results from these norm-referenced and standardised tests lead to follow-up diagnostic approaches, which provide more in-depth information on the nature of the problems and signpost appropriate interventions (Bricker & Squires, 1999). Summative assessment also encompasses performance-based assessment, where children have opportunities to demonstrate what they know (Meisels et al., 1994), and curriculum-based assessment or evaluation, which examine a child's mastery of a curriculum (Bricker, 2002).

In contrast, formative assessment or assessment for learning involves strategies or approaches that primarily aim to promote children's learning (Black et al., 2002). Formative assessment is an evaluation of what happens during the learning process (Alasuutari, 2014) and attempts to unravel the thinking processes of learning-in-action. As such, formative assessment is continuous and forward looking in providing feedback and shaping future learning. The current language of assessment in early childhood education emphasises a formative approach which strives to understand children's learning (Drummond, 1993) and thinking (Brassard & Boehm, 2007) and is also related to monitoring their achievement against learning goals or outcomes (McLachlan et al., 2013). The OECD (2005, p.1) encapsulates formative assessment as, "frequent, interactive assessments of student [*children's*] progress and understanding to identify learning needs and adjust teaching

appropriately”. Thus, assessment in this formative frame is understood to have intertwined purposes, to make both children’s learning and the pedagogical practice of educators visible.

If, as is suggested through the body of literature, children’s learning is intricate and understood within a socio-cultural context (Rogoff, 1990), then corresponding “assessment and evaluation processes are required which match this complex, democratic, dynamic and multi-dimensional educational reality” (Pascal & Bertram, 2009, p.59). Consequently, this perspective highlights the responsibility of educators to do justice to children in how their learning is interpreted and assessed.

Many challenges exist in assessing dynamic learning across the age range (birth to six years) where children may be preverbal. However, narrative approaches to documenting children’s learning have emerged as effective ways of generating authentic and formative assessment in early childhood. Narrative documentation suits assessment in early childhood as it allows for the dynamic nature of learning, facilitates communication that can be shared with a wide audience (Ochs & Capps, 2001), makes connections between past and current learning, and supports critical reflection (Formosinho & Oliveira-Formosinho, 2016). Bruner (2003, p.89) celebrates the power of narrative as the almost “obligatory medium for expressing human aspirations and their vicissitudes”. He is clear that through narrative, “we construct, reconstruct, in some ways reinvent yesterday and tomorrow” (p.93). All of this suggests that narrative is both powerful and transformative.

Pedagogical documentation as narrative assessment is evident in systems where there is congruence between philosophical beliefs, curriculum approaches, and ways of evidencing learning. This alignment is evident in the Pedagogy-in-Participation project (Oliveira-Formosinho & Formosinho, 2016) which is based on the participatory pedagogical thinking

of Dewey (1997), Malaguzzi (1998), Freire (1970) and Bruner (1996). This project sees pedagogy as experiential learning, and assessment as situated, holistic, and continuous. Two further, more established, narrative approaches are the Learning Stories emanating from New Zealand (Carr, 2001) and the Reggio project from Northern Italy (Malaguzzi, 1998), which are outlined below as examples of pedagogical documentation as assessment.

Learning stories (Carr, 2001) are a mode of formative assessment that originated in New Zealand but have a global following. Drummond (2012) has emphasised that a learning story is a documented narrative that speaks directly to the child, her family, and the community of educators. Using words and annotated photos the learning story is strengths based and aims to build the child's identity as a learner. This approach responds to Eisner's (2000, p.350 as cited in Carr & Lee, 2012) belief that teachers/educators need to "prepare short narratives that provide a much more replete picture of achievement than a B+ or an 82 on a standardised achievement test". Consequently, Carr and Lee (2019) propose that Learning Stories are formative in that, over time, the positive narrative, based on documented research or episodes, builds children's identities as learners. Learning Stories are based on the premise of educators noticing, recognising, and responding to children's initiatives (Carr & Lee, 2012), alert to their many forms of expression.

Located within a socio-cultural approach, the Learning Stories promote and make evident connections between learning in the setting and in home environments. The Learning Stories are not without critique. Queries are raised about the subjective interpretation of children's learning and the overall effectiveness of this approach as a form of assessment (Blaklock, 2008; Zhang, 2017). Despite a questioning of the approach, Learning Stories provide a powerful framework of pedagogical documentation, whereby the interpretations or

assessments presented are based on documented events or episodes. They can be shared with the children and are accessible to and by parents or families. However, they are adult observations with an individual focus that do not include the active participation of children in their construction. The absence of the child's voice in the interpretation of the Learning Story reduces the possibilities for meaning making.

In contrast to the Learning Stories, the Reggio approach to assessment and pedagogical documentation focuses entirely on children's learning and the perspectives of children and adults in the moment. Using documentation in this way, as formative assessment, allows the children and adults to review the documentation together and to use this thinking to guide the next steps. As Dahlberg and Moss (2005, p.16) suggest, this interrogation is not a search for "cozy consensus" but a process in which the educator must take responsibility for her/his own actions and views that are captured in the documentation. In the Reggio context, documentation and assessment are driven by the question, "how can we help children find the meaning of what they do, what they encounter and what they experience?" (Rinaldi, 2001a, p.78). Children strive to make meaning from birth. So, in documenting, the educators develop an interpretative theory that is a working guide to support them in recognising and engaging with what they see as children's learning. Documentation in this context testifies to children's learning and to the relationships which are the building blocks of knowledge (Rinaldi, 2001a, p.82).

The relationship between assessment and documentation.

There are three prevailing perspectives in considering the relationship between documentation and assessment in early childhood, namely, where documentation is

understood as assessment, where documentation is viewed as being intertwined with assessment, and where documentation and assessment are seen as two separate entities.

The Reggio approach contends that assessment is an intrinsic part of documentation and that they are not separable processes (Rinaldi, 2006, p.69). This view is also borne out by Carr and Lee (2012) for whom Learning Stories are identity-referenced assessment practices that bring together curriculum, pedagogy, and assessment in ways that are sharable, and which involve the voices of children, parents, and educators. In contrast, Alasuutari, et. al. (2014, p.28) contend that assessment is not pedagogical documentation, but both are “interwoven in different forms”. This is echoed by Oliveira-Formosinho and de Sousa, (2019) who understand pedagogical documentation as the fulcrum between children’s learning and assessment, which suggests that documentation is the basis for assessment. Forman and Fyfe (1998), coming from a different perspective, suggest that “strictly speaking, documentation is not a form of assessment of individual progress, but rather a form of explaining, to the constituents of the school, the depth of children’s learning and the educational rationale of activities” (p.241). This resonates with a view which positions assessment as a form of accountability and is shared with others (Bath, 2012; Garrick et al., 2010; Basford & Bath, 2014). While not agreeing with this perspective Reggio (Rinaldi, 2006, p.62) sees documentation as providing “an extremely strong antibody to a proliferation of assessment/evaluation tools which are more and more anonymous and decontextualised”.

Pedagogical documentation has been highlighted earlier in this review as being content and product, process, and practice, participative and equitable, accessible, and communicative, and as being open to, and for, reflection and critical thinking. Within this section, the topic of assessment in early childhood has been briefly explored and addresses

the question of, “how can pedagogical documentation support assessment”? Some such as Biesta (2011) are wary of this mix, questioning the possibility of capturing learning at all since, in his view, most of it is inaccessible. Nonetheless, assessment is an inherent part of the teaching and learning process, even in early childhood. Stremmel (2017, p.208), in contrast, believes it is possible to reconcile both, in that pedagogical documentation in a formative state is an “ethical and subjective means of assessing what children know and understand in contrast to a process for measuring and judgementally scrutinising children’s work in relation to some standard of acceptability”.

Pedagogical Documentation as Supporting Parental Engagement

What role does pedagogical documentation hold for parents? Is it, as suggested by some educators, merely a souvenir, keepsake, or a memento (Hope, 2019)? What becomes evident through the literature is that the relationship between documentation and parent is complex and multi-faceted. The tenets in considering this relationship are that, firstly, families want to be involved in their children’s learning (Henderson & Mapp, 2002; Papatheodorou & Moyles, 2012), and that they are interested in what happens in school or the educational setting (Gauvreau & Sandall, 2017). Secondly, documentation has long been understood as an important tool or means of connection for pedagogical and social reasons and can be powerful in that it mediates relationships between educators and parents (Karila & Alasuutari, 2012; Rintakorpi, et al., 2014). Finally, despite parents’ inherent desire to be involved in their children’s learning, it is not always possible for them to be engaged with, or

take advantage of, documentation (Lee-Hammond & Bjervås, 2020; Beecher & Buzhardt, 2016) due to busy schedules or life events and pressures.

However, while literature highlights the strong connection and benefits of developing and sharing documentation with parents and families in theory, the reality is that documentation plays multiple roles. Documentation can be a way of providing information, a one-way system of communication with parents and it can also be a means of engagement, whereby both setting and parents contribute to, or comment on, the work. Within these relationships parents can be positioned as partners or consumers and this has implications for the ways in which documentation is developed and shared.

Strategies in sharing documentation.

There have always been challenges in developing relationships and communications between home and the ECEC setting (Brown-DuPaul et al., 2001). Time, or lack of time, is a consistent issue that arises for ECEC staff in connecting with parents. Where children are in full day care because both parents or a single parent works, it means there is limited time for involvement (Zellman & Perlman, 2006; McLean 2019). Across many countries staff use documentation not only to make children's learning visible but also to highlight the importance of ECEC and the pedagogical work that happens within the setting (Hoystyn, et al., 2018).

In addition to journals, portfolios, and other forms of documentation, settings frequently depend on wall displays or panels (Seitz, 2008; Brown-DuPaul et al., 2001), newsletters (Löfdahl, 2014), or social media platforms to support parental engagement. Acknowledging the issue of time, wall panels or displays are designed primarily as a tool of

communication (Tarini, 1997). They are more meaningful than traditional bulletin boards in that they can be more focused on a specific topic and are developed to support understanding of children's learning (Helm & Beneke, 2003). They may include children's work, photographs, other artefacts, educator's comments and explanations, as well as links to curriculum. While panels may not necessarily result in deep engagement, they have potential to extend the involvement of families and strengthen relationships with the setting (Kline, 2008; Nolan & Reynolds, 2008). They can also be effective in directing the attention of parents towards specific pieces of work or concepts (Bjervås & Rosendahl, 2017). There is a skill in developing panels, as parents are attracted by the visual appeal and children will often have a sense of pride (Reynolds & Duff, p.96) and will encourage parents to stop and look (Brown Du-Paul, 2001).

So, while there is a clear value in display panels as documentation, McLean (2019) cautions that some parents do not notice displays as they tend to be in a hurry during drop-offs and pick-ups. This is corroborated by Perlman and Fletcher (2012, p.539), who found that, "on average parents spend 63 seconds in their child's classroom during the morning drop off". Thus, the effectiveness of the panels is called into question. In addition, significant effort and skill is required to keep displays current, not merely wallpaper (McLean, 2019), talking walls (Knauf, 2017), or attractive bulletin boards (Brown Du-Paul, 2001). The challenge is to ensure that over time all children are represented within the panels, as this can become a source of tension in the relationship between educators and parents (McLean, 2019). There is a real challenge for educators in developing display panels that are: purposeful in what they wish to convey, meaningful for children, attractive to parents (Brown

Du-Paul, 2001), and utilising the opportunity as a springboard to foster conversation and build relationships.

Newsletters are another form of documentation that are frequently used to share information in ways that meet the needs of parents. In one Swedish study, the newsletters tried to find a balance between keeping a professional distance and yet maintaining a friendly closeness with parents (Löfdahl, 2014). However, this resulted in what might be termed as nice and cute newsletters, which were recognised as “one-way communication” but were also understood as “a means of getting the parents on the right track” (p.108). So, while display panels and newsletters may be considered as information giving, their value as pedagogical documentation is questionable, with the content aimed primarily at parents and with little focus on children’s interests (Knauf, 2017). In both cases the aim of educators in using these approaches with time poor parents is to prompt further engagement. However, this notion of panels or newsletters priming engagement is debatable in light of Garrity’s (2104) study, which suggests that where documentation is shared without discussion or a context, it may become a barrier to building relationships. This highlights that providing or sharing information alone, while an initial step, may not in itself be sufficient to foster deep engagement with parents.

Developing close connections with parents is a primary goal of educators. Engagement is deepened when parents become active in the process of developing or contributing to the documentation. In one Finnish study (Rintakorpi et al., 2014), parents and educators documented the experiences of an 18-month-old toddler, Leo, as he settled in to day care over a six-month period. The documentation, in the form of a small, paper (laminated) fan, which contained photos, was developed incrementally as it moved between

home and the ECEC setting, with parents and educators recording aspects of Leo's life that would help him to manage the transition. The fan, which when splayed out showed photographs of home and day care, was a powerful piece of documentation that mediated relationships and places, became "a shared point of reference but also served as a discursive resource" (Rintakorpi, et. al., 2014, p.194). Over time the level of parental engagement weakened, but at a critical point of transition the home/setting relationship, manifested through the documentation, held the toddler safely. The question arises as to the capacity of parents to be highly involved in documentation over a long period of time. In contrast to the intensive engagement with the Fan Project, the Learning Stories (Carr & Lee, 2019) inculcate a more graduated approach with documentation shared with parents and family for review, discussions, and contribution on a continuous basis. The Learning Stories capture interests, passions, skills, competencies, and dispositions and "are owned and read by the children and commented upon by the families" (Carr & Lee, 2019, p.114). Settings that use Learning Stories strive to build a continuous culture of collaboration through documentation that is accessible, and meaningful. As Athy (2007, p.66) suggests, "nothing gets under a parent's skin more quickly and more permanently than the illumination of his or her own child's behaviour", and the Learning Stories are an ideal point of joint focus for parents and settings to celebrate and make sense of children's learning. However, parents do not always comment on their child's learning story and their responses tend to be summative in nature (Stuart, et al., 2008). Parents appear reluctant to counter any interpretations presented within the Learning Stories and this suggests that, despite the deep relationships held and the easy format of the material shared, there is an inferred or felt power imbalance between the educators and parents.

Positioning of parents within the documentation process.

While the importance of parental engagement in children's learning through the process of documentation is acknowledged, how parents are positioned or how they feel in being actively involved in the documentation process impacts on their ability to contribute. The form of documentation shared with parents elicits diverse reactions. Lehrer (2018, p.293) in drawing on Bamberg's (1997) positioning analysis suggests that in some cases the documentation itself positions parents "as passive consumers of information about their child", with little or no response required or consequently received. Other forms of documentation that require a parent's signature locate parents in a different role, as part of a surveillance system which monitors compliance, particularly in relation to operational aspects of the ECEC setting, e.g., attendance, absences, health issues, incident reports, or general notifications. Alternatively, the nature of the documentation may require parents to comment on entries that relate to their child's behaviour and to collaborate with staff in implementing a corrective plan. However, this positioning foregrounds parents as needing support to be good or proper parents (Karila & Alasuutari, 2012; Löfgren, 2015) with educators positioned as experts. Finally, documentation can be used as a means of accountability to parents, identifying the pedagogical work of the setting rather than as an opportunity for dialogue.

Irrespective of how parents are positioned, it is evident that their engagement is knotty and influenced by the type of documentation used by the educators. Parents may also be reluctant to respond or contribute to documentation as they feel "that it is not their role" (Birbili & Tzioga, 2014, p.163). They "may feel shy or inadequate" (Carr & Lee, 2019,

p.129) or they may be anxious and guilty, believing that they do not give enough time to their children or the pedagogical documentation that comes home (McFadden, 2016).

One development that aims to support parent's engagement with pedagogical documentation is the use of digital platforms and e-portfolios. Digital documentation has been found by some to be an excellent tool to engage parents and wider family (Goodman & Cherrington, 2015; Gauvreau & Sandall, 2017), prompting and initiating interactions between children and families about their learning (Hooker, 2019). There is a sense that parents benefit from the flexibility and convenience of digital documentation that allows for deeper conversations (Hooker, 2019). However, McFadden's study (2016) reported that in accessing digital material parents were "predominantly looking for photos of their child", and that some "found references to curriculum to be cumbersome" (p.91). This suggests that for some parents, the move to digital documentation prompts no more engagement than display boards or newsletters. On a more positive note, Hooker (2019) highlights greater dialogue between parents and children with e-portfolios and equally that grandparents and extended family have greater engagement.

It appears that while settings wish to use documentation to foster relationships with parents, circumstances in family lives do not always make this possible. Even in the well-established, accessible, and highly visual formats of the Learning Stories, parents may still feel reticent and struggle to comprehend the language of learning (Hattie, 2009, p.70). What emerges strongly is that all forms of documentation, whether pedagogical or compliance focused, hard copy or digitally generated, wields a power that directly or indirectly impacts parents. There is an inherent danger in these positionings that parents are "subjugated to the institution's [settings] agenda" (Lehrer, 2018, p.304) and that they are not actively

empowered to engage with documentation. Thus, one of the ongoing challenges for ECEC educators is to find a balance between producing documentation that satisfies the needs of parents (McFadden, 2016, p.93) and supports engagement, but at the same time opens up documentation and professional practice for critical examination (Asén & Vallberg-Roth, 2012; Kalliala & Pramling Samuelsson, 2014).

Pedagogical Documentation as Supporting Professional Practice

The main focus of pedagogical documentation is on children's learning, but research highlights that it is also valued as a process in itself (Buldu, 2010; Bjervås, 2011). This allows educators to reflect and open up practice for critical examination (Asén & Vallberg-Roth, 2012; Kalliala & Pramling Samuelsson, 2014).

From the perspective of the educator, documentation can facilitate new understandings of pedagogy and curriculum (Harcourt & Jones, 2016), and can prompt collaborative reflection on actions and decisions (Rubizzi, 2001). Documentation also affords opportunities for the exchange of ideas (Filipini, 2015), and enables educators to see more deeply and interpret children's learning (Quinti, 2015). Finally, documentation can also be considered as an approach to tracking the quality and progress of the preschool setting (Bjervås, 2011).

There is a general consensus that, as proposed by Harcourt and Jones (2016, p.83), documentation can be used "as a critical tool for the ongoing examination and illumination by a pedagogical team" to better understand the child and the work of the educators, and for the validation of educators' work with the children (Stacey, 2015). However, these sentiments can be passively dangerous in that they obscure the realities of documenting and fail to

challenge the dominant discourses (Alvestad & Sheridan, 2015). The tensions that emerge for educators, and the shifts in perspectives, practices, and roles that are required in documenting pedagogically (Heshusius, 1995), collapse into two key areas, namely, challenges in the enactment of documentation and in the process of documenting collaboratively.

Challenges in enacting documentation.

The key tensions that arise for educators in the practices of documenting (Stacey, 2015) relate to uncertainty, decision making, managing time, and acknowledging challenges.

Educators frequently express uncertainty in relation to the detail of pedagogical documentation (Löfdahl, 2014). Concerns about where to start and what direction to follow are not unusual (Chng, 2017) as many opportunities to document arise in daily practice. However, pedagogical documentation requires a flexible mind set, a capacity to look for what may be critical, and an ability to be comfortable in a situation where there is no general formula or right approach. In considering the skills and attributes required, the doing or enacting of documentation becomes a professional attitude as much as a practice, and having the confidence in being open to the unknown and unexpected is central to the documentation process (Chng, 2017). A challenge in documenting is to be comfortable in uncertainty, so that children's thinking is not too quickly narrowed. The risk is that educators will decide on the focus of documentation too quickly, and they will be drawn in a specific direction (Colliander et al., 2010). Educators must be "sure enough to let themselves be unsure" (Sharmahd & Peeters, 2019, p.63). Thus, the ability to pause in uncertain moments minimises a risk that pedagogical documentation may be interpreted and "censored even before it is written" (Kalliala & Pramling Samuelsson, 2014, p.117), or that educators capture and

interpret learning and make decisions too rigidly or quickly (Duncan & Eaton, 2013; Surin, 2010; Houle, 2011).

Making decisions in terms of documentation is influenced by policy but also by the curriculum and the professional judgements of the individual educator and team within the setting. The nature of the curriculum influences the process of capturing or making sense of children's learning. Within a project approach some decisions relating to documentation are made in advance, with educators identifying the point of focus (Bjervås & Rosendahl, 2017). In contrast, an emergent approach which uses the spontaneous ideas and interests of children and educators to develop curriculum (Jones & Nimmo, 1994) captures and documents what arises in the moment (Robertson, 2017). Thus, decision-making is a complex issue in pedagogical documentation (Lipponen, 2017) and everyone involved in the process is a decision maker (Robertson, 2017). The act of documenting pedagogically is non-linear, because how choices are made and what material is gathered and assembled directs the process. The moment-to-moment decisions that are made by the educator give visibility to the ethical, ecological, and egalitarian choices that are made (Harcourt & Jones, 2016, p.83) as part of the documentation process. Thus, the narratives that are developed; the photographs that are taken; the direction of the lens; the selections made in editing video work; the language and words that are recorded, all have a purpose and leaning. Decision-making can be very evident in relation to photographs, which are widely used as part of the documentation process. Moran and Tegano (2005) propose three functions of photographs as part of the documentation process. Firstly, photographs can be understood as having a representational function that is mainly in relation to foregrounding or describing an event. Secondly, photographs can have a mediational function, where the attention of the educator

and the camera lens are trained on a learning situation. Thirdly, an epistemological function of photographs is where they are used by the team to support new understandings. The typology of Moran and Tegano (2005) suggests that important decisions are made in the simple act of taking a photograph. This is borne out by Bjervås and Rosendahl (2017) reporting on a Swedish case study where educators of toddlers make deliberate choices regarding what and how to photograph. At times only children's hands are captured to focus attention on a particular object. Equally, photos may be in black and white as a means of eliminating the distraction of colourful clothes or surroundings. Decision-making in documenting children's learning extends across policy and practice, setting, culture, and ethos. Ultimately, value-laden choices are made at each stage in the documentation process (Turner & Wilson, 2010).

The practice of documenting raises a number of issues that reflect the educators' confidence and competence in the process and have implications for children. A primary consideration in documenting is the intentional, or unintentional, framing of children. The ways in which documentation is constructed by educators has been found to position children as being competent in terms of friendship and agency (Liljestrand & Hammarberg, 2017), but has also served to reinforce normative understandings of children as being "good" (Lehrer, 2018, p.292). Hence, there is a danger of children within the documentation process becoming objectified (Elfström Pettersson, 2015), that is, when the educators are positioned as onlookers and children are observed. In this way, through passive engagement (Sinclair, 2004), children can be put on display (Sparrman & Lindgren, 2010). Rinaldi (2001, p.88) also contends that if educators don't have an awareness of what is being observed, there are risks of vagueness and superficiality in documenting, with a consequential

loss of meaning and depth. A superficial approach to documentation can arise where educators stage activities or experiences for children that lack a strong pedagogical basis, or where the focus of documentation is pre-determined. There is an inherent danger in this approach, or “mode of seeing ... which thinks it knows in advance what is worth looking at and what is not” (Bryson, 1990 as cited in Hall, 1997, p.65).

Thus, while educators are central in making decisions and recording children’s learning processes, many struggle in collecting and analysing documentation (Eidevald, 2013; Hostyn, et al., 2018). Some educators are uncertain or lack confidence in producing written narratives (Picchio et al, 2012, p.167) while, for others, there may be a risk of over-documenting (Emilsson & Pramling Samuelsson, 2014), as in when material is gathered but not with a purpose. Practical challenges related to time arise constantly when linked to documentation (Kalliala & Pramling Samuelsson, 2014; Evetts, 2009). Rintakorpi (2016) found in her study that 69% of educators identified time as the key barrier to documenting. The Finnish educators felt that there was no time during work to document, that it was not valued, and that time was required to become familiar with the technical aspects of using equipment. Documenting can be time-consuming and may be perceived as taking educators away from the process of teaching or being fully with the children (Buldu, 2010). Robertson and Shepherd (2017, p.3) address the issue of time in proposing that documentation becomes a “habit of mind and practice”, where it is seen as an embedded part of daily practice rather than an add-on or extra burden for the individual educator.

Challenges in using documentation collaboratively.

An ameliorating point that counterbalances many of the challenges facing educators is the practice of using documentation for collaborative thinking or reflection. This is a

consistent theme and one that is recognised as being vital to the meta-learning of educators (Formosinho & Oliveira-Formosinho, 2016, p.50). Using documentation within the context of a team allows for individual and collective knowledge-building (Peeters & Sharmahd, 2014). In short, reflecting with other educators on documentation creates opportunities for critical discussion about pedagogical practice; it facilitates the sharing of differing perspectives, and allows educators valuable space, time, and distance (Filippini, 2001). Examining and discussing documentation can be empowering and through the collaborative process educators “develop their sense of themselves as contributors, thinkers and problem solvers” (Seidel, 2001, p.319), seeing things that had not previously been noticed.

However, the process of reflecting on documentation is not straightforward and tensions can exist where educators put forward their own documentation for discussion (Wong, 2010), or where adaptations to curriculum have to be negotiated, arising from a review of documentation (Alcock, 2000). Reflecting on documentation should provide a context for support and critique, for questioning practices, and for testing out ideas with others (Cossey & Tucher, 2005). Engaging in collaborative discussions should also build confidence in educators in presenting their work and in coming to see themselves “as competent professionals and teacher-researchers” (McCarthy & Scott Duke, 2007, p.108). However, conditions such as the availability of paid non-contact time for educators, the support of a dedicated pedagogical coordinator, a programme of continuing professional development (CPD) (Picchio et al., 2014) [also named as continuing professional learning (CPL)], and a structured collegial framework are necessary requirements for the habitus and practice of reflexive collaborative approach (Picchio et al., 2012). Where these conditions are not embedded as part of the culture, reflection can become the “missing middle step”

(Stacey, 2009, p.66), where educators have no opportunities to pause and consider documentation.

Unequivocally, the educator is central to the practice of documenting, which requires a balancing of external, national requirements with local curriculum and pedagogical documentation practices. It demands that the educator has strong pedagogical competence and confidence and has goals and intentions, but also has the capacity to manage uncertainty and hold back for what experience might suggest is the right moment to document. The educator must also be able to write about what she is seeing (Jones et al., 2010) and make moment-by-moment decisions about what to photograph, and how. She must also consider the engagement of the children and the ethics of the situation in how the children are portrayed or positioned. Finally, the educator must also be open to offering her work for collegial review and collaborative reflection. Documenting pedagogically is a highly complex and skilled pursuit that is, according to Harcourt and Jones (2016, p.83), “primarily for educators to construct and reconstruct their understanding of learning, teaching and the curriculum”.

Pedagogical Documentation as Democratic Practice

The enactment or doing of documentation as evidenced within this chapter foregrounds the many perspectives, practices, and challenges that educators encounter when recording children’s learning. Practically, documentation is positioned as providing accountability to parents and policy makers. It focuses on the practice of making learning visible but also considers the links with assessment. The agentive role of documentation as a means of engaging parental involvement, and the relationship between educators and

documentation are compelling issues, which frame the many ways in which documentation is understood. However, other posthuman and new materialist perspectives, which are less dominant through the literature, but are highly relevant to this study, re-frame documentation as democratic practice, as intra-active pedagogy and as material-discursive practice.

Pedagogical documentation as a practice carries many possibilities for children, educators, and families and while it can be viewed through many lenses, this section considers the practice of documenting pedagogically as democratic, ethical, and value laden.

Democracy as a concept is multi-dimensional. This can be considered in terms of government, politics, structures, and forms of governance that frame daily life, such as the legal or election systems. Democracy can also be understood in relation to people and how they live together in society or within an early childhood setting. At its heart, democracy and democratic practice refers to participation, power, and citizenship (Moss, 2007) and is anchored in principles of equality and inclusiveness (Taylor, 1994). Moss (2011) proposes a systemic approach to democracy and the early childhood field, suggesting that democratic practice operates at national as well as a setting level. Democracy at a national level speaks to things such as the system of funding for ECEC (is this equitable for parents?), the curriculum that is used (does this allow for professional judgements and localised interpretations?), and the conditions for educators (are they paid a fair wage for the work that they do?). At a local level, democracy in the ECEC setting relates to decision-making and, for example, who gets to choose, who decides on activities, who dominates in structuring daily routines and environments, who decides when it is time to play outside. In a very connected way, democracy in the nursery (Moss, 2007) also speaks to issues of power and control, for

example, how the child is seen, framed, and consequently categorised - for example, as being a slow learner, or different, or as gifted.

Democratic practices in ECEC allow for participation of children and adults in having voice and shaping decisions that impact on themselves. It means sharing control and power so that the adult is not always the one with the right answer. It means that listening to the other (Rinaldi, 2006) and respecting children's funds of knowledge (Hedges, 2022) are important within the setting. Acknowledging and drawing on funds of knowledge, or what children already know through cultural and familial practices, values children's contributions within the life of the setting and in the generation of documentation. Democratic practice can also mean that all parents, irrespective of their backgrounds and contexts, have a sense of belonging and ownership in the setting that enables them to be actively involved in the education of their children. Democratic practice also suggests that educators have opportunities to exercise professional judgements in the context of ECEC and their practice. In short, Moss (2007, p.12) summarises democratic practice in ECEC as, "the rule of all by all", but cautions that it does not happen by accident, and it requires specific conditions and values in order to flourish. Democratic practice in the ECEC setting requires at a basic level that children are seen and heard in all their multiple languages of expression and that the adults believe they have worthwhile contributions to make. Being democratic in reality also means that parents are valued for their experiences (Cagliari, et. al., 2004; Moss 2007) and listened to, even when those experiences contest with accepted norms of practice within the setting. Educators, who have a powerful role in facilitating democratic ways of working, must also recognise that there are multiple ways of seeing and understanding the world, that there is never a privileged single truth, but that what they draw on is contextualised experience and

local knowledge. Working democratically by allowing space for the voice of others, demands that educators feel comfortable in the not-knowing or uncertainty (Urban, 2008), and adopt a critical attitude (Rose, 1999) and reflective stance in their work. Pedagogical documentation is a key tool that supports, and in turn is supported by, democratic practice within the ECEC setting.

Pedagogical documentation is an extraordinary tool (Hoyuelos, 2004) that can offer children and adults genuine moments of democracy, made possible through dialogue and reflection. Democratic practice becomes evident in the documentary choices that are made by adults, their commitment to share power and control with children, through the participation of children in the process and the willingness of the adults to refrain from interpreting children's thinking or jumping to conclusions about children's learning too quickly. So, for example, the Mosaic approach (Clark, 2010) identifies different methods of documentation such as photography, video, and map making - all of which offer opportunities for children to be directly involved in documenting their own learning and experiences. Democratically constructed, pedagogical documentation allows for full participation by the children and educator who collaborate in the co-construction of meaning within the work. Through the participative process, children's learning becomes transparent, the professionalism and interpretation of the educators are made visible, and the engagement of parents is made possible, in that the documentation becomes a focus for discussion. Thus, democracy in pedagogical practice hinges on the authentic and meaningful participation and voice of children and adults in the documenting process, or the possibilities for their engagement. Beyond the walls of the ECEC setting, the democratic process also allows the work with children and families to become visible to a larger and wider audience (Vecchi, 1993). The

value of conceptualising pedagogical documentation as democratic practice is that it gives the educators and the setting “legitimacy in relation to the wider community.....having a public voice and a visible identity” (Dahlberg et al., 1999, p.158).

However, as with all democratic processes there are dangers. Fendler (2001) suggests that democratic devices or approaches such as pedagogical documentation can also be used as a means of governing or exerting greater control over the child and the setting. In other words, in rendering learning visible through documentation, children and educators are left open to judgement (Dahlberg & Moss, 2005) by others who may have differing agendas, and may wish, for example, to normalise and standardise practices, such as a government wishing to use pedagogical documentation as a means of accountability for settings and educators, as outlined in a previous section. Democratic practice, specifically as it relates to documentation, is a deeply ethical issue.

Documenting is an ethical encounter (Dahlberg, et al., 1999) in which the educator’s awareness and willingness to reflect on the processes have consequences for children, for example, in how they are invited to participate in documenting (Lindgren, 2012). Do adults invite children to join in the documentation process as participants, either partially or fully? Do adults encroach on children’s privacy in deciding what and where to display their photographs, for example? Viewed uncritically, pedagogical documentation can become an intrusion, and a “tool to access children’s inter- and intrapersonal worlds” (Smith, 2012, p.30), unthinkingly increasing the levels of monitoring and surveillance on them and their worlds. Where pedagogical documentation has a focus of understanding children’s thinking and learning, it becomes a means of resisting expected outcomes or normative expectations and instead affords opportunities to see children’s interests and capabilities differently.

Ethical practice requires a stance of ongoing questioning and a willingness by the educator to be aware of the hundred languages of children (Rinaldi, 2006), that is, the many ways children will express themselves or represent their learning. Being ethical in documenting pedagogically means that the educator is open to seeing and understanding what is happening for the child within the process. Ultimately in the process of developing and using pedagogical documentation, the adult constructs the story or narrative of the child, which is powerful in that it determines the image of the child that is projected to the family and the wider community. Understanding and enacting documentation as democratic practice is respectful of rights and places attention firmly on those encounters as intra-active teaching and learning processes.

Pedagogical Documentation as Intra-Active Pedagogy

The above sections frame documentation as typically evidenced through the literature and problematised in its enactment within specific contexts. Another perspective that has relevance for this study is that of documentation as an intra-active pedagogy (Lenz Taguchi, 2010), which opens up the relationship between human (children/educators) and non-human (documentation) matter.

The concept of intra-action refers to relationships and connections with and amongst all phenomena, which include human and non-human matter. Interaction, as a more familiar term, relates to the notion of between, much like the serve and return episodes that occur, for example, between toddlers and educators or care givers. The interaction moves from the adult to the toddler and back again to the adult. So, the adult might say, “oh, you are looking at the

bird in the tree” and the toddler points and responds “birdie”. In this example, the educator, the toddler, and the bird can be understood as being separate entities and the interactions (words and gestures) that move between the actors involve a reciprocity, in that the adult speaks and then the toddler points and responds.

In contrast to interaction, the concept of intra-action, as first proposed by Barad (2007), understands all elements or phenomena (human and non-human) as being interdependent and all connections as porous. Taking the example above, an intra-active lens would recognise that there is more than the toddler, educator, and bird involved in this encounter or episode. The tree, its shape, and its shading will offer a particular picture of the bird at a given point in time and will impact on what and how the toddler and adult can see it. The breeze or gusts of wind may shake the tree and result in the bird moving, adjusting itself or flying away, thus giving the toddler an opportunity to see the bird in flight. The sun that glints on the windows and casts shadows will allow for different views, highlighting the bird’s colour or wing detail, which otherwise might not be evident. Considering this episode through an intra-active lens, a broader landscape of dense connections emerges. Understood in this way, intra-action calls into question one’s ontological beliefs, or what it means “to be”. For example, do I see the world in terms of people as separate autonomous beings or do I see the world as a vibrant mass of matter, which is constantly changing as each element of human and non-human matter connects? Intra-action acknowledges the entanglements of both human and non-human matter. It speaks to relationality, amongst all elements of the assemblage or phenomena, and it builds on the notion that all matter, human and non-human, has agency. As proposed by Murriss and Bozalek (2022, p.70), “intra-action involves rethinking and redoing our claims to knowledge” because in the intra-active moment matter

and meaning are mutually constituted and connected. At its core, the concept of intra-action gives rise to an understanding that knowledge does not reside in the head of any individual, rather knowing becomes “a matter of part of the world making itself intelligible to another part” (Barad, 2007 p.185). In short, knowing emerges in the process of intra-acting, a coming or being together of matter and non-human matter. Consequently, it follows that knowledge is generated in and through intra-action.

Intra-active pedagogy (Lenz Taguchi, 2010) builds on Barad’s concept of intra-action and applies it to the world and processes of teaching and learning with young children, specifically as it relates to documentation. An intra-active pedagogy understands that educators, children, parents, policy makers, the classroom space, the equipment, materials, documentation, and other artefacts are all part of “a performative production of power” (Lenz Taguchi, p. xiv), where each element of the phenomena is agentic. Together and entangled, human and non-human matter afford possibilities for the generation of new knowledge and insights into the teaching/learning process.

Extending an intra-active pedagogical lens to documentation highlights that knowledge is generated as children, educators, photographs, journals, pens, paper, and drawings all connect in the development of the material. But equally, the documentation actualises or materialises the phenomena, enabling it to be re-viewed and to influence the thinking of children and adults. So, knowledge is generated in the intra-action of the child holding and reading her/his journal or the educators re-viewing their documentation. Educators in Reggio Emilia understand documentation as, “a skin that is alive and energy giving” (Merewether, 2018, p.5), attributing to it a sense of agency and oneness with the world or the setting. In this way, intra-activity dissolves the ontology/epistemology divide

and flattens thinking on what it means to “be”. It gives rise to Barad’s (2007, p.185) “onto-epistem-ology”, that is, the study of practices of knowing in being, because in connecting with the other, be that human or non-human matter, we come to know differently.

Lenz Taguchi (2010) offers an example of children’s engagement with sticks which, over time, becomes problematic in the preschool. The children engage with the sticks in war-like ways using them as guns and despite rebukes from adults. This is the sole relationship the boys have with the sticks. A student on placement documents the boys’ play and, on hearing one of them say, “my gun is alive and it wants to kill you” (Lenz Taguchi, 2010, p.31), she simply states, “if your gun is alive, it must have a name”. This simple statement disrupted the boy’s notion of the stick, which moved from being an instrument of destruction to becoming a friend that had a name, a persona that lived with its family under a tree. The stick remained the stick, what changed was the entering of the student and her observations/documentation into the assemblage and her recognition of the intra-action between herself, the sticks, and the children.

A second example highlights the intra-action between the children and the documentation. The project or initiative started with an invitation to the children to describe and draw or represent the way home from preschool. The children’s drawings were driven by stories of the long road to Anna’s house, which necessitated the sheet of paper being turned over to accommodate the mapping. In this action Anna had to bend to the dictations of the paper as it was, quite simply, not long enough for what she needed. Separately, two boys took the task off in a different direction, including lighthouses in their drawings which spurred imaginations beyond their current living conditions. The boys lay on the long sheets of paper, using the wet markers to draw roads – almost becoming one with the story, the paper, and

markers. Taking an intra-active lens to this quite ordinary story allows the educators to think differently about the children and their imaginings and abilities. It is more than possible, had the long sheets of paper not been available on the floor nor the space been made for the boys to stretch out on the paper, that the stories, knowledge, and imaginative capabilities of the boys would not have shone through. It was in the affordances and intra-action of time/space, materials, and bodies that the boys' brilliance as "small engineers" (Lenz Taguchi, 2010, p.116) emerged.

The process of coming to know differently becomes possible when educators slow practice down and see the learning that is generated in the intra-active spaces, in those moments where, for example, boys, paper, and markers become one. Recognising documentation as intra-active pedagogy has profound implications for teaching. Educators are no longer outside or at the edge of the learning process and documentation is not merely inert material or the product of an experience. The child or children cannot be separated out as individual subjects because learning becomes foregrounded as a "dynamic, relational process of intra-action" (Murriss, 2016, p.131). Thus, pedagogical documentation can be understood as a performative agent (Lenz Taguchi, 2010, p.10) in its intra-action with/between children and educators.

Pedagogical Documentation as a Material-Discursive Apparatus

Building on pedagogical documentation as intra-active pedagogy (Lenz Taguchi, 2010), it is also positioned as a material-discursive apparatus (Barad, 2007).

Early childhood has long recognised the importance of materials and environments (Reggio, 2016) as being supportive, indeed critical to children's learning and development. Materials are understood as being facilitative, acting as provocations for children in the process of coming to know, but within a posthuman and new materialist frame, materials become something more. They become co-constructors of knowledge, entities or phenomena entangled in the assemblage of educators, children, time, space and environment. Within this frame, material refers to matter, be that human or non-human and in their account of agential realism (explored further in this thesis) Barad's (2007, p.132) core tenet is that matter (documentation) matters and that it is not "passive and immutable". They (Barad, 2007) attribute agency to the material, relevant here is that documentation is agential, and that thoughts and impressions emerge or are surfaced through intra-action. In this way, documentation is not just a 'thing', a photo or a journal, but is a 'doing' (Barad, 2007, p.183), an enactment that exerts influence in constructing meaning about children's learning. Working with photos, journals and displays (as non-human matter) educators are enabled to listen to the children but it also to listen to the documentation and what it might suggest.

Discourse does not equate with language or conversations. Rather discourse is "that which constrains and enables what can be said" (Barad, 2007, p.146), which echoes Foucault (cited in Hall, 2001) who suggests that discourse is the rules and practices that generate meaningful statements. Thus, discourse is inclusive of beliefs, practices, and taken-for-granted assumptions, e.g., the understanding of child development as a linear and universal process or the use of pedagogical documentation as summative assessment. The initial sections of this chapter present and frame documentation within a current discourse. In Baradian terms discourse alone cannot generate meaning/knowledge or constitute a reality

(Jackson & Mazzei, 2012). Meaning is made or comes to be through ongoing intra-actions of the world. In other words, discursive practices can only be understood as generating knowledge or making meaning when connected with other aspects of the world, that is the material. This might mean that children's learning cannot be perceived through educator's independent observations, nor documentation as stand-alone phenomena. It is in the dynamic, intra-active process that educators and documentation connect, generating new or different insights. Equally the documentation is not passive material, it too has agency and can be considered as performative. The documentation materialises learning and practice and in that process we/educators and documentation/matter are transformed and come to know something differently. An example of the material-discursive nature of documentation in the form of video is offered by Margaret Somerville (2016), who re-counts the following story of school/community endeavour to Love Your Lagoons.

“Despite my attempts at persuasion a group of three children decided they wanted to record stones landing on the surface of the water and borrowed my iPhone. While I hovered uncertainly, worrying about my failure to keep them on task and the thought of my iPhone landing in the lagoon, they patiently recorded their first video, throwing a single large stone into the water and then a handful of smaller ones. This first short (2.57min) video records the sound of the first stone's plop and the ripples as they spread out on the still surface of the pond. The children then played it back and decided to reject this attempt because of the overlay of their voices on the sound of stones falling into water. They then made a second video, even shorter this time (1.62 mins), trying very hard to be completely silent so that the video recorded only the

lilting sound of a shower of small stones landing on the still surface of the water.

They played it back and were satisfied”. (Somerville,2016, p.1164)

The material and discursive are intertwined in this short story, where matter and meaning do not pre-exist but occur through intra-actions (Bozalek & Kuby, 2022, p.82). The discursive meaning of the teacher’s role, the iPhone, the video, the children’s skills as video-directors, are entangled and shift depending on the moment. What does it mean to be a teacher, the one in control guiding the learning? There is an expectation that the teacher will keep the children on track, carrying out the agreed tasks. The students step outside the codes or rules of what it means to be a child in the classroom, to obey and follow instructions. The power moves from teacher to children. The materiality and possibilities of the iPhone, shifts from the property of the teacher to the children’s appropriation of it as a means of creating video clips. While the teacher is nervous about the phone, the children are focused and competent in the process of recording. The children step out of the student/learner role, almost moving into teacher mode, and take control, mesmerised by the sound and effect of stones landing in water. It is the materiality of the stones and water that the children/students responded to and documented, neither themselves nor human voices. The students actively work to erase the human voices in their production, taking a second shoot until only the plop of the stone can be heard. It is the material-discursive forces (Lenz Taguchi, 2010, p.36) that emerge in the intra-actions in-between the children, the phone, the stones and the water that open possibilities for learning that might happen. The various phenomena or elements within the assemblage, represent a complex and continually changing material-discursive entanglement, and as Somerville (2016, p.170) advises it was the students “irresistible

response to water and stones that propelled them to refuse the task they were given”. Barad (2003, p.822) signals that “neither discursive practices nor material phenomena are ontologically or epistemologically prior. Neither can be explained in terms of the other. Neither has privileged status in determining the other”. In other words, the meanings and experiences that emerged from this episode were not planned or prior, it was in and through the intra-action of human bodies, the connection with the natural environment, the materiality of the iPhone and the listening to nature that new insights were generated. All phenomena were interdependent and contingent and so meaning is never fixed in any given situation, it continually re-configures in ongoing discursive practices. What is critical in the consideration of material-discursive practices in this story of the stones and video, is that there are no clear boundaries between discourse and matter and that meaning/knowledge is generated through the intra-action.

Through Somerville’s (2016) example the material cannot be fully explained without the discursive context. The discourse is materialised in the happenings at the Lagoon and in accounting for the materials (iPhone, stones, water sounds, bodies) different meanings are made possible. Adopting a material-discursive lens to the happenings at the Lagoon helps to “resist the dominating ways of understanding what it is we should be looking for in the documentation” (Lenz Taguchi, 2010, p.88) and instead supports a reading of the event from different perspectives.

Concluding Remarks

The review of literature on documentation in early childhood shows how it is both positioned within the current discourse and framed through a posthuman and new materialist

lens. The literature review enacts an agential cut (Barad, 2007), that is, a temporary separation of elements, which disentangles the discourse and material performativity of documentation to enable more comprehensive understandings and multiple perspectives to emerge. Material matters (Barad, 2007) but discourse also matters, as it frames the prevailing positionings of documentation. Through the literature review and the thesis, I argue that the processes of generating documentation is complex, that is serves multiple purposes and that the conceptual and theoretical lens used or plugged-in shapes the analysis and the understandings of what subsequently emerges. Documentation is generated within discourse and is contingent on mutual relations between human/non-human matter.

The thrust of the review maps the landscape and discourse of documentation, framing it firmly as a form of accountability, as a means of making learning visible, as an approach to assessment, and as a means of connecting with parents. In this way, the body of literature starts from the ontological position of viewing human (children, educators, parents, policymakers) and non-human actors (documentation, materials, environment) as separate and distinct entities, focusing on what documentation is. Mapping the discourse of documentation through a posthuman/new materialist lens allows for an understanding of what documentation does and shows how the materiality of documentation is acting upon the discourses at work. So, while documentation in the opening sections is constructed within a discourse, there is a need to also consider the “material nature of discursive practices (Barad,2007, p.63).

Through the lens of current discourse, the literature review recognises that documentation is generated within a national and local context, both of which require

consideration and exert an influence on pedagogical practices. Finding the balance between external and internal requirements requires energy and perhaps, as suggested by Basford and Bath (2014), necessitates actors learning to play the game. A further tension arises in considering the trilemma of accountability, visibility, and assessment, which Saar et al. (2012) describe as a triple tug-of-war, that is the struggle to balance pedagogical work with the children, to manage increasing demands for accountability/assessment, and, at the same time, to maintain and develop the educator's own professionalism. Finally, there is a strong sense that pedagogical documentation is a "very difficult tool to use" (Dahlberg et al., 2013, as cited in Moss, 2014, p.129), but one that is not just for evaluation but for the education of educators in their work with children and families (Vecchi, 1996, p.156).

Conceptualising pedagogical documentation "as" highlights the multiple roles, possibilities, and responsibilities that are associated with its creation. Done well, pedagogical documentation opens up possibilities for change (Moss, 2014, p.130), leading to transformation of practices but also of identities. Issues of power and empowerment permeate this chapter on pedagogical documentation. Foucault (1983, p.232) suggests that "everything is dangerous" and so documentation can be viewed along a continuum, as a technical exercise that is driven by external requirements and is experienced as both a wicked problem (Fleet, 2017, p.12), and a burden (Harcourt & Jones, 2016) on educators.

Through the review, the power of applying a posthuman and new materialist lens to documentation emerges. This perspective serves to de-centre the human actors and instead to focus the gaze on the material-discursive intra-actions that are continually happening with and between documentation and other human/non-human matter. Put to work as democratic practice, documentation creates a space for authentic engagement, enabling the

materialisation of language/voices (MacLure, 2013), and acting as an entangled tool of participation. Dahlberg and Moss (2005) position documentation as an ethical encounter, highlighting the responsibility that exists in its generation. Ethical responsibility relates at one level to the child's right to be involved in how they and their learning are scripted within the documentation. Through a posthuman lens responsibility and respect extends to the other, be that human and/or non-human matter because as Barad (2007, p.392) posits "responsibility cannot be restricted to human-human encounters". A new materialist lens puts documentation to work as a form of intra-active pedagogy (Lenz Taguchi, 2010), emphasising its agency in making meaning and generating knowledge. An important point here is that documentation is read from and through its multiplicity, shifting the focus from the child to the intra-actions in-between the child and the materiality of the photos and journals. The notion of documentation as a material-discursive apparatus connects with Lenz Taguchi's intra-active pedagogy in that the entangled inseparability of all matter, be that educators, children, documentation and more, comes to the fore.

What emerges strongly from this review is the dominance of the lens through which documentation is understood and enacted. This chapter has endeavoured to bring a range of lenses to bear on documentation, each of which positions it not just 'as' something different, but as doing something differently. Without interrogation, the power of the lens may remain implicit and unrecognised, but perspectives have consequences and require explanations. In the next chapter the conceptual framework provides theoretical transparency and an explanation of how documentation is underpinned within this study.

CHAPTER 3: Conceptual Framework or Thinking with Theory

Theoretical and conceptual frameworks can be confusing and problematic (Crawford, 2020). Within the body of research these terms are often used interchangeably (Merriam & Tisdell, 2016), with some authors considering them as synonymous (Crawford, 2020). Others view theoretical and conceptual frameworks as being separate entities with no explicit relationship (Marshall & Rossman, 2016).

A theoretical framework is always present within a study, whether implicit or explicit. It highlights the methodological approach and positions the epistemological paradigm (Collins & Stockton, 2018). Anfara and Mertz (2015, p.15) suggest that theoretical frameworks are “any empirical or quasi-empirical theorythat can be applied to the understanding of the phenomena”, and Merriam and Tisdell (2016, p.15) position the theoretical framework as, “the underlying structure, the scaffolding or frame’ of the study”.

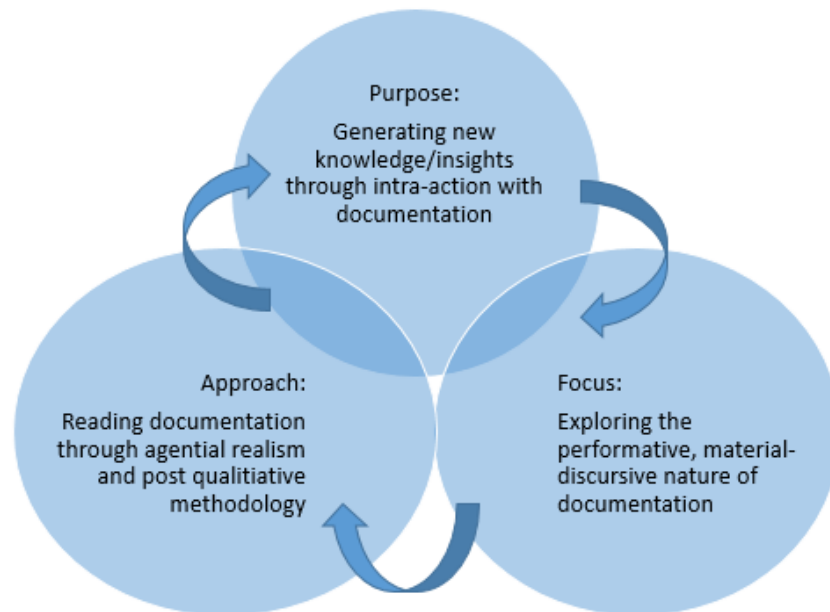
Thus, the conceptual framework can be considered in a number of ways. Maxwell (1996, p.25) proposes that a conceptual framework is “the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs research”. Miles and Huberman (1984, p. 33) suggest that the conceptual framework is “the current version of the researcher’s map of the territory being investigated”. This definition uses a metaphor from geography, indicating an outlining or mapping of the landscape or topic and its use of “current” gives a sense that the conceptual framework may change over time. Maxwell (1996, p.25) endorses this viewpoint, arguing that the conceptual framework “is a visual display of your current working theory—a picture of what you think is going on with the phenomenon you’re

studying”. It guides thinking and supports decision-making (May, 1993) and can be considered as, “tools for researchers to use rather than totems for them to worship” (Weaver-Hart, 1988, p. 11). The conceptual framework is or should be dynamic and may change after a review of the literature (Berger & Patchener, 1988,), as is the case for this study, or during the research process (Glatthorn, 1998, p. 87). Ultimately, it “forces you to be explicit about what you think you are doing” (Robson, 1993, p. 150).

This study draws on the work of Ravitch and Riggan (2017), who contend that the theoretical framework is contained within the conceptual framework. Ravitch and Riggan (2017, p.5) suggest that the conceptual framework builds “an argument about why the topic one wishes to study matters and why the means proposed to study it are appropriate and rigorous”. They centralise the conceptual framework as a superstructure that explains the rationale for the study, outlines the design, and addresses the theoretical foundations. Ravitch and Riggan (2017) identify experience, literature, and theory as the core elements in constructing a conceptual framework. The purpose of the conceptual framework is to map the development or pathway of the study for the reader but more importantly for the researcher. I have come to this realisation late in my study. The conceptual framework for this work has been in my head from the start as a great blooming, buzzing confusion (James, 1890). I could contend that the basis for the conceptual framework lay in the original thesis proposal and ethics submission. However, I failed to recognise its value as a separate, working document, a way of “thinking on paper” (Ravitch & Riggan, 2017, p.210) that could have more efficiently helped me to navigate the research process and value the hurdles and time delays along the way.

The visual mapping of the study commences with a summary of its purposes and processes (Diagram 2), which lie at the heart of the research journey.

Diagram 2: *Study summary*

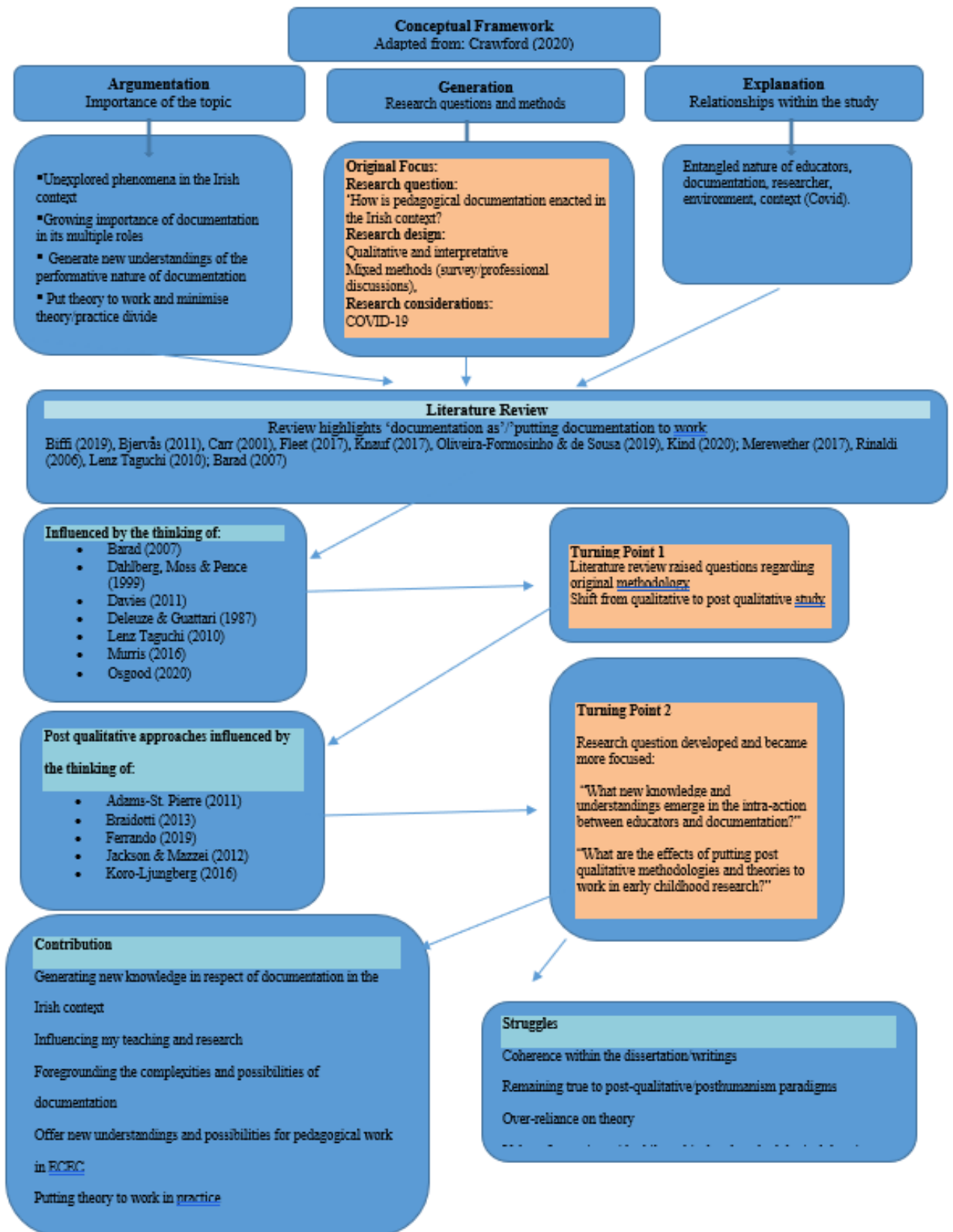


The focus of the study is on surfacing the performativity of documentation. Conceptualising the purpose and the approach as a Venn diagram (2) highlights the relationships and interdependencies between the research elements of the study. The research process is non-linear, with the overall purpose guiding the selection of methods. In this way, the study remains integrative and evolving, as the intra-views materialise new insights and generate new knowledge of the topic.

If Diagram 2 summarises the “what” or core of the study, then the conceptual framework (Diagram 3) depicts the “how” and “why”. In short, the conceptual framework

explains the evolution of the study and highlights the choices that were made and that altered or informed the research direction. While the core aspiration of the study held steady, the research did not develop as planned, in that it was re-shaped through engagement with the theoretical and methodological literature. The conceptual framework outlined below (Diagram 3) draws on Crawford's (2020) visual model, which offers a sense of the movement and turning points encountered on the research journey.

Diagram 3: Conceptual development of the study



While the graphic depictions and narrative explanations of the conceptual framework are presented neatly in this chapter, the reality and pathway of its development is far from neat. In constructing this conceptual framework, I have come to recognise the importance of graphically mapping the elements of, and relationships within the study and of revisiting, reflecting, and revising this framework regularly throughout the research process. I have begun to see what could have been perceived as “stumbling blocks” were in fact valuable pauses that helped to re-centre the work (almost like a navigation system). I have learnt that the conceptual framework is, but should have been from the start, a “non-human, critical friend” through the research process. I should have trusted in the materiality of the conceptual framework. The concept of the conceptual framework as a superstructure (Ravitch & Riggan, 2017) is daunting and in this chapter the evolution of my thinking with the theoretical aspects of the study are both traced and mapped. I include and hold tight to theory which on one level appears to have led me down a rabbit hole, but which has illuminated other pathways. The theoretical avenues explored contributed to the direction of the research and so while ‘documentality’ for example acted as a starting point, but fell by the wayside along the journey, some of its essence is included in the thesis as a visible knot, which enfolds and connects (Taylor & Fullagar, 2022, p.73) the many strands of the thesis.

The aim of this chapter is to provide coherence and academic confidence in the study and to expose the developmental flows and deviations in the research process. Chapter 3 (Conceptual Framework) and chapter 4 (Inquiry or Methodology) while written separately, are closely intertwined. They aim to flow together like a river, wandering and meandering, finding meaning in aligning the concepts underpinning the study in this chapter with the post qualitative methodology explored in chapter 4. The following sections will draw on Ravitch

and Riggan's (2017) structure to narratively examine personal experiences that have guided the research, the literature that has shaped its direction, and the theory that has informed the study.

The Influence of Experience on the Conceptual Framework

My interest in documentation emerged from the interactions I had with early childhood educators in my role as Placement Coordinator in two Irish Universities over the period of a decade. As part of my assessment visits to students in the field, I saw increasing volumes of photographs on display and included in children's learning journals, but I frequently wondered about their purpose or pedagogical effectiveness. I heard staff educators and managers anguish about the time required for documentation, the cost of printing photographs, the perceived pressure to track children's learning, and the apparent apathy of some parents when offered the finalised journals or displays. Coupled with this situation, the Irish Government had begun over two decades to centralise early childhood on the national agenda, increasing investment and charging the Department of Education with the development of an Early Years Education Inspections (EYEI) regime. Documentation generated as part of curriculum and assessment within the settings is core to the EYEI inspections. These developments have begun to signal the importance and potential power of documentation at a local and national level and have formed the impetus for this study.

This study seeks to explore "what new knowledge and understandings emerge in the intra-action between educators and documentation?" and "what are the effects of putting post qualitative methodologies and theories to work in early childhood research?" The focus in

this aspect of the research is on the performative nature of documentation and how, when plugged into and read through theory new perspectives on pedagogical practice and children's learning emerge.

Ravitch and Riggan (2017, p.8) contend that the conceptual framework provides the overarching argument for the study, making a case for why and how it should be done. And so, based on my own professional experiences and recognising the potential for documentation as pedagogic practice, the conceptual framework started with a simple question "what is documentation doing, what is its effect?" This research question evolved many times as I engaged critically with both the topical and methodological literature.

The Influence of Literature on the Conceptual Framework

The literature, which is central to the conceptual framework, has been the driver of change within this study and has shaped the format and methodology of the research. The body of literature relating to documentation in early childhood is vast. What initially emerged most strongly through the critical review process was the multiple purposes of documentation as determined by educators, parents, and policy makers. This pattern positioned "documentation as..." as an approach to assessing learning and making children's learning visible; as supporting engagement with parents; as a means of accountability; as supporting professional practice; as democratic practice, and as a form of intra-active pedagogy. The literature review highlighted the expectations of and multiple possibilities for documentation. It also revealed documentation to be fluid and chameleon-like, depending on the lens that is used.

The power of the “lens” emerged strongly through the literature and shifted or extended the focus from ‘documentation as’ to what ‘documentation does’. The new materialist influence of Lenz Taguchi (2010), who drew extensively on theoretical concepts in revealing the complexities and layers of documentation practices enacted in early childhood settings has influenced this study. The work of Lenz Taguchi (2010) Murriss (2016) amongst others has prompted the shift in considering what documentation does, its effects and workings as part of an entangled assemblage. Diffracting through the new materialist lens has altered the research focus and the conceptual framework for this study. Reading the work of Lenz Taguchi and those authors whom she cited, brought me to a threshold where I engaged with pedagogical, philosophical, and theoretical thinking in the spheres of posthumanism, new materialism, and post qualitative theory. I could not go back.

The journey into the post qualitative arena led me to take a different approach to research. Jackson and Mazzei (2012) offered the tools to “plug-in” theories (to analyse research through theoretical lenses) to my local research, which would bring another perspective to revealing documentation *as*, and exposing what documentation *does*. Through this journey I struggled, went down rabbit holes, and spent significant amounts of time trying to grasp the meanings and language of theoretical, methodological, and philosophical concepts that were new to me and which at times felt out of my grasp. However, the use of a post qualitative methodology, as embraced by St. Pierre (1997) and Jackson and Mazzei (2012, p.6), is appropriate for this study in that it enables data or the documentation to turn into something different. The methodology is also rigorous, trustworthy or ethical in the sense that it is transparent but perhaps also “continually changing, situated and divergent”

(Koro-Ljungberg, 2016, p.86) and that the tracings of my thinking are exposed within the materiality of the text.

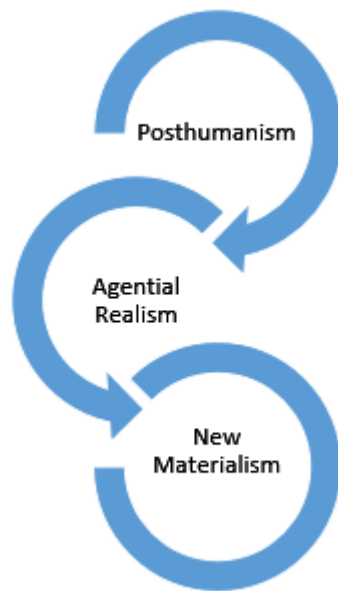
This study was from the outset a process of back and forth in my thinking. I was troubled about the rigor of the study and the changing focus of the research question. I was concerned that I was being self-indulgent (Greene, 2013) in allowing myself to be seduced by theories which, at times, appeared to dominate the study.

The Influence of Theory on the Conceptual Framework

The theoretical framework, which is the third element of Ravitch and Riggan's (2017) conceptual framework, draws on the topical research that emerges through the literature review and connects it to big ideas or formal theories. If the conceptual framework comprises the overall scaffolding which guides or enables the construction of the study, then the theoretical framework provides the underpinnings or foundations (Crawford, 2020), giving sense to the methodological choices and my positioning and values as the researcher. Coming to the central and influential theories of the study was a meandering affair. Ferraris' (2013) theory of documentality was a starting point of inquiry in constructing the theoretical framework. His seminal work on the performativity of documentation positions documents as social objects, separate from individuals, and the basis of social reality (Ferraris & Torrenco, 2014, point 18). Ferraris (2013) attributes prominence to objects, relative to subjects within his theory of documentality. In contrast to separating out documents as powerful stand-alone entities, this study works to position pedagogical documentation as a relational phenomenon.

Through my theoretical journey posthumanism, agential realism and new materialism emerged as most relevant to the study under construction (Diagram 4).

Diagram 4: *Components of the theoretical framework*



Posthumanism

Ferraris (2013) appeared initially to offer a starting point for this study, as his theory of documentality positioned social and inscribed documents as powerful, in that they assume a performativity in their own right. However, while ascribing power to documents resonated with this study, which is focused on pedagogical documentation, Ferraris' theory did not adequately explain the relationship between material documentation and humans. I felt that posthumanism could offer insights to or act as a starting point for the study.

Posthumanism is the conceptual starting point for this study and is a broad term which describes a “constellation of different theories, approaches, concepts and practices” (Taylor, 2016, p. 6) that displaces how we perceive the centrality of humans across all strands of life. The term posthuman or posthumanism is applied across disciplines to reconfigure what it essentially means to be human (Ferrando, 2013) and aims to challenge and disrupt ways of thinking and knowing. As Murriss (2016, p.46) suggests “posthumanism focuses on the interdependence between human animals, animals and nonhumans”.

The initial attraction to posthumanism, which was inspired by the writings of Braidotti (2013) and Taylor (2016) amongst others, was that it seemed to offer an alternative way to consider the relationship between human and non-human matter. As an entry point, posthumanism “introduces a qualitative shift in our thinking about what exactly is the basic unit of common reference for our species, our polity and or relationship to the other inhabitants of this planet” (Braidotti, 2013, p2).

Posthumanism works to de-centre the human, recognising that “humans are but characters in a cast of many” (Ulmer, 2017) and that humans have, in this era of the Anthropocene, been attributed too much power to the exclusion of all others (non-human).

Posthumanism belongs along with postmodernism and poststructuralism, to what St. Pierre (2014) refers to as “the posts”, an informal title for a family of diverse theories that question, and critique accepted knowledges and can be considered as part of the ontological turn (St. Pierre, 2014). Braidotti and Hlavajova (2018, p.1) summarise posthumanism as “the critique of the humanist idea of man as the universal representative of the human”, working to decentralise the human and breakdown the well-cemented Cartesian divides of us/them/other. As Barad (2007 p.136) advises “posthumanism doesn’t presume the separateness of any ‘thing’, let alone the alleged spatial, ontological and epistemological distinctions that sets humans apart”. It is this separation and essentialising binary (Taylor, 2016, p.5) between human and non-human that has enabled man to be elevated to a privileged position in respect of all other matter and which is problematic. Haraway (2008, as cited in Osgood & Giugni, 2016) suggests that posthumanism offers an invitation to move beyond critiquing/deconstructing/resisting to embracing/promoting a dynamic openness which reflects intellectual and existential enquiry.

The concept of human has exploded under the pressures of global economics, environmental sustainability, and technological advancements. Developments in these areas have troubled what it means to be human and have brought into question the fundamental relationship of man with and to the world. Braidotti (2013) is concerned that we are living in unprecedented times where humans have and continue to negatively impact on the world. Emerging over many years is a call to develop new understandings of the human.

Posthumanism has emerged as a reaction to humanism (Wolfe (2010, as cited in Murriss, 2016, p.46) and to have a sense of posthumanism it is helpful to briefly tunnel back through history like an earthworm (Barad, 2007, p.231). Humanism emanated from the

Enlightenment period, centralising “mankind” and basing the definition of what it meant to be human in terms of the powerful adult, western, white, male, who had the most privileged role or position in society. All other human categories were subservient to and measured against this ideal. The Enlightenment bestowed the privileged and central position to human beings, centring them (us) as, “lording it over the planet, apart and above from the environment and alone having the capacity for agency” (Moss, 2019, p.142), which raises questions of who matters and what counts (Taylor, 2016, p.5).

The relationship between humanism and posthumanism, while presented here as discrete units, cannot be considered as separate or negative. Braidotti (2013a) understands posthumanism as a departure from social constructionism and Ginn (2015) posits that the concept of the posthuman can be understood more as a development of, rather than a break from, humanism. Thus, posthumanism can be considered as a line of flight, a way of thinking and being that challenges taken-for-granted assumptions and systems of knowledge production. Posthumanism theorises the notion that ‘things’ (non-human matter) are dynamic and agentive (Diaz-Diaz & Semeneć, 2020; Jackson & Mazzei, 2012), and this philosophy seeks to shift anthropocentric thinking by challenging presumptions of human exceptionalism.

In overviewing and problematising the condition of human, non-human and in-human, Braidotti (2013) stresses that the taken for granted understanding of what it means to be human is not consensually shared and that the category of human cannot be glossed over un-problematically. What does it mean to be human, is that an all-encompassing category, who is included and excluded within that category? Being human comes to be defined in binary terms, and explained through comparisons, that is, human/animals, human/nature,

human as mature/immature, sophisticated/primitive (Murriss, 2021, p.65). A binary stance suggests that being human is predicated on individualism and contingent on a privileged contrasting with all others.

Braidotti (2018) highlights that the missing peoples of humanism are the “real life subjects whose knowledge never made it into any of the official cartographies” (p.21) and these include women, people of colour, and children. Humans without power, those who deviate from the norm or who are fundamentally different or marginalised, have been lost or deliberately excluded from the category of human, which is influenced and shaped by racism, sexism, classism, and ableism. In a humanist frame, difference, or otherness spells inferiority (Braidotti, 2013, p.15). A forgotten other in the human debate is that of children, which has relevance for this study. Murriss (2021, p.63) makes the case that there is a “troublesome silence about age as a category of exclusion in the general posthumanism literature”. While early childhood has been to the forefront in the posthumanist movement (Dahlberg, et al., 1999/2013), the not-fully-human child has been conspicuously absent from the discourse. The invisibility of children, their rights and protection is exemplified for example through their absence from the legislative and policy debate in Ireland until 2012 when a referendum was passed to enshrine children’s rights in the constitution. The pervasiveness of ‘misopedy’, which is understood as “a non-clinical sense of antipathy towards children and childhood” (Rollo, 2018, 16ftn 2) explains in part, the lack of value that is placed on early childhood in general, on early childhood courses/programmes, educators and on early childhood research (Murriss, 2021). If young children do not fit within the category of human, then it is unsurprising that associations with them are also rendered invisible or lacking in status and value.

Creating categories of inclusion/exclusion perpetuate binary divides which influence thinking and shape discourses in unhealthy ways, for example, the nature/culture divide that has seen humans exert destructive power (Taylor, 2017) over animals and natural habitats (Pacini-Ketchabaw, 2013) and the human/non-human divide that renders swathes of our society invisible. Binaries opposites are limiting in that we are consciously or unconsciously caught into existing ways of thinking and cannot imagine or think otherwise. Binary thinking creates accepted norms (e.g., able/disabled; man/woman; white/coloured), but the reality is that they are “social constructions that do not correspond to any actually existing polarities in the world but intervene in it theoretically and practically (Murriss, 2021 p.79). To move beyond the binary divides of humanism, posthumanism opens up possibilities for new ways of thinking/being/doing and seeks at a basic level to examine how the delineating boundaries are configured and reconfigured. However, moving beyond the human/non-human binary to a posthumanist way of being (and researching) is not straightforward as “there are in fact many humanisms” (Braidotti 2013, p50), e.g., romantic, revolutionary, liberal, secularist, anti-humanist humanisms (Davies, 1997) and forms of posthumanism (e.g., transhumanist). As Taylor (2016, p.21) suggests “there is no one line from humanism to posthumanism but, rather, various complicated genealogies”, which will illuminate the connection with pedagogical documentation.

Putting posthumanism to work.

Posthumanism helps me to think differently about documentation and its performativity in early childhood, by paying attention to the more-than-human contexts (Gannon, 2016, p.128) and in drawing on a methodological approach that allows for creative

or flexible research. This study is positioned within a posthuman frame, recognising the influence of pedagogical documentation on the practice and thinking of educators and in so doing attempting to centralise the matter or material of the artefacts, display books and journals. This posthuman study will allow differences to emerge through the research, it will work to disrupt anthropocentric thinking, and consider the relational intra-actions between educators and documentation. While the concept of posthumanism strongly resonates with my own beliefs, the language and concepts within this philosophical field are challenging to understand. Hultman and Lenz Taguchi (2010, p.521) highlight that, no matter how informed we are on posthumanist theory, “our perceptual style and our habits of seeing” continue to influence how we act and what we perceive. Hence, in reading for this study my challenge is to unlearn what I have learned (Lyotard, 1992, p.117). However, as Barad (as cited in Dolphijn and van der Tuin, 2012, p.54) suggests, “it is not easy to resist the gravitational force of humanism”, and so it is a struggle in undertaking this research to ensure that materiality matters.

While posthumanism may have inspired my initial thinking for the research, it is put to work within this study through the methodology, namely a post qualitative approach. As echoed elsewhere in this thesis, there is a sense in the academy that while there has been a paradigm shift in ‘post’ theorising (Osgood & Giugni, 2015, p.223), there has been less emphasis on posthumanist methodologies. Putting posthumanism to work means moving away from research practices that separate out humans and afford them a privileged position within the process of inquiry. In this study that means, constantly working to displace my gaze from educators to the documentation itself and in connecting documentation with other human and nonhuman elements in the assemblage. In other words, within the posthuman

frame, the research must account for the other and has to avoid falling into the trap of all-too-human reading and analysis (Gannon, 2016, p.130) and at the same time enacting posthuman research is to be entangled with the phenomenon being studied.

There are implications in putting a posthuman approach to work. Taylor (2016, p.8) suggests that ethics begins with the re-thinking of the interdependence of everything and everyone. Ethics is profoundly relational and posthumanism requires “a new ethics of engagement for education by including the nonhuman in questions about who matters and what counts...” (Taylor, 2016, p. 8). What is required is an ethics of care and ethics-in-relation. Arndt (2016, p.9) also acknowledges the crucial necessity to re-think ethics within posthuman research, suggesting that it means being respectful and present or aware of other things, places and beings. As with Dahlberg and Moss (1999) who understand ethics as an encounter, which is always happening, Arndt (2016) proposes an entangled ethics or an ethics of the unknown, which involves taking response-ability for the other, responding ethically to the other be that human/non-human. Taylor (2016) makes the point that ethics is not about trying to see the world from inside someone else’s shoes, as this infers a cut or separateness from the world. Posthumanism works to eliminate or minimise human/other and this resonates with Barad (2007, p.394) who suggests that responsibility is at the core of ethics and that “responsibility entails an ongoing responsiveness to the entanglements of self and other, here and there, now and then”. In short, ethics is everywhere and always within a posthuman frame which engages with the vibrancy and agency of everything.

As a theory or methodology, posthumanism troubles traditional ways of thinking, being and of doing research. Posthumanism offers an alternative way of thinking about our (human) relationship in and with others, proposing that we (humans) are not separate from

the world, we are entangled. It is not about the individual and sameness and within this posthuman paradigm, difference is taken as a productive force.

Braidotti, (2013, p.29) acknowledges that thinking that the posthumanist can fully escape a humanist world is not practical and is of limited use. There is a sense that posthumanism must remain committed to human needs. In other words, posthumanism must consider humans 'with' others and most definitely the baby should not be thrown out instead of the bath water (Bennett, 2016, p.61). Posthumanism is more than a paradigm or methodology, it is a way of life – a broadening of what constitutes agentic matter that is deserving of respect. A challenge lies in the enactment of posthumanism and walking the talk (Pacini-Ketchabaw, et al, 2016) across life and research. Haraway (2016, p.3) urges staying with the trouble in finding ways to connect across binary divides on the basis that new insights and knowledge are generated within flattened, relational ontologies, where all matter matters.

Posthumanist research requires that nature/materialities/others are given attention (Jackson & Mazzei, 2016, p.105) and that this engagement enables experimentation with methodology (Koro-Ljungberg, 2016) offering potential new readings of data (Gannon, 2016, p.134). Taking the posthuman research route means treading the path of uncertainty, recognising the interconnectedness of and intra-actions between and amongst all things. A posthuman perspective does not allow for fixed meanings but requires movement and flow, recognising the contingency of all matter. It may be that in working to enact a posthuman ethos in this study, engagement with documentation will support new conversations to emerge (Malone & Kuby, 2022, p98).

If posthumanism posits what needs to happen in re-positioning the human/nonhuman relationship, Barad (2007) offers a ‘how’ of this might be enacted through their theory of agential realism.

Agential Realism

Agential realism is an overarching framework from Karen Barad that reconfigures the human/non-human relationship and which has ontological, epistemological and ethical dimensions or implications for how we think, act, research and live. Agential realism has particular relevance for this study which attributes agency to documentation and which seeks to surface new knowledge that emerges through intra-action. Core concepts linked with agential realism, include intra-action, entanglement, erasure, phenomenon, indeterminacy, diffraction, agential cut, agential separability and spacetimemattering (Murriss, 2022, p.6), some of which permeate this study. These concepts themselves are already entangled and under the umbrella of agential realism they work together to trouble the notion of separateness, offering a philosophy and methodology to understand the nature of being and knowing differently. Some of Barad’s (2007) concepts will be put to work through examples offered in the sticky stories, which are presented later in this study. In this section I outline some starting points.

At the heart of agential realism is the proposition that everything is entangled, always in relation ‘with’ and nothing is simply there as a given; that there are no bodily boundaries, that all matter (human/nonhuman) is agentive in intra-action and that through/in the process knowledge is generated. Barad’s (2007, p.ix) opening lines in their seminal work state that the book/work is about entanglements and that “to be entangled is not simply to be

intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence”. Agential realism challenges the notion of separateness, or of separate objects intra-acting, with Barad positing that beings are not independent entities but are always entangled or in relation with others (human and non-human). It is because we humans are always in relation or entangled with others that “each individual is always already a crowd” (Barad & Gandorfer, 2021, p.60) and whether known or not, “we lack an independent, self-contained existence”. Agential realism is more than a theory, it is way of thinking and a letting go of ‘I’ as a concept and a consequence everything changes, with the “rug pulled from under our established educational assumptions about human agency, causality, intentionality, and voice” (Murriss, 2022, p.3). That said, agential realism does not focus on erasing the human (Murriss, 2022), but argues instead for displacing the human to allow the gaze to shift from the human to the vibrancy of materiality and matter.

Materials are everywhere and are part of our world and experiences. However, materialism depends on matter. In Baradian thinking, (2007, p.151) all bodies (human, environment, objects) are matter or substance. But matter is not stable or fixed, it is a substance or phenomena that materialises in its intra-active becoming. Barad (2007) proposes that “matter is a dynamic and intra-active becoming that never sits still” (2007, p. 170). Bennett (2004, p358) also recognises the performativity of matter, proposing that “so called inanimate things have a life of their own, that deep within them is an inexplicable vitality or energy” and she names it as ‘thing-power’, suggesting that it is active, intricate and awesome (p.364), hinting at its potentiality. The presence of matter and the relationship between human and non/human has come to the fore through the contemporary ‘material turn’ (Coole & Frost, 2010). The material turns moves away from Cartesian understandings of matter as

material objects that are separate, discrete and inanimate and instead draws attention to the “vibrant, constitutive, aleatory ...” (Coole & Frost, 2010, p.14) nature of materiality. While the material turn acknowledges the importance of matter, it is Barad’s agential realism that signposts how through intra-action matter comes to matter.

The word or concept of ‘inter’ signifies the concept of between or amongst and infers a coming together of separate entities. In definite contrast, ‘intra’ refers to the concept of ‘within’ which suggests that knowledge, people, things and meanings materialise from (within) the encounter. Intra-action signifies “the mutual constitution of entangled agencies” (Barad, 2007, p.33) and a consequence of this process is change and transformation as “marks are left on bodies” (Barad, 2007, p.176). Encounters leave traces. The concept of intra-action/intra-activity, which is core to agential realism, refers to the ways in which “discourse and matter are understood to be mutually constituted in the production of knowing” (Lenz Taguchi, as cited in Jackson & Mazzei 2012, p 115).

Intra-actions entangle and have no separations. So, through the intra-active lens of agential realism, neither documentation (things/matter) nor educators or children (human) exist independently of each other. Both exist in relation to or contingent upon each other and there are other phenomena at play in this intra-active relationship. Other phenomena, for example in relation to this study, in the assemblage include the materials (photos, markers, card, digital equipment) that shape the documentation, the time and space that is allocated, the others who may be involved (parents, inspectors) and the values/beliefs of the educators that are at work. As explained by Murriss and Zhao (2022, p.28) agency does not reside in the human, but exists and flows within the complex and ongoing, dynamic relationships. Documentation can transform thinking about learning and pedagogy. The documentation

does not tell a story in splendid isolation, but it is only in encounters with the other that possible meanings are made. In other words, reality is composed not of things-in-themselves ...but of things-in-phenomena (Lenz Taguchi, 2010, p.73), in intra-action. When educators engage with the documentation they are seeing and interpreting through the limitations of their own knowledge and understandings of learning and their experience and value of generating documentation. The very form, quality, nature and positioning of the documentation suggests something and influences how it is perceived.

Ontoepistemology

Agential realism is premised on the inseparability of the epistemological, ontological, ethical and political. It dissolves the boundaries between human/nonhuman, material/discursive, nature/culture and posits that nothing is or is known in advance and that everything arises through relationships. Hence, agential realism is a relational ontology where “all bodies, not merely ‘human’ bodies, come to matter through world’s iterative intra-activity” (Barad, 2003, p.822) and where the “primary ontological units are not ‘things’ but phenomena” (Barad, 2007 p.141). It is the entanglement of matter that generates knowledge and agency in and through intra-action. Hence matter and meaning (material-discursive) are mutually constituted in the processes of coming to know and this is what Barad (2007) terms ontoepistemology. The argument for ontoepistemology, as opposed to ontology/epistemology, is that in we do not exist in isolation and cannot come to know in isolation, we are always in relation with other elements in the world and we come to know with and through others, be they human and/or nonhuman. Knowing is as Barad (2007) suggests part of the world making itself intelligible to another part and this is happening

constantly through intra-action. The point is made that we cannot come to know by standing outside of the world, we only know because we are part of the world (Barad, 2007). The separation of ontology from epistemology creates an artificial distinction between subject/object, human/nonhuman, mind/body and these binaries are dissolved within the frame of agential realism.

A challenge for Barad (in Juelskjær et al., 2021, p.120) in coming to agential realism was “what methodology might there be for putting different insights into conversation with one another that does not belie a relational ontology?”. Diffraction and diffractive analysis offer a solution.

Diffraction

Barad is closely associated with the concepts and practices of diffraction and diffractive analysis. They have been influenced by Haraway (1997 as cited in Barad, 2007 p.71), who understood diffraction as an “optical metaphor for the effort to make a difference in the world...” Barad developed this notion of diffraction further as a physicist and researcher. Diffraction as a physical phenomenon relates to the behaviour of waves and the ways in which they respond to barriers, overlapping and combining, creating patterns of difference and offering a sense of same but different. The classic example to illustrate diffraction is one of two stones dropped into a pond, both of which causes ripples. These ripples or waves radiate out and overlap, creating a different or diffractive pattern in the water. Thus, diffraction has come to mean to “break apart in different directions” (Barad, 2014, p.168), a (re) configuring of patterns (Barad, 2014), and it is concerned with fine detail. Diffraction is not seen as something “to-be-captured, to-be-assimilated, and, eventually, to-

be-wholly-eradicated” (Geerts & Van der Tuin, 2021, p.174), rather it is to be valued as a means of generating knowledge differently. Diffraction infers movement and an interference of/with patterns, generating new forms of motion. Bozalek and Murriss (20220, p54) highlight that diffraction is a rich concept to think-with. It is a concept and practice that guides us to consider not only what differences emerge or are seen in a given event, but to look at the effects of difference. Because diffraction is put to work within the frame of agential realism, nothing is fixed or can be anticipated in advance.

Barad uses the physical process of diffraction as methodology (Bozalek, 2021, p.36) and as a tool of analysis or way of surfacing and bringing the realities of entanglements to light. Barad (2007) traces the concept of reflection, which is prevalent in qualitative research, to help position diffraction within a post qualitative frame. Reflection is a metaphor ‘based on the phenomenon of a pattern of light that is taken to reflect an actual object or entity” (Davies, 2014, p.734). Reflection as a methodology or practice is concerned with representing that which is already there, what is already known. In contrast, Barad’s diffractive methodology is “a method of diffractively reading insights through one another, building new insights, and attentively and carefully reading for differences that matter in their fine details, together with the recognition that there intrinsic to this analysis is an ethics that is not predicated on externality but rather entanglements” (Barad as cited Dolphijn and van der Tuin, 2012, p.50).

Adopting a diffractive reading or analysis of the data is to think differently, to examine the assemblages and entanglements and to consider “how something different comes to matter” (Davies, 2014, p.734). The role of the researcher is not merely to trace what already is known or evident from the data but to explore or map “unforeseen, not-yet-known

possibilities” (Moxnes & Osgood, 2018, p.298) and the challenge is to “disrupt habitual modes of hearing and seeing research data” (Levy et al., 2016, p.194). Important here is that diffraction is not about any difference, but about differences that matter (Barad, 2007, p.378). Consequently, Barad’s diffractive methodology does not merely juxtapose or contrast theories to surface difference but is relational (one thing in relation to another) and instead reads one element (be that theory or policy) through another. In short, the patterns or effect of difference emerge through the diffractive reading. Jackson and Mazzei (2012) draw on diffractive analysis in plugging data into theory, installing themselves into the assemblage or event in an effort to see differently because as Barad (2007, p.51) says “to ‘see’ one must actively intervene”.

Putting agential realism to work.

Barad’s overarching theory of agential realism offers a way of seeing matter differently, providing a way to understand the interconnected relationships between human and nonhuman matter. Agential realism also maps the process of coming to know through intra-action. Understanding the nature of being and knowing from this perspective, breaks down the ontological/epistemological divide and emphasises a single ontoepistemology, setting in motion different modes and understandings of relationality (Taylor, 2016, p.13).

In terms of research and this study in particular, agential realism becomes a tool with which to see and think differently. In practical terms, thinking with agential realism re-inserts the material into the process of analysis (Jackson & Mazzei, 2012 p. 135), shifting the gaze of the researcher beyond the human voice and experience. The question also arises in within an ontoepistemological frame as to what is meant by data or research participant

(Taylor et al., 2021, p.171), within a fluid methodology. Enacting a diffractive analysis creates a different relationship between researcher and data, which Jackson and Mazzei (2012, p.135) see as offering “much productive potential for research methodologists.

In addition, Barad (as cited in Heckman, 2010) identified four principal implications of agential realism which relevance for this study.

Firstly, putting agential realism to works, situates knowledge claims in local experience. Secondly, agential realism privileges neither the material nor the cultural, that is the material-discursive is valued. Thirdly, agential realism entails the interrogation of boundaries, which has different ontological implications. Fourthly, agential realism underlines the necessity of an ethic of knowing; our constructed knowledge has real, material consequences (p.73)

Agential realism is a field of forces (Lather, 2016), which helps us think about how meaning is made and how discourse comes to be, but it also shows how discourses are materialised and consequently how they can be disrupted and perhaps transformed. In letting go of notions of separateness and fixed stability and in understanding the interconnectedness of all things and matter, possibilities for new knowledge and insights emerge. In embracing agential realism, I wonder how do educators intra-act with the materiality of documentation in ways that produce different becomings and knowings? Agential realism is a hopeful and respectful ontoepistemology.

New Materialism/Materiality

New materialism is one of the many nested theories that connect with posthumanism and is a term that was coined by Rosi Braidotti and Manuel DeLanda in the mid-1990s (Ferrando, 2020, p.158). According to Ferrando, new materialism arose as a reaction to the omission of the material in the philosophy and theory of postmodernity. This point is taken up by Barad (2003, p.801) who contends that the “only thing that does not seem to matter anymore is matter”. The nature of how material and matter are perceived has altered over time, from Descarte’s inert matter to Einstein’s discovery of atoms, which fundamentally changed how matter is understood, to Bohr and Barad’s (2007, p.128) assertion that there “are no determinately bounded or propertied entities...”, thus re-focusing attention on matter and giving rise to new materialism.

New materialism speaks to a new ontology, a way of understanding the relationship or intra-action between human and non-human matter and is part of an ontological or material turn. The material turn moves the focus away from a subject/object divide and instead promotes more holistic understandings of the nature of being and knowing. New materialism fundamentally recognises that all matter, both human and non-human, co-exists in a web of agential relationships that are in constant change.

Bennett (2010, p.6) offers alternative thinking in suggesting that matter has “thing power”, that is “the curious ability of inanimate things to animate, to act, to produce effects dramatic and subtle”. In their study Moxnes and Osgood (2018) explore how laptops, computers and phones have agency in how they influence, tempt, and distract teacher educators when in meetings or lectures. Moxnes and Osgood’s thinking has come into stark relief for those working or teaching exclusively online during the pandemic. Our

relationships and encounters with technology have created very different teaching and learning experiences. Bone (2019), in a separate study, considers how matter in the form of a preschool chair can suggest academic activity for children, but equally can raise issues of bodies and space when used by adults. The adult can feel uncomfortable and perhaps feels silly or unprofessional sitting in a child's chair. In philosophising with children Murriss (2016) signals how children who have been drawing on wallpaper suddenly notice something new in the wall display and raise questions. In Murriss' (2016, p.12) opinion, without the "force enacted by the wallpaper some of our conversations would not have taken place". Kuntz and Presnall (2012, p.736) explore the effect of interviewing while moving/walking and conclude that, "through material interventions, we have different thoughts, and through shifts in metaphorical conceptualisations, we experience shifts in reality and possibility".

In each of these scenarios, thing power is visible and the materiality or matter of the laptop, the chair, the wallpaper, or the pathway, all opened up new possibilities for new thinking or new re-actions. In this way, new materialism re-positions the centrality of vibrant materiality within an entangled assemblage, which relates to early childhood documentation within this study. While Maria Montessori and Loris Malaguzzi of Reggio Emilia have long held beliefs that materials and environment constitute a 3rd teacher, there has been a "blindness toward the question of *how* educational practice is affected by materials" (Sørensen, 2009, p. 2).

The very act of using materials within the documentation process prompts thinking, leaves traces, and makes new perspectives possible. Elfström Pettersson (2015) offers an example of how projected photos/images of children's socio-dramatic play supported children to remember an earlier drama activity. The photos/images, the camera as an

apparatus, all contributed to, and became part of, the documentation process and helped make memories. The materiality of the photos constructed new narratives amongst the children and educators.

The body of literature that explores the material-discursive practices of pedagogical documentation in early childhood is expanding. New materialist insights (Coole & Frost, 2010; Lenz Taguchi, 2010; Murriss, 2016) highlight the need to examine all aspects of the materialist research process, which is apt for this study in which pedagogical documentation and educators intra-act within specific contexts. It is the intra-action and what happens and emerges in those in-between spaces (between educators and documentation) that are of specific interest to this study. What new insights or learnings are evident through the material-discursive intra-actions? As both Barad (2007) and Lenz Taguchi (2010) suggest, it is in the between spaces where human and non-human matter meet that new learning is generated.

Concluding Remarks

The conceptual framework positions this study as a dynamic, methodological, ecosystem (Ravitch & Carl, 2016) which reflects my own interests and theoretical leanings. In short, the framework acknowledges the multiple and interrelated influences that shape the study and offers an overview of the context and turning points in the move from design to engagement. Mapping the conceptual framework has necessitated a slowing down and reappraisal of the arguments for this study. Perhaps more importantly, it has called into question why this study matters, the coherence between the research question/s and methodology, and the critical connections between methodology and theory. The conceptual

framework grounds this study and seeks to highlight the complexity and interrelatedness of experience, literature, theory, and methodology in guiding the research process.

CHAPTER 4: Methodology

A Post Qualitative Methodology

The methodological approach for this study seeks to progress my understanding of documentation as a performative agent and to respond to the question: “what new knowledge emerges in the intra-action between educators and documentation?” To respond to the research question, the study aligns with a posthuman/new materialist conceptual framework and adopts a post qualitative approach, delving more deeply into the performativity and effects of documentation, as educators and researcher intra-act with self-chosen pieces of documentation over a number of months. Thus, the post qualitative methodology takes an exploratory approach, focusing on the intra-action between human and non-human matter, looking to the in-between spaces of encounters through a series of intra-views (Kuntz & Presnall, 2012) and plugging in theory to data (Jackson & Mazzei, 2012) by way of analysis.

Methodology is important and can be narrowly considered as a strategy or plan of action that provides a rationale for the choice of methods selected (Crotty, 1998, p.7), but this definition is to do methodology a disservice. Methodologies are broader than methods and are important, as they emerge from a paradigm or set of beliefs that (Guba & Lincoln, 1989) “guide thinking and action within the research process” (Mertens, 2010, p.7) and are underpinned by a set of values (Coe, 2017). Methodologies tap into the core of a researcher’s ontological and epistemological beliefs.

A conventional route for this study would be to draw solely on a qualitative approach in exploring the intra-active enactment of documentation in two ECEC settings. However, a traditional qualitative methodology does not easily align with the underpinning conceptual framework of this study, which is posthumanism/new materialism with all its inherent uncertainties. Therefore, a major challenge of this part of the study has been to think differently about methodology (Ulmer, 2017). There is a sense that, while a posthuman paradigm shift or materialist turn is underway, the methodologies used within this frame have not kept pace with new thinking (Ferrando, 2012). My aim within this study is to explore and apply a post qualitative methodology to a series of intra-views to explore what new knowledge is generated in the intra-action between educators and documentation. The journey in coming to know post qualitative methodologies is difficult, as with each reading I need to tunnel back, to understand what has gone before. I stand in good company, as others acknowledge the challenge of making sense of a different way of thinking about the world and to some extent being “an outsider to the post qualitative conversation” (Greene, 2013, p.750). In addition, there is no one way to do post qualitative research (Benozzo, 2020) and post qualitative methodology can be understood as, a “journey without a clear beginning or ending point and a journey with multiple paths to be taken” (Koro-Ljungberg, 2016, p.3), and thus is untidy and uncertain.

Consequently, this section works to make sense of the material and study in two ways, firstly by reflecting my own emerging understandings of post qualitative methodologies, which entails writing to make meaning and secondly, by endeavouring to make concrete links between the theory of post qualitative research and this piece of research. This section will set the context, troubling qualitative and post qualitative methodologies to position and explain

this study. It will outline elements of the overall design, provide pen portraits of research collaborators/participants, and consider the intra-view as a method of inquiry. The issues of data, data analysis, and ethics within a post qualitative frame will also be explored, as will the overarching consideration of Covid-19 and its implications for the current study.

Troubling qualitative and post qualitative methodologies

Qualitative methodologies, which emerged in the 1980's in response to positivism aimed to "produce different knowledge and produce knowledge differently" (St. Pierre, 1997, p.175), and were powerful in that they required researchers to, "open up their hearts as well as their heads and to listen attentively to stories" (Bochner, 2018, p.361). The shift from positivism to a qualitative approach encountered much resistance within the field, but over time this form of inquiry "cleared a space for itself and became legitimate" (St. Pierre & Roulston, 2006, p.674). Shifts never constitute clean breaks as the past cannot be left behind and so the process of legitimisation saw an element of what Brady and Collier (2004, p.15) called "quantitative imperialism" in action, which took the form of qualitative research being framed within quantitative templates. In other words, there was an ongoing effort in some research areas to dress up qualitative research in the garb of a more positivist, quantitative approach as a means of making it academically acceptable. While in some quarters qualitative inquiry continued to be positioned as weaker research (Maxwell, 2004), ultimately it absorbed many of the features of positivism: triangulation, coding, and theming of data. There is and has been a growing sense that qualitative inquiry has adopted a formulaic approach that has led to researchers unquestioningly following a distinctive structure of

exploring literature, devising a question, and gathering data (Koro-Ljungberg, 2016), all of which tends to stifle openness and creativity (Massumi, 2002).

Thus, a current critique of qualitative inquiry is that it has become “conventional, reductionist, hegemonic, and sometimes oppressive and has lost its radical possibilities to produce knowledge differently” (St. Pierre, 2011, p.613), something that it set out do from the start. This growing dissatisfaction in some quarters of the research community (Jackson & Mazzei, 2012; Koro-Ljungberg, 2016; Taylor, 2016; St. Pierre, 2014; MacLure, 2009) has led to a gradual emergence of post qualitative inquiry. The timing of the post qualitative journey is not accidental, and it begins to gain traction alongside shifts in thinking spurred by postmodernism, posthumanism, new materialism, and new feminist materialism. Lather (2013) maintains that post qualitative inquiry is slow in making itself felt within the academy as many of the related epistemologies (feminist; race; class; postmodern theories) that have emerged, and continue to emerge, are intimately linked or entangled within this methodological frame. In short, the gradual emergence of post qualitative inquiry is occurring in tandem with other shifting paradigms.

Post qualitative inquiry cannot be easily taught or learned, and as an approach is wary of standardised research labels, which may be understood to restrict thinking and creativity. In this frame the researcher is prompted to take responsibility for, and engage in, methodologies without “strict boundaries or normative structures” (Koro-Ljungberg, 2016, p.1). Post qualitative methodologies are thus seen as multi-directional and messy in that, in the absence of a linear methodological pathway the researcher is constantly making decisions in uncertainty. Post qualitative inquiry is not for the fainthearted. St. Pierre (2014), Benozzo (2020), Jackson and Mazzei (2012) and Lather (2013) see these developments as creating

new methodologies for new times. This ever-shifting methodological journey or layering of methodologies as understood by Lather (2013), establishes the continued questioning of underpinning ontological and epistemological assumptions as a core feature of the new approach.

As with other “posts”, post qualitative inquiry is confusing (Taylor & Hughes, 2016, p.1), and is hallmarked by openness and flexible methodologies (Lather, 2013). At the heart of a post qualitative approach is not so much a rejection of what has gone before (qualitative methodology) but rather a future orientation, which foregrounds three key elements. The first element relates to a desire to continue the questioning of assumptions. The second element signals an effort to deconstruct concepts and practices. The third element places an emphasis on using concept or theory as method (Jackson & Mazzei, 2012), trusting that in studying theory the methodology will follow (St. Pierre, 2014, p.7). Within this post qualitative frame, theory is put to work interrogating data not through codes and themes but through theoretical concepts and the exploration of difference. Post qualitative research rails against pre-determined structures and is characterised by concepts, materials, ideas that are constantly in flux, dynamic and becoming. This way of thinking offers opportunities for creativity in the processes and ways of understanding research, but it also presents challenges and concerns on a number of levels. Do I fully understand and grasp the language, concepts, and unstructured nature of post research? Is post research self-indulgent, has it relevance to anyone, or is it merely a “retreat into the mind”? (Greene, 2013, p.753).

For me, a post qualitative methodology movement rests on an understanding that the world is complex and consequently striving to generate knowledge, or coming to ‘know’ through research, and is a dynamic process. Adopting a post qualitative approach is

congruent with Barad's (2007) agential realism (outlined in chapter 3), which highlights that existence is a mutual affair with human and non-human matter always in relation to and contingent on each other. Meaning is made and knowledge is generated in the intra-active process. A key point here is that nothing can be known in advance, nothing can be pre-determined, as it is only in and through entangled relations that new thinking and knowing emerge. A consequence of accepting this position of Barad (2007) and others (Lenz Taguchi, 2010) is that researchers cannot know the outcomes of their work in advance but more so, that every phase or development within the research process cannot be pre-determined. By that I mean the research journey cannot definitively be laid down, because within the broad parameters of a given study, new directions will emerge, new understandings of what constitutes data will become evident. The researcher within a post qualitative study will be led by the complexities and uncertainties of the methodological entanglements.

Consequently, I understand that a post qualitative methodology is less about problem-solving and more about problem-making (French, 2014). It is not about answers but instead offers "temporary breathing pauses, halts and energy voids" (Koro-Ljungberg, 2016, p.4) to allow for extended thought. While Greene (2013) questions the contribution of post qualitative inquiry to the academy and society, others see this approach as pushing the boundaries. As signalled by Lenz Taguchi (2020, p.34), "the day we believe that we have found the way to know the world better, is the day we are doomed, because nothing stands still and there is no one way of knowing". Thus, post qualitative inquiry is troubling epistemologies and chipping away at established methodologies because, as Leonard Cohen suggests, it is through the cracks that that the light gets in. St. Pierre (1997) also highlights that in this new methodological space:

we must learn to live in the middle of things, in the tension of conflict and confusion and possibility; and we must become adept at making do with the messiness of that condition and at finding agency within rather than assuming it in advance of the ambiguity of language and cultural practice. (p.176)

Adopting a post qualitative approach to this part of the study means that, while there is a loose starting point, that is, an opening question for educators to consider in discussing documentation, the overall direction of the study is open for the two preschool teams engaging with research.

Research participants - pen portraits

The research was carried out in two separate, privately-owned pre-school settings in Dublin between October 2020 and April 2021. In 2018/2019 I undertook a separate (unpublished) study, whereby managers in nine diverse early childhood settings were interviewed to explore current documentation practices. The purpose of that initial study was to better understand the climate and challenges of documentation within the sector. That research also invited expressions of interest for further research engagement, with six of the original group indicating a willingness to participate. This group of interested managers were potential research participants in the current study. The arrival of Covid-19 in 2020 influenced their ability to engage, with two full day care settings indicating that they were too busy to consider participating in the research. The manager changed in one setting and in another staff were uncertain about their capacity to give time to the research in the current climate. The two remaining settings from the original grouping continued to express interest in participating in the study. While managers in both settings expressed a desire to be

involved in the research, I met with both staffing groups separately in October 2020 to outline the study and ethical requirements, determine staff interest, and respond to queries that arose. Staff in specific rooms in both settings were enthusiastic and willing to engage in the study.

Setting 1 – Castlevue (pseudonym)

Setting 1 is a privately-owned pre-school and after-school service, located within a primary school campus in a marginally disadvantaged area in suburban Dublin (Pobal, 2011). Built in 1958, the setting lies in a self-contained wing of the school and comprises three separate pre-school classrooms and an afterschool room, with access to a large concrete school yard and a separate, purpose-built outdoor play area. The setting caters for a total of 106 children aged 3-6 years, all of whom access places through a universal, subsidised Government scheme, the Early Childhood Care & Education programme. Each room runs two separate sessions per day, the first from 9.00-12.00 and the second from 12.30-15.30. The setting has a well-established reputation locally in working with children with additional (special) needs and caters for 17 children who have diagnoses. The staff complement includes 16 staff (full time and part-time) plus a manager.

The research takes place in the Purple Room and focuses on the morning session which has 3 core staff (Table 1), caters for 20 children, and operates a key worker system. The Purple Room is a standard classroom with bright airy windows that give views to the outside areas and is connected to the large entrance hallway.

Table 1:*Staff profile Castleview*

Name	Position	Qualification Level	Years of Experience	Number of years in the setting
Ava	Room Leader	Level 8 (Hons.)	3 years	1 year
Victoria	Educator	QQI Level 6	8 years	8 years
Amelia	Educator	QQI Level 6	26 years	26 years

The current documentation practice within the Purple Room is that each child has an individual scrap book or journal, which captures their experiences and responses within the setting over the academic year. It is available to parents and leaves with the child at the end of the year. In addition, staff undertake periodic observations using the National Council for Curriculum and Assessment (NCCA) Learning Record Templates (Appendix B), and develop wall displays which are sometimes shared with parents via a closed Facebook page. It appears that their interest in engaging with the study emerged from a change of staffing within the room, and a desire to review and reflect on their documentation processes.

Setting 2 – Seaview (pseudonym)

Setting 2 is located within an old stone community centre, located by the sea and originally built in 1929 as a two-room school which has extended over time and is now used for the benefit of local people. Currently the setting uses three rooms within the centre, catering for a total of 56 children from 2 years and 9 months to 6 years and employing 10 staff. An outdoor area has been renovated in recent times with the aid of Government Capital Grants. The setting runs one morning session, 9.00am - 13.00pm daily. In response to a growing local need, a newly built after-school extension room was added in 2017 that caters

for 20 primary school children. While the area itself is designated as a marginally below-average disadvantaged area (Pobal, 2011), in reality the setting caters for very diverse family groupings (professional, entrepreneurial, artistic).

The research takes place in the Blue Room where 4 core staff (Table 2) work with a group 20 children, two of whom have diagnosed additional needs and have one-to-one support. The manager of the setting, who has a deep interest in documentation, leads this room. She has adapted the documentation practices over a number of years. Previously, staff prepared group floor or project books, as well as individual scrap books and a professionally printed collection of children's stories and illustrations each year. The manager and staff frequently felt overwhelmed with the level of documentation that was developed and wondered about its effectiveness or purpose. In an effort to focus more deeply on children's learning, many forms of documentation have been abandoned and the current practice is that staff develop an individual learning journal for each child. This captures a combination of project work and individual children's responses to experiences and events over the year. Engagement with this study was understood as an opportunity to share this approach with an outsider (researcher) and to consider its effectiveness.

Table 2:

Staff profile Seaview

Name	Position	Qualification Level	Years of Experience	Number of years in the setting
Beth	Manager/Room leader	Level 9 (Masters)	15	15
Sarah	Educator	Level 6	6	6
Caroline	Educator	Level 6 + Degree in Psychology	10	10
Ursula	Special Needs Educator	Level 6	5	2

The teams in Castleview and Seaview were committed to the research process because of their interest in documentation and their desire to reflect on and improve their practice. This commitment enabled a series of intra-views to proceed, even as the staff managed in a stressful Covid-19 environment.

Study design

A series of four intra-views were held with two separate settings in the period October 2020 to April 2021 (Table 3). An introductory visit at the beginning of October was in person, intra-views that occurred between the end of October and the end of March were online via Zoom, due to Covid-19, with a final visit in May/June happening face-to-face in the setting after the children had left.

Table 3:

Schedule of visits

Focus	Castleview	Seaview
Introductory visit – in person	06.10.2020	08.10.2020
Session 1 (Zoom) - Review of selected documentation	27.10.2020	12.11.2020
Session 2 (Zoom) - Review of selected documentation	24.11.2021	10.12.2020
Session 3 (Zoom) - Review of selected documentation	23.02.2021	25.02.2021
Session 4 (in person) - Review of selected documentation	02.06.2021	20.05.2021

Each intra-view commenced with a single initial open question, “tell me about your chosen piece of documentation”.

Intra-view as method

Working within a posthuman frame and drawing on post qualitative inquiry to explore the nature of documentation, the intra-view is how method is conceptualised in this study. Framing method as intra-view broadens out what might be noticed and included for consideration. In this section, the concept of the intra-view as method, will be explored and will also problematise data, examining tensions relating to voice and representation within the post qualitative frame.

Troubling the interview

The interview, as a standard method or tool of inquiry within qualitative research (Cohen et al., 2011) is predicated upon a captured conversation between people that contributes to the accepted research phases of collecting interview data, analysing data, interpreting data, and finally presenting findings. The interview is evidenced in the resultant

transcript, which can separate the interviewee from the interviewer and privileges or positions the researcher as a disembodied spectator (Brinkmann, 2011). It is through the transcription process that the spoken word of the interview is turned into an “object that can be seen” (de Certeau, 1984), and it is in this objectification that the interview is valued. Equally it is only in textualised form that data yield to analysis (Van Maanen, 1988, p.95). Denzin (2003) suggests that the interview as a method has been simplified, in that the transcript becomes an abstracted artefact that privileges voice and separates the discursive from the material.

In critiquing the interview as a method, questions arise: what of the environment and context and its influence on the interviewee? What of silences and pauses that hang and tell a story, what of the shifting or physical movement of research participants that might speak to restlessness or denial? What of the tone and pace of talk that says one thing but may camouflage another meaning? How are these gaps or stumblings within the data accounted for? Hence, problems with the interview as method relate primarily to notions of narrowness, omissions, and a desire to tidily present the recorded and disembodied voice and experiences of the interviewee. In the process of capturing voice, much is lost, and this point is elaborated in a further section considering voice and representation.

Finally, there is also an acknowledgement that interviews are not neutral encounters in which interviewees share their experiences with an impartial interviewer (Marn & Wolgemuth, 2017, p. 365). Rather, the interview is the interviewees interpretation at a point in time which is transcribed by the researcher and re-interpreted in light of something else, for example, the research question. The point to be made here is that, while interviews have given voice and power to the research participant (Kvale, 1996), from a post qualitative perspective it has centralised the subject to the exclusion of all else.

The intra-view

Building on the interview as a method, the intra-view signifies an event “among” rather than “between” (Braidotti, 2002), where the material and the discursive intra-act. The intra-view becomes an assemblage of people, things, everything across space and time. It is a different way of encountering the world and is more than a simple exchange of words (Kuntz & Presnall, 2012, p.736). A difference between interview and intra-view is the broadening of what is relevant, what is seen, felt, and heard, an openness to difference and how the encounter or event is read. The intra-view can be considered as an engaged encounter in which the voices of the participants cannot be accepted at face value, they cannot “be separated from the enactment in which they are produced” (Mazzei, 2013, p.732). Hultman and Taguchi, (2010, p.529) see the intra-view as promoting positive difference, as “a continuum and a multiplicity, rather than a difference in a system of separations and divisions”. The intra-view is not dismissive of the interview but rather it acknowledges the overlapping nature of everyone and everything that is involved in the encounter, and which is drawn “together through their difference” (Widder, 2009, p.215). Thus, it appears as though an intra-view is a way of seeing, hearing, and connecting not only with the words, but with the physicality and the emotion of the event. It is about pushing out the boundaries beyond words to recognise the agency of non-human matter and the relationship between elements in the assemblage.

The intra-views within this study are not just an elaborated question and answer session, rather they are educators and documentation in conversation with each other. A starting point in re-orientating thinking from interview to intra-view is to be aware of the provisional nature of knowledge and to know that all responses are contingent on relational

factors and what has gone before. The human cannot be elevated within the intra-view because so many other elements influence what is thought, said, or evidenced. In short, the educators within this study are understood as being entangled and connected with the documentation and other nonhuman material including research questions, physical location, and recording devices (Zoom App.). If the intra-view encompasses tangibles and intangibles, then what constitutes data within this study?

Troubling data in post qualitative methodologies

Data for this study was gathered in a series of intra-views from four sessions with two separate groups of early childhood staff, undertaken between October 2020 and April 2021. These sessions provided the material or data for the study but within a post qualitative frame, data is a contested term and one that I will trouble slightly in this section.

The word data comes from the Latin word “dare”, which means to give, but nothing is ever just given (Brinkmann, 2014, p.721). Rather, within the research process data is gathered, produced, shaped, mediated, constructed, and interpreted. Data is generally understood as words, photographs, artefacts, notes and records of observations and interviews (Lincoln & Guba, 1985), and within a qualitative frame researchers gather rich data and thick descriptions (Geertz, 1973) to generate meanings. Only when data is formatted as text can it be analysed, and it is the words that are used to create and justify knowledge creation. Thus, within a traditional frame data is constructed from the interpretations of what is seen and heard, that is, from an inert body of information (MacLure, 2013), and the researcher takes responsibility to order, code, and represent what can be understood from the gathered data. While this approach can be understood as helpful in that it provides a structure to make the

work intelligible to others, it can also be problematic as the structure in itself can become limiting or formulaic in identifying what stands out, what is selected and analysed. In the process of following a defined structure much can be lost. St. Pierre (1997) describes how she encountered emotion within her study, and wondered if, and how, this might count as data. Further, if the emotions that emerged through the process of interviewing were important, how might they be framed within the study. So too, Brinkmann (2014) wonders about the unexpected data that surprises or causes a stumbling, a type of disequilibrium, which may not easily find a home within the research space. This all suggests that data potentially takes many forms and may resist definition (Koro-Ljungberg, 2016). It may be considered a “reduction of our experience” (Bernard & Ryan, 2010, p.5), “a matter of seeing” (Schostak & Schostak, 2008, p.91) or as a changeable chameleon, assuming different shades of meaning based on the perspective of the researcher (Hammersley & Atkinson, 1995 as cited in Koro Ljungberg, 2016, p.47). Data is, therefore, more than words or transcripts that have come to characterise qualitative methodology. It is this centralising of voice and language, meaning and representation in qualitative research that becomes problematic in considering what is lost in this narrow conceptualisation of what might count as data.

Voice and language

The authentic voice of the participant, which Jackson and Mazzei (2009) suggest typically serves as the foundation of knowledge, is central to the principles and practices of qualitative inquiry. A qualitative frame positions the researcher close to the participant and close to the topic being explored (Boldt & Leander, 2017). Within this frame the voice of the participant is centralised through the processes of using language to describe, capture, transcribe, and analyse their perspectives or words, with the researcher attempting not to

contaminate the voices of the research participants. Within this approach language is key (MacLure, 2013), as it provides the basis for making meaning, assuring validity or trustworthiness, and determining if what has been spoken and coded can be generalised in any way. In fact, it is the voice of the participant that becomes of primary value, materialised as data through the process of transcription. But what of other modes of expression, silences, and forms of utterances (sighs, laughter, coughs, crossing of legs, fidgeting of hands) which may be present within the qualitative study and warrant consideration?

The problem is that the voice of the research participant is not “sterile or uncontaminated” (St. Pierre & Jackson, 2014, p.715), and does not exist in a vacuum. So, while a qualitative approach may frequently acknowledge external influences, ultimately it is the subject her/himself that dominates the study. A critique of this perspective through a post qualitative lens understands that the participant is not and cannot be separate from the world, but is part of the phenomena that is being studied and as such is enmeshed or entangled (Barad, 2007), and the voice of the participant is but one constituent element amongst many within the data. Thus, it is the messy nature of being entangled, the human and non-human, that constitutes the research and not merely the captured voices of the participants or the language that is used to legitimise it.

Meaning and representation

While characterised by voice, qualitative research is charged with an ultimate goal of making meaning of a situation or phenomenon representing an interpreted reality. However, McGregor (2020) questions whether the lived experience alone can be a source of knowledge, as meaning is always situated, heard, and interpreted through the researcher as a filter. The filtering process, as a core part of qualitative research, can funnel or reduce what

emerges in the final cut. At the heart of the problem is the illusion that meaning lies solely in the words of research participants, waiting to be discovered by the researcher. Thus, the notion that meaning is fixed and is something that is extracted or discovered, leads the researcher into what Jackson and Mazzei (2012) call a trap of representation. This suggests that in the process of capturing, describing, and transcribing the lived experiences of research subjects, there is a natural desire to tidy up participants' words within a coherent narrative or story (Mazzei & Jackson, 2012) or square off the data (Koro-Ljungberg, 2016).

In short, the quest for meaning within the traditional qualitative frame can lead to layers of omission, reducing complexities and seeking easy fixes. In a post context, there may be meanings and meaning-making processes but there is also uncertainty and questions (Koro-Ljungberg, 2016). Ultimately, post qualitative research works to see beyond meaning which resides within the participant and is interpreted by the researcher. Instead, it seeks to make visible or acknowledge the many connections with context in its broadest sense. To look for meaning in data is to try to find answers, which can be understood as solutions or destination points. In contrast, a post qualitative process seeks connections within the data, which allows for movement of thought (MacLure, 2013) and it is the flexibility of thought that creates a space for differences to be seen. In post qualitative thinking, flow and movement broadens the scope of research and minimises static assumptions or representations. In short, it seeks to recognise and encompass the human participant within an entangled context of non-human matter, of movement, of space and time. The challenge within a post qualitative study is that data can be understood as everything within the frame, be that matter (people and things), energy and flow, language and silences, feelings, and connections. This can be construed as problematic because if, as Freeman (2004) suggests,

data are everywhere, then in Brinkmann's (2014, p.721) words, "if everything is data, then nothing is data". Where does the post qualitative researcher stand?

The effort in post qualitative inquiry is to broaden the scope of what is understood as data, to de-centralise the adult, to actively seek differences (not similarities) and interferences in what is seen, heard, understood, felt and to be open to connections. Therefore, pausing and listening to data within a post qualitative frame can throw up points of interest that do not fit within a themed approach.

It is difficult to construe, therefore, the scope of what data might look like in this study as it emerges from the intra-action of documentation, educators, zoom and researcher amongst other elements or phenomena. St. Pierre (1997) wondered about the legitimisation of emotion data and dream data and Brinkmann (2014) calls data into question, wondering if instead the discussion should be on instances or life episodes. Are understandings of data too narrow or exclusionary, and what are the implications for this study? In adopting a Baradian stance, which purports that new knowledge is generated in and through intra-action, this research will re-conceptualise the notion of what constitutes data. It will incorporate but work to de-centralise the educators, their voices, wonderings, uncertainties, and emotions. Data will look to documentation but will also focus on what emerges at points of intra-action, where educators engage with documentation and where matter meets matter (documentation within the physical environment). Data is not just one thing and does not do just one thing. It can be an object, for example a transcript, but it can also be a process that has been made visible (enactment of documentation) (Koro-Ljungberg, 2016), or thoughts and dreams (St. Pierre, 1997), and perhaps passions.

Troubling data analysis

In all its rich and varied forms, data once gathered requires management and this will be influenced or directed by the methodological paradigm of the study. Qualitative data is analysed through processes of organising, theming, and categorising and analysis is driven by a principle of fitness for purpose (Cohen et al., 2011, p. 537). At the heart of traditional qualitative analysis is intention, and a desire to respond to the research question. The data is required to describe, interpret, discover patterns, generate themes, raise issues, or discover commonalities, differences, and similarities (Cohen et al., 2011, p.539). A qualitative stance to analysis suggests that data can be understood differently depending on how it is viewed, and what the data analysis is required to do (Cohen et al., 2011). A key tool in data analysis within this research frame is that of coding (Braun & Clarke, 2006; Strauss & Corbin, 1990). There are several types of coding: open (Strauss & Corbin, 1990), analytic, axial, and selective coding, all of which are characterised by systematic approaches that identify patterns and similarities. Thus, the traditional coding of data, now assisted by software applications, allows for effective data management and manipulation. Concerns have surfaced that there is an over-emphasis on the technical skill of coding at the expense of understanding, thinking about, and making meaning of the data (Gibbs, 2007; Flick, 2009).

In contrast to coding within qualitative inquiry, data analysis within a post qualitative methodology prompts alternative or more productive approaches (Brinkmann, 2014), two of which are relevant to this study, namely, diffractive analysis and thinking with theory.

Diffraction analysis

Diffraction analysis derives from the phenomena of diffraction, a term drawn from the world of physics and a metaphor applied to research methodology. Diffraction is an established given in the world of physics and it relates to the ways in which “waves combine when they overlap and the apparent bending and spreading of waves that occurs when waves encounter an obstruction” (Barad, 2007, p. 74). Waves of many types are capable of diffracting - water waves, sound waves, and light waves. As these waves encounter an apparatus or barrier they will diffract; for example, water waves will diffract as they spread around rocks or when waves overlap, rolling into and transforming within one another. Diffraction is also evident when, for example, two stones are dropped into a pond and the resultant ripples spread, overlap, and interfere with each other. The interference and the forced changes create a diffractive pattern, one of difference. Diffraction as a concept focuses on difference, and is, as Haraway (1992, p. 300) explains, “a mapping of interference, not of replication, reflections, or reproductions. A diffraction pattern does not map the differences themselves, but rather maps where the effects of difference appear”. Difference as envisaged by Barad (2007) and Haraway (1997) proposes a way of seeing difference differently (Thiele, 2014).

Diffraction is also used as a metaphor for a methodological approach which sees the researcher read “insights through one another in ways that help illuminate differences as they emerge” (Barad, 2007, p.30). Thus, diffraction as a methodology concerns the ways in which difference is seen and understood within the data and the research process (Lenz Taguchi, 2012) and how difference comes to matter (Davies, 2014). What is important to highlight is that difference does not refer to separate or distinct entities, such as, this being different to

that. The waves are still the waves before and after the encounter with the rocks, their core elements remain stable, but their form is different. In overlapping, the waves are entangled so that one wave is indistinct from another, and they are of each other. This notion of entanglement is key to interpreting Barad's (2007) concept of difference, which refers to the inseparability and interconnectedness of everything, be that human or other matter. A diffractive methodology therefore:

shifts research from the concept of difference as categorical difference to difference as an emergent process, in which subjects and objects become different in the encounters through which they emerge and go on emerging differently. Diffractive research thus breaks up linear thought where one agent acts on another in a causal relationship and opens up a space of awareness in which it is possible to see those multidirectional, emergent, intra-active interferences that Deleuze calls Being and Barad calls the world and its possibilities of becoming. (Davies, 2014, p.740)

A diffractive approach eschews and resists the notion that there are tools or techniques that can be easily followed in the process of analysis. Thus, a key challenge for this study is my ability to engage in diffractive readings of the data and to notice difference. St. Pierre et al. (2016, p.105) acknowledge the complexity of diffractive analysis and rhetorically question how a diffractive methodology can be adopted with little practical guidance. However, there is some signposting. Moxnes and Osgood (2018, p.301) urge researchers to stay unbalanced when encountering questionings and moments within the data, and to search for "the moments where human, non-human and more than human become entangled". Levy et al. (2016, p.185) adopt a strategy of re-thinking, re-turning, and re-searching to trouble the data

and attempt to see points of diffraction. Murriss and Bozalek (2019) put forward a series of propositions which suggest that researchers should be guided by questions or wonderings that emerge through the reading of the data, and that they should pay close attention to the differences that matter. They also propose that texts or data should be “read through and around one another rather than against one another” (Murriss & Bozalek, 2019, p.1514), which allows for “a spreading out of thoughts and meaning” (Mazzei, 2014, p.742).

Thinking with theory

Building on the concept of diffractive analysis and an alternative to traditional qualitative coding, Deleuze and Guattari (1987) propose that to analyse data is to think with theory. This practice of reading-the-data-while-thinking-the-theory (Jackson & Mazzei, 2012, p.4), is to allow differences to emerge from the data. Reading the data through a specific theoretical lens or concept creates a space to see the material differently and to enable different connections to be made.

More than reading data through data, Jackson and Mazzei (2012) suggest that theory and data need to be plugged in, a metaphor which imagines a two-way current or flow, a spark of creation, energy, unpredictability, and dynamism. To be plugged in requires “a deep intimacy with both the data and theory” (p.5) and a sensitivity to the context and situatedness of both. Plugging in means that both theory and data are drawn apart, examined, and then reconstituted. It also requires re-readings of the data, making it groan and protest (Foucault, 1983) so that a multitude of meanings are evident. Plugging in also creates a different relationship with the data as it is considered from different perspectives, is made, unmade and remade. Thinking with theory does not negate qualitative methods such as focus group

discussions or intra-views as are used within this study, rather it troubles assumptions. Thinking with theory requires an acknowledgement that research participants have already interpreted and framed their experiences or stories in ways that creates meaning for them. Consequently, the notion of a pure voice or truth does not exist and the practice or habit of questioning what is asked of the data and what is relayed by the participants becomes central. On a practical level, Jackson and Mazzei (2012) outline that thinking with theory requires the identification of a theoretical concept and the development of questions which are then used to re-read and diffractively read the data. Analysis for this study then becomes a search for differences and connections amongst the myriad of data using the lens of intra-action which is captured through a series of sticky stories (Moxnes & Osgood, 2018).

Sticky stories

Sticky stories are deployed in this study as a research method, as a means of enabling connections between matter (human and non-human) or things be made and become visible. But stories have always been important, particularly in early childhood. Bruner (1987) in his seminal text on 'Life as Narrative', proposes that stories do not just happen, there are created in people's heads. He suggests that stories are shaky in that "any story one may tell about anything is better understood by considering other possible ways in which it can be told" (p.32). In other words, in becoming a focal point, stories present a perspective.

Sticky stories with a post qualitative research frame differ from Bruner's (1987) thinking, in that they are presented not as a given to be viewed from multiple perspectives, but rather they emerge from points of difference within 'micro moments of being (Davies, 2014a, p.15). In other words, sticky stories become like a microscope, allowing ordinary,

micro-moments become important. The stories allow for a focus on the entanglements of intra-action, where for example, documentation and educators meet and they are a means to work with diffractive analysis, providing a basis for new understandings or mappings to emerge.

Moxnes and Osgood (2018, p.302) highlight, that “unfolding sticky stories in a diffractive mode open up possibilities to rethink what comes to matter”, and to see situations or moments differently. Within this study sticky stories will be identified, through the data, in an attempt to map “situated body/object/sound assemblages” (Renold & Mellor, 2013, p.24), and will provide the basis for analysis.

In summary, a post qualitative methodology requires the researcher to go beyond voice, language and representation, making a case for questioning and disruption. Consequently, this study draws on intra-views, framing data within sticky stories and analysing them diffractively in thinking with theory. To impose an element of structure on the study, Table 4 outlines the analytical approach to be taken and this supports the trustworthiness or fidelity of the research.

Table 4:

Analytical approach to data

Clip details	Sticky Story (transcribed)	Diffraction Analysis Points of diffraction	Reading the data through theory
Zoom recordings will be titled and dated. Clip details relate to setting/date	Sticky stories or specific episodes from the recorded clips will be identified, reviewed multiple times and transcribed. Sticky stories become the basis for analysis	Recordings and transcripts will be read for points of interest, difference, wondering or jarring and key points will be noted	Recordings and transcripts will be read through a specific theory or a theory focus, which will be outlined, and key points noted

Validity and Reliability

Validity and reliability are concepts that resonate, albeit in different forms, across all forms of research. Concepts of validity and reliability are companion concepts that are applied differently across methodological approaches and should be understood as, “a matter of degree rather than as an absolute state” (Gronlund, 1981 cited in Cohen et al., 2011, p.178). Validity, at a basic level, is predicated on the research being true and the researcher finding truth. Within a qualitative frame the concept of validity holds steady, but it may translate as the researcher being honest, bringing depth, having a focus on process, and bringing thick description to the study. In this frame, validity acknowledges that data is socially situated and socially and culturally saturated (Bogdan & Biklen, 1992). The accompanying concept of reliability is considered by Joppe (2000, p.1) as, “the extent to which results are consistent over time... and if the results of a study can be reproduced under

a similar methodology”. From a qualitative perspective, reliability translates as research being credible, dependable, and trustworthy (Lincoln & Guba, 1985).

While honesty and trustworthiness are important research criteria irrespective of the paradigm, the concepts of validity and reliability are problematic within a post qualitative frame. The premise underpinning the “posts” and this post qualitative study is that matter, human and non-human, is mutually entangled (Barad, 2007) and consequently cannot be separated, as it is constantly intra-acting, effecting, and altering each other (Bennett, 2004). Meaning and connections are made and re-made through the intra-actions. Understood in this way, concepts of truth or stability cannot be upheld, as data are unstable, full of potential meaning, and open to interpretations. Maxwell (1992) contends that types of validity are dependent on the research methodologies. He broadly classifies validity as being descriptive, which relates to factual accuracy; interpretive, which facilitates the exploration of competing and conflicting analysis, and finally, evaluative. Evaluative validity recognises the legitimacy of the researcher’s judgements that contribute to research findings. This position is reinforced by Winter (2000) who believes that any definition of validity must align with the belief system of the researcher. Blumenfeld-Jones (1995) goes further by arguing that it is fidelity rather than validity that is important. Fidelity is seen as developing out of a respectful and ethical relationship and within a post qualitative frame this understanding can be extended to human and non-human matter.

Ethics

Ethics are a complex affair and are ever present, embedded within all aspects of research. In relation to this study, ethics encompass standard research practices, but also

resonate directly with the notion of posthumanism/new materialism. This study has been informed by ethical guidelines from the British Education Research Association (BERA) (2018) and the European Early Childhood Education Research Association, (EECERA) (2015), both of which centralise principles and values of respect and responsibility. As standard, the ethics for this study have been approved by the University of Sheffield (Appendix C). This section considers the embedded nature of ethics within this study.

In this study, significant attention has been given to the issue of values in undertaking an exploration of the intra-active performativity of documentation. At the start of the process, I was fortunate to meet the research participants face-to-face (prior to Covid-19) to address questions and make clarifications. Transparency was supported by information sharing in the form of Plain Language Statements/Information Sheets (Appendix D., D.1), and Consent forms (Appendix, E, E.1, E.2), which were prepared and tailored for educators, parents, and children. The research did not directly involve children but as I hoped to capture some images of their documentation, their assent was critical. To this end, educators were asked to talk with the children, explaining to them the purpose of photographing some pieces of their work. These actions speak to a deep awareness of what it means to be ethical.

However, Sevenhuijsen (1998, p.37) highlights that it is “impossible to give a single unambiguous definition of ethics” as this is embedded within a “particular philosophical school of thought in which work is situated”. Thinking and working within a posthuman/new materialist paradigm argues for ethics in terms of responsibilities, relationships, situatedness, and otherness (Dahlberg & Moss, 2005). Within the “post” frame, ethics are considered through different, but related, lenses. An ethics of care (Noddings, 2013) recognises that ethics are first and foremost practice, which is always local, contextual, and relational, almost

habits of mind (Tronto, 1993). Moving towards a Baradian notion, Dahlberg et al. (1999) identify ethics as an encounter, which proposes that ethics happen in the moment, recognising difference and multiplicity and at the same time struggling “to avoid making the Other into the same as oneself” (Dahlberg, et al., 1999). Engaging with ethics as an encounter demands a respectful seeing and hearing of the Other (Taylor, 2016). ‘Other’ in this sense is understood primarily as a human other, but Barad, building on the work of Levinas, broadens this out to include an ethics of mattering or an ethics of worlding (Barad 2007, p.392).

Barad’s core tenet is that we are entangled with the world and therefore can never stand separate from it. Consequently, we always have a response-ability to the other, be that human or non-human. Barad maintains that, unlike interaction which sees engagement between separate entities, it is intra-action that “signifies the mutual constitution of entangled agencies” (Barad, 2007 p. 33). This entanglement of matter and non-human matter dissolves the boundaries between, for example, the educator and documentation, which can never be clear or delineated as each has the capacity to affect and be affected by the other. There is an interdependence with both educator and documentation being part of the phenomena and in this mutuality, ethics becomes not a set of guidelines to be followed, but a matter of responsibility. Ethics becomes an ability to respond respectfully to the other, and Bennett (2010) suggests that, for the new materialist, ethics is:

the recognition of human participation in a shared, vital materiality. We are vital materiality and we are surrounded by it, though we do not always see it that way. The ethical task at hand here is to cultivate the ability to discern nonhuman vitality, to become perceptually open to it. (p.14)

Ethics also presupposes an openness to the unknown, as the outcome of an intra-action can never be known in advance. This is what Barad identifies as an ethics of worlding, or the ethics of being in and part of the world. Barad is not alone in her thinking, as Braidotti (2013a) also signals humility as a common reference point in considering ethics.

Ethics within a posthuman, post qualitative study therefore emphasises the relational context and the respect which must be afforded the other, whether that other be human or non-human matter, educators, or documentation. For me, this approach builds on the ethical approval of the University and moves a step further to focus more immediately on researcher values. Consequently, within this post qualitative inquiry, ethics infers taking responsibility for the acts and choices that are made within the detail of the study, what is selected for analysis and how that analysis interprets or connects what the educators or documentation represent. In short, ethical practice within this study demands “a permanent critique” (Wolfe 2010, p. xvi) of oneself, because there is no anticipation of stability in this frame of thinking and every “every encounter keeps the matter of ethics open” (Taylor, 2016, p.16).

Concluding Remarks

This chapter on methodology has attempted to work across multiple strands and in so doing reflects a journey from qualitative to post qualitative research, in relation to this study. As St. Pierre (2014) and Lenz Taguchi (2010) have highlighted, shifting methodological thinking and practices from established qualitative stance to a more post approach is both challenging and ongoing. Tensions arise in moving between methodologies, but Lenz Taguchi (2020, p.45) urges researchers to always think of the “multiple and plural”.

From the stance of a novice I have, within this chapter, knowingly fallen into a number of traps and I have fallen into these traps to better work my way out, with greater insights and deeper understandings.

I have emphasised divisions between qualitative and post qualitative throughout this chapter in ways that perpetuate a dualistic approach to research, and which is an anathema to posthumanist thinking. Posthumanism and new materialism “push us to consider the intricate interconnectedness with local and wider worldly others” (Arndt et al., 2020, p.9). However, there is a discord. While the posts strive to break down dualities; the Cartesian mind/body, theory/practice, ontology/epistemology splits, there is little consideration of what this new thinking means for new methodologies. To better understand and represent my thinking of methodology within a new post frame, I have included some mapping of what has gone before, in terms of research approaches. The divisions outlined within the chapter should not be seen as oppositional, nor a sense of one approach being better than another. Rather, they should reflect my methodological journey which sees post qualitative inquiry building on, extending, and transforming the qualitative paradigm. This almost juxtaposing of methodologies is to support a re-orientation of thinking, which St. Pierre (1997) acknowledges as a slowing down and challenging process. Shifting thinking and the practices of research to new paradigms and methodologies is not without difficulties and even St. Pierre (1997) questions whether she can sufficiently escape her training to produce different knowledge and to think differently (p.15). It appears that moving into a post qualitative paradigm is a work in progress for the experts as well as the novice.

Koro-Ljungberg (2016, p.173) encourages researchers to take risks with new methodologies and to “move beyond authoritative expectations”, but that may be easier said

than done. Equally, the enactment or application of the methodology to the real world may be problematic, as it is daunting to “put new concepts to the test” (Lorimer, 2010, p.238). The coming chapter will put new concepts to the test in beginning to explore, through sticky stories and diffractive analysis, the performativity of documentation.

CHAPTER 5:

Story 1 – Documentation and curriculum as performative agents

Documentation has been conceptualised and represented through multiple lenses in chapter 2, where it has been understood as a means of providing accountability, as making learning visible, as a way of assessing learning and as a support in engaging with parents. These current framings are important because they enable documentation to be interpreted or understood in many ways along a spectrum, which are contingent on policy and practice. I believe that mapping the perceptions and the changing nature of documentation across the literature review is critical, in the same way that the journey from qualitative to post qualitative methodology in chapter 3 is core in reflecting my own growing scholarly learning. Chapter 2 also leans towards an explication of documentation as democratic practice and as intra-active pedagogy, moving towards the heart of the matter, which is the performativity (Barad, 2007) of documentation as an apparatus of meaning-making and transformation.

In drawing on theories (Barad, 2007; Lenz Taguchi, 2010) and practice, this chapter sets out to examine the performativity of documentation, explore the entanglements of curriculum and present practice as intra-active pedagogy through a number of sticky stories that emerge from the study. These stories will draw on documented examples from practice to blur the human/non-human, theory/practice divide and allow the materiality of artwork, microscopes, trees and roots become visible and come to matter. The chapter argues for the power and inseparability of documentation, curriculum and practice, suggesting that in breaking down the theory/practice divide pedagogy is transformed.

Agential Realism, intra-action, agency, and performativity

Barad's (2003) understanding of performativity is related to the power of matter, both human and non-human and is tied to concepts of agential realism, agency and intra-action. To briefly recap, agential realism, as outlined in chapter 3 of this study is Barad's overarching theoretical framework, which rejects an ontology/epistemology divide, troubles the notion of independently existing things/bodies/individuals (Murriss, 2021, p.8) and questions the nature of 'matter' both human and non-human. The basis of Barad's theory of agential realism is that all matter (human and non-human) matters and that "matter and meaning are not separate elements. They are inextricably fused together, and no event, no matter how energetic, can tear them asunder" (2007, p. 3). Barad (2007) understands matter in all its forms (e.g., documentation and curriculum) to be significant in how meaning (and learning) comes to be. In this frame of thinking, there is no independence, as everything/everyone is entangled and actively and continually transforming through intra-actions.

A key point underpinning agential realism is the problem of representationalism (of language). Barad does not discount the importance of language but questions the "power of words to mirror pre-existing phenomena" (Barad, 2007, p.133). In mapping out agential realism, intra-action and performativity, Barad (2003) firstly argues that within a humanist context language has been granted too much power (p.802), in that it shapes discourse and understandings of the world. In other words, language is assumed to cleanly represent or mediate the knower and known (Barad, 2007 p.133). In troubling the primacy of language and in drawing on the thinking of Bohr, Barad highlights that words do not have inherently determinate meanings and language does not represent a given state of affairs (Barad, 2003, p.813) and so calls in question the belief that words can represent meaning. To be clear,

representationalism infers a separation of what is represented from entities to be represented (Barad, 2003, p.804).

As an alternative, Barad is proposing intra-action as the fulcrum of meaning-making.

Intra-action, in contrast to the more recognised interaction, signifies that ...

Discursive practices and material phenomena do not stand in a relationship of externality to one another; rather, the material and the discursive are mutually implicated in the dynamics of intra-activity. But nor are they reducible to one another. The relationship between the material and the discursive is one of mutual entailment (Barad, 2003, p.22).

Intra-action thus breaks down any notion of oneness or representationalism and it is only through encounters such as outlined in the stories below, that knowledge emerges and new wonderings arise, as Murriss and Bozalek (2022, p.70) explain “intra-action is about connectedness with the world. It assumes that as individual humans, we have no control over the network of relations we always already find ourselves in, and how they affect us”. But intra-action also speaks to the explicit interconnectedness of human and material privileging neither the human nor the material but moving to an agential relational ontology, where “things are because they are in relation to and influencing each other” (Murriss, 2016, p.12). Intra-action focuses on relations between entities and not on the entities themselves.

Agency is generated and performativity is effected through the intra-active process. Agency is not a prerogative or quality attributed to humans, rather it is understood as a force or energy flow that emerges through intra-actions. If agency is the energy that is generated or emerges through intra-action, then performativity signals potential action and transformation. Performativity is intertwined with and inseparable from intra-action. Performative

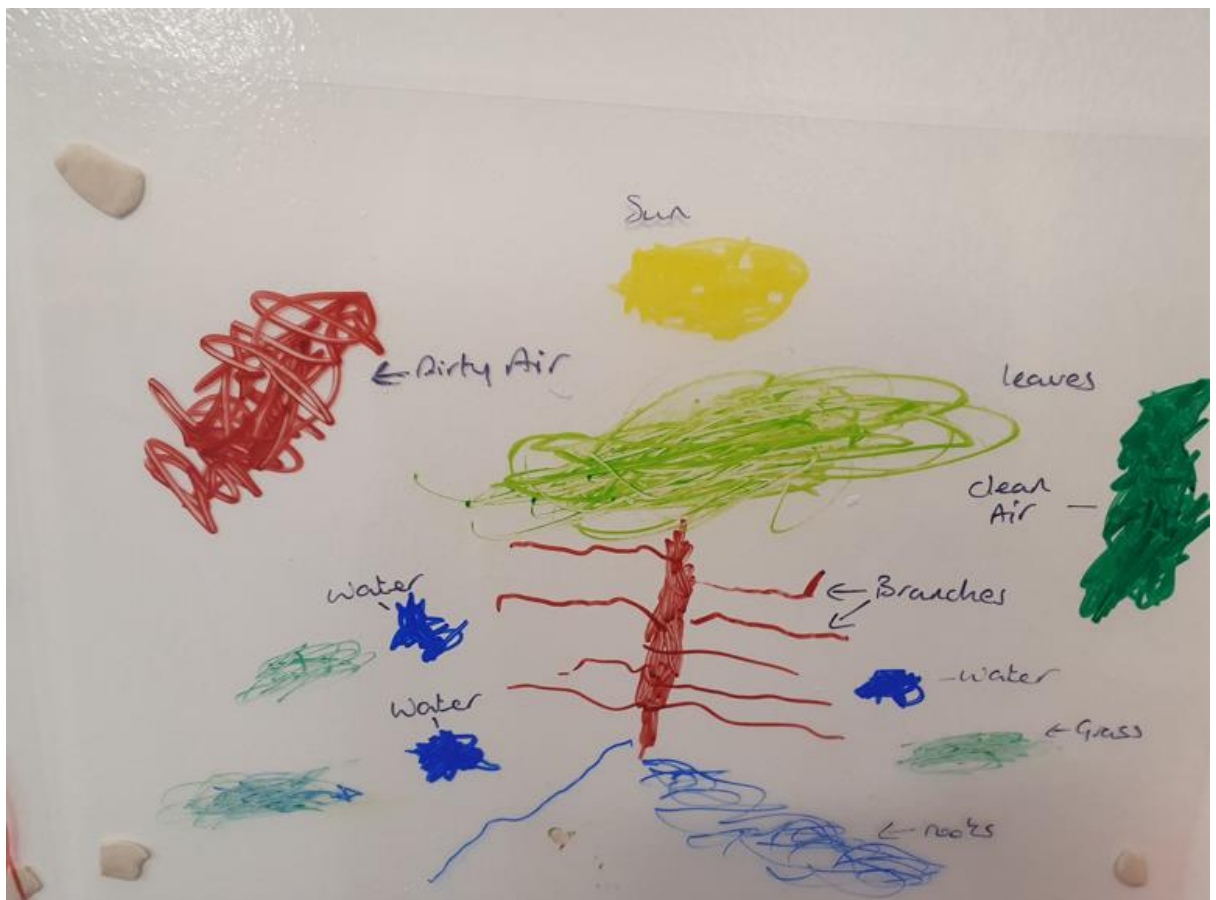
objects/agents can be both human and non-human and have a capacity to act on or transform (Lenz Taguchi, 2010, p.29). To summarise, Barad's (2007) agential realism offers different kinds of knowledge-making practices (Barad, 2007, p. 90).

Using a lens of intra-action and performativity resonates for the stories in this chapter. Thinking about performativity emerging through human/non-human intra-actions has implications for the ways in which learning is understood within the preschool and how it is represented through documentation. No longer is learning the prerogative or responsibility of the individual child or educator but instead the "learner and the world cannot be separated, but are of the world in a co-dependency (Len Taguchi, 2010, p.47). The story of photosynthesis below becomes both an end point and a starting point in considering the performativity of documentation.

Story of photosynthesis

Photosynthesis, as explained in the documentation of Jack (Image 2), a four-year-old boy, forms the impetus, but not the starting point, for this first story. The complexity of the drawing reflects the constituent agencies necessary for photosynthesis, the dirty air swirling around the tree, the sun taking centre stage shining down on the strong tree with many outstretched branches welcoming the light and a swirly root system. Leaves, pools of water and a resultant body of clean air completes the cycle of photosynthesis. This single piece of documentation is powerful in highlighting the learning processes that have occurred over the Autumn period but also in signifying the transformative relationship that has emerged between children and nature.

Image 2: Photosynthesis



This single piece of documentation, summarises a learning journey over many weeks, perhaps months, where meaning and connections were made by the child (Jack), the other children and educators within an emergent and inquiry-based curriculum, and where lived pedagogical practices materialised (Lenz Taguchi, 2010, p.66). As I encounter the drawing and the educators from Seaview, I wonder how knowledge and understandings that emerge from the work have been generated, what intra-actions and other material-discursive practices have been mobilised, and what phenomena are at play within the assemblage?

Stories and colours of autumn in the curriculum

The story of photosynthesis has its roots in years of practice. In Seaview, the educators have been grappling with and refining their pedagogy and curricular approaches over years. In the materialisation of their curriculum, documentation has been at the heart of their struggles.

In the past, the staff completed individual learning journals, group floor books, wall displays, parental newsletters, and a published hard bound compilation of the children's stories and illustrations. As Beth the manager indicated, the level of work "was all too much". This year, the team decided to narrow the range of documentation to be developed and instead they elected to focus on individual learning journals and to go deeper on themes that arise for individual children or groups of children.

Planning curriculum in September, the team were conscious that, "we really did not want to do the traditional Autumn stuff, picking up and painting the leaves" as part of a thematic approach. They recognised that sometimes a provocation or an invitation must be made intentionally to prompt children's thinking within the inquiry-based curriculum. Consequently, they used a question to initiate the process. We tested the water by asking the children what colours they saw in Autumn, and we decided that we could see every colour, absolutely every colour, not just red or brown or orange. Anna [one of the children] announced that she could see pink in the leaves. We then printed off some abstract pictures from artists to see how they had interpreted the colours and shades of Autumn. The children did their own paintings or representations on canvas (old roller blinds that we cut up). Some used oil paints, others used pastels and charcoal as different mediums to interpret Autumn. These works were displayed in the classroom (Image 3), but the questions arose from the

children, ‘why does the leaf fall off the tree?’, ‘what was the leaf before it fell off the tree?’
From here we started our investigations.

Image 3: Colours of Autumn



The journey of Documentation

The journey of engaging with documentation is not unique to Seaview.

Documentation has been described as “material communication tools appropriated or developed by teachers’ practitioners or researchers for the purpose of recalling, reflecting on, re-thinking and re-shaping learning, teaching, knowledge and understanding” (Carr, et al., 2016, p.277.). It has also been described as a “wicked problem” (Fleet, 2017) as being an oversimplified process (Pacini-Ketchabaw et al., 2015) and as constituting an administrative

pressure (Alasuutari et al., 2014). So, while acknowledged as critical to the teaching/learning processes in early childhood, documentation practices are entangled with other demands and expectations of curriculum and policy. The team in Seaview have changed documentation practices year-on-year in working to find balance within their curriculum.

Documentation practices within the setting are nomadic in that they are non-linear and embrace uncertainty. As a process, documenting has the power to open up dialogue, to surface, confront and resist taken-for-granted assumptions (Rinaldi, 2006) and approaches in the preschool and beyond. A dominant preschool discourse might be that in September/October the children should learn Autumn concepts, hibernation and animals, identifying leaves and trees as they shed for winter. There is an expectation that children will be outdoors in wellies walking through the scrunching leaves, gathering natural materials but using those materials in a pre-described way. In this study the group in Seaview disrupt the normative expectations – there are no rows of similar or identical leaf prints or painted trees with stuck-on leaves displayed within the setting. There are no autumn shades of brown and orange dominating amongst the art materials. The team wanted to approach the curriculum differently, more authentically, more open to being led by children, to disrupt the predictability of the Autumn theme and instead wait and see the direction that engagement with nature might bring.

The provocation started with a question and some examples of autumn depictions from famous artists (Image 4). The images, which were printed and put on the board were not passive. The images were powerful and linked with the educator's question they provoked different ways of thinking, framing ways of seeing and giving structure to the ideas being

explored (Kind, 2010, p.123-124). Through a lens of agential realism (Barad, 2007) and materiality (Lenz Taguchi, 2010) the children's documentation acted "as a materializing apparatus of knowing" (Pacini-Ketchabaw, et al., 2015, p.164). Thus, the artist's images (Image 4) and the children's documentation/paintings, are entangled in intra-activity. Children's thinking bubbles up in the in-between spaces, at the borderlands and in the middle of things. In this way, documentation complexifies practice and intra-acts in reshaping or defining curriculum. Documentation in Seaview has created a vigour, excitement and validation of learning as educators and children map growing understandings of nature's life cycles. The process of finding out and making meaning together, creates more equal relationships between children and educators and in this way documenting "produces helpful affects for humans" (Albin-Clark, 2020, p.10). Documentation has also enabled and encouraged resistance to the normative ways of approaching the topic of Autumn, instead creating spaces and possibilities within the curriculum.

The entanglements of curriculum

The curriculum in Seaview had evolved over time (years) from play-based to emergent play-based to what might now be termed as emergent and inquiry-based. However, in the shifting terminology and practices it is, as Barad (2007) contends that the past is never left behind, traces of the past are embedded in the present and the future. So, how can the phenomena or apparatus of curriculum be untangled to better understand Jack's interpretations of photosynthesis or the group's composition of Autumn colours?

Play has always been ambiguous (Sutton-Smith, 1989), acknowledged as an intrinsic and natural way that children learn and develop but equally as problematic for pedagogy

(Edwards, 2017). Problematising the relationship between play and the curriculum, Wood (2014) outlined three possible understandings, as child-initiated (Mode A), as adult-guided (Mode B) and as a means in achieving curriculum/policy learning outcomes (Mode C). Edwards (2017) exhorts educators not to pit play against curriculum so that they are seen as “contrasting elements of an intractable problem” (p.10). Instead, and building on Woods (2010) concept of pedagogical play, Edwards maps out a pedagogical play-framework (Edwards et al., 2017) which categorises play from a teaching perspective as, open-ended, modelled and purposefully framed play. Both Wood and Edwards signpost the possible roles of educators in both understanding and supporting play. Valuing play lies at the heart of pedagogy in Seaview, but there was also a strong and consistent emphasis on emergent curriculum, which followed children’s interests. Emergent curriculum has always required educators to ‘trust in the power of play’ (Jones & Nimmo, 1994, p.1) but conversely this approach does not mean that everything stems from the child. Educator’s interests also are integral to emergent curriculum (Hedges, 2022), as is evidenced by the Colours of Autumn documentation where the intention was to explore the autumnness of Autumn differently. In this case, it was Beth who probed children’s interests, not as they related to the feel or sound of the Autumn leaves, but in relation to the colours that could be seen, and which other famous artists had creatively replicated or presented (Image 4).

Image 4: Artist's impressions of Autumn



Melissa McKinnon



City Park in Autumn – Vincent Van Gogh



Gustav Klimt



Leonid Afremov

While paint/ painting was a favourite material/activity for many of the children, it was Anna's insistence on seeing pink in the autumn leaves that engaged the others and it was the questioning of another child 'why does the leaf fall off the tree' and 'what was the leaf before it fell off the tree' that took this emerging interest down another road of inquiry. The Colour of Autumn paintings were displayed on the wall in the room, and it was through the encounter with the material that the performativity of the documentation emerged. The wonderings and questions that emerged from the interconnectedness of children/autumn paintings were profound and it was as Bereiter (2002, p.301) suggested that "the most profound of children's questions seldom relate to activities of the moment. They relate to the

larger issues and forces that shape the world – birth, death, good, evil, power, danger, survival, generosity, adventure.....” Children’s questions about the leaf, what it was and what it is now, reflects inquiry as an act of wondering (Lindfors, 1999), and this Hedges (2022, p.96) suggests requires a relational pedagogy in response. The educators in Seaview frequently mobilise children’s inquiries, interests and working theories through a project approach.

A project-based curriculum could present in many guises, originating from the children’s interests or from topics that are pre-determined by educators or policy makers. As Seaview’s curriculum has flexed over time, it aligns in principle with the Reggio Emilia concept of “progettualità” which refers to the process of building or evolving a project. Linked to that concept of project as process is “progettazione”, a flexible practice whereby “initial hypotheses are made about classroom work but are subject to modifications and changes of direction as the actual work progresses” (Cagliari et al., 2016, p.357). The project approach allows connections to be made with children’s sustained interests and enables a shift from engaging activities to experiencing concepts in multiple exploratory ways (Hedges, 2022, p. 43).

These tracings of play, emergent, inquiry and project-based approaches within the curriculum have tracked and accumulated pedagogical and curriculum practices over several years, leading to the documentation of Autumn colours and Jack’s depiction of photosynthesis. Curriculum as content, practice and as an apparatus has and continues to fold, unfold, and mangle learning experiences from the past into the present and the future.

So, while the paintings/documentation suggest a clean start (Colours of Autumn and end point (Photosynthesis), they belie the performativity and material-discursive nature of the

curricular process. Emergent, inquiry and sometimes project-based curricula, embedded in the pedagogical practices of Seaview, are consistent with a sociocultural stance. However, I argue, considering Barad's (2007) work on agential realism and intra-action, that not only is the documentation (in the form of paintings/drawings/journals) performative, acting on children, educators and research, so too is curriculum, which emerges from iterative intra-activity (Barad, 2007, p.184). Curriculum within an emergent inquiry-based framework can have aims or general goals. In the context of Seaview, they are guided at a macro-level by Aistear, the Early Childhood Curriculum Framework (NCCA, 2009), which focuses on broad learning outcomes which relate to children's wellbeing, communicating, exploring and thinking and their sense of identity and belonging. At a micro or practice level, the outcome, outputs or even effects of curriculum cannot be known in advance. The intra-action of children, educator, practices, intentions, materials, desires, equipment, routines, schedules (and more) all connect in supporting new understandings and generating new knowledges. It is as Barad (2007, p.185) says that each intra-action matters because "possibilities for the what the world may become call out in the pause that precedes each breath before a moment comes into being and the world is remade again..." The possibilities for the emergent and inquiry-based curriculum are endless because in each iteration, the curriculum is re-shaped differently with different outcomes.

Intra-active pedagogy

In engaging with the Colours of Autumn and Photosynthesis, what may be extrapolated through an agential realist lens is that curriculum, in its enactment and

materialisation, is complex and unpredictable. In addition to the entanglement of curriculum with children, educators, parents and policies, curriculum is closely tied to pedagogical practice. Lenz Taguchi in her seminal work (2010) looks for workable concepts that enable a move beyond the identified theory/practice gap within the early childhood profession. Citing Williams (2007, p.1) as affirming that “no practice is free of theoretical

Aside:

This dilemma of theory/practice divide manifests itself with my students in Higher Education. They sometimes tell me that when on placement they are advised by staff/educators to forget the theory they are taught because the real world is about practice.

dependencies”, Lenz Taguchi proposes that practice is “a dense material-discursive mixture of events that are folded upon each other” (2010, p.22). The theory/practice debate is divisive on many levels and Lenz Taguchi (2010), in drawing on Barad’s (2007) theory of agential realism and more specifically intra-action, proposes an intra-active pedagogy, that is one which aims to,

shift our attention from intra-personal and interpersonal relationships towards an intra-active relationship between all living organisms and the material environment such as things and artefacts, spaces and places that we occupy and use in our daily practices (Lenz Taguchi, 2010, p. xiv).

Like Barad, Lenz Taguchi argues that agency is not a prerogative of humans and that material artefacts, as part of the material-discursive production, are also agentic and performative. In short, materials matter. As indicated elsewhere in this dissertation, the significance of the material in early childhood education is not new. Froebel recognised the value of the gifts, a set of open-ended play materials, which promoted exploration, problem solving and encouraged children to make connections, identify patterns along with discerning similarities

and differences (Froebel Trust, n.d.). Froebel's open ended block play materials are a key legacy which are as relevant today as in the 1840's. Maria Montessori emphasised the prepared environment and self-guiding, didactic materials and understood learning as a product of a child's interaction with the environment (2022 [2014]). In more modern times, the Reggio approach is powerful and transformative in recognising that meaning making and change occurs through collaborative action and engagement between human and non-human matter. Materials and environment are key provocations in prompting thinking and learning. Loris Malaguzzi in drawing on the work of Bronfenbrenner and Piaget, suggests that children's holistic development "takes place between an active or very active organism, the very active child and its environment, but also through the way this child-environment interaction is conditioned by interconnections This interconnection is always active, and therefore constantly, continuously in a state of change and fluctuation between different environmental situations...." (Cagliari et al. 2016, p. 316). While focusing primarily on children, their learning and development, Malaguzzi recognises the contribution of materiality to those processes. So, while Froebel, Montessori and Malaguzzi afford prominence to the environment (and materials) as the 3rd teacher, the vibrancy or thing-power of materials have not been foregrounded. In short, in these approaches, the focus remains on the child as meaning-maker, ably supported by the materials and not the child/material as co-constituents in the processes of coming to know. In contrast, Lenz Taguchi (2010, p.29) asks if material can be understood as being active in producing our discursive meaning-making, and consequently if it is possible to "think of the material as being active in producing our meaning-making of the children and learning and of ourselves as teachers?"

They dynamics of curriculum and documentation are in constant development along with the pedagogical practices of the team. The openness of the educators to new ways meant that they were positioned and supported in embracing an emergent and inquiry-based approach which harnessed interests and valued the material, but it was not always so.

Beth conceded that she would have been more controlling over the years and would have decided on the end point from the outset of any project. Now, and this year she is adamant that she would let it [project] run and take its course. However, figuring out the inquiry-based curriculum is not straightforward. Sarah added that it does take a very, very long time though to learn to hold back. You want to help, and you think the desire to help is coming from a good place and it is, but it is not actually good, if you know what I mean, because it's better to let them [children] go.

It is evident from the responses of Beth and Sarah that 'letting go' and trusting the process has been a struggle in practice. Relinquishing power within the curriculum takes professional and pedagogical confidence. The coalescing of a more flexible curriculum and an orientation towards an intra-active pedagogy still requires that the team are comfortable in uncertainty (Urban, 2008), knowing that the outcome of any given experience or activity cannot be pre-empted and that being adaptable in following children's interests is key. It has been challenging, from the manager's perspective, to bring the team to the threshold of uncertainty given the range of pressures experienced by the setting. The minimum qualifications for the profession have only been introduced in Ireland in 2016, meaning that considerable mentoring and leadership have been required to support staff in engaging with the emergent

and inquiry-based curriculum. There are ongoing challenges regarding availability of space for the preschool in the community centre building, which impacts on the flow and availability of materials, encroaching on what can be left out on display for completion at another time. Finally, changes in government funding have and continue to exert financial pressures on the operation of the setting. Cumulatively, these external pressures take energy and detract from the curriculum and pedagogical work in the setting.

Pedagogical practices, curriculum and documentation are entangled with broader issues of policy. In accepting the contingent and dynamic nature of these phenomena, the eye is drawn to the learning that is taking place in-between children, spaces and materials.

The following stories help unfold and illustrate how learning is not an individual affair. The child does not learn about the possible colours of Autumn or photosynthesis or the structure of a leaf or the function of roots outside of engagement with the human/non-human world in its totality.

Under the microscope.

In the story of Autumn, the connection was made between the colourful leaf and the life of the leaf. Thinking about form and colour was not new to the children, but the introduction of a microscope allowed them to come to know the leaf differently, to see the inner structure and wonder about the function of the leaf (Image 5).

Image 5: *Under the microscope*



Their [children's] interest with the microscope was amazing and, while what they saw bore no resemblance to the leaf, it raised wonderings as they drew their pictures. Looking, examining, and researching about veins prompted the children to think about the life and death of the leaf, why some were deciduous, and others evergreen, how they stayed alive, and the food that nourished them. It was as if the leaves were alive and real to the children. We have come from focusing on Autumn as a grand concept or project to now focusing on a leaf.

In its introduction, the microscope became part of a performative production of inquiry and learning in Seaview. There were expectations when the microscope arrived. It was anticipated that the microscope would exceed the limitations of the educators to explain, or pictures from the internet to show the inner structure of the leaf. It was hoped (but not named so) that through child/microscope encounters new insights would be generated. In this story the microscope might traditionally be recognised as an apparatus in a scientific or laboratory sense, which it is – a powerful piece of equipment. However, in Baradian thinking (2007, p.142) is clear that apparatuses are not mere devices (things) or social forces that

function in a performative mode. In this context the apparatus or microscope is not merely there to support learning. It is not a case of the microscope being passive and the child being active. Apparatuses are not passive observing instruments, nor are they distinct, bounded pieces of equipment. Where does the microscope or apparatus end – where it connects with the table, where the boys' eyes meet the material of the microscope, or where the hands twist and focus the lens. There is no objectivity or separation in this relationship – where the eye is placed and how the lens is focused determines what might be seen and how it might appear. The microscope and boy, the steady table it sits upon, the nature of the leaf on the slide, the light shining in through the window all contribute to new insights on the inner structure of the leaf, seeing it differently each time. Thus, through the intra-actions and flow, the discursive meaning of the leaf begins to shift as the children encounter it through the microscope. They initially ask questions and doubt whether the leaf they have held in their hands is the same as the leaf they are looking at under the microscope. Ultimately, knowledge can only be generated through “direct material engagement with the world” Barad, 2007, p.49). In talking about physics, but directly relatable to this story, Barad (2007, p.51) advises that “you learn to see through the microscope by doing, not seeing” and thus the intra-active encounter with the microscope illustrates learning as a material-discursive process. The microscope fundamentally changed conceptualisations of the leaf as part of a wider awareness of nature, and this led on to further inquiries within the curriculum.

Curly roots and the kindness of trees

Trees are everywhere in the small seaside community of the preschool, they are part of the landscape, blending in and almost invisible in the long shady gardens that line the streets down to the water's edge. ...The stories in this chapter have aimed to break down the theory/practice divide in highlighting the intra-action and performativity of curriculum. The documentation generated as part of the curriculum process clearly maps the transformative journey in coming to know and experience the natural world differently.

Two separate stories illustrate in how coming to know the treeness of trees and in dissolving the subject (children)/object (tree) divide, relationships change.

Changing the relationship

Pacini-Ketchabaw (2013) notes that natural outdoor environments have become a 'hot topic' in the world of early childhood. This focus on nature and environmental learning has become more prominent with the experience of Covid-19 and growing global concerns around environmental sustainability (Taylor, 2017).

Engagement with nature is frequently presented as simplistic in assuming that by walking regularly outdoors children will come closer to nature, becoming more knowledgeable and becoming invested in the natural world (Pacini-Ketchabaw, 2013). However, the point is, that being in nature is not sufficient to affect attitudes and relationships with the natural world. Attention to climate justice and sustainability requires urgent attention to more than human and "we cannot continue with the universalized, individual human developing child as the centre of what we do" (Nxumalo, 2020, p.199).

Questions are raised regarding the role that early childhood educators play or should play in raising environmental awareness amongst very young children. While environmental awareness and education has emerged as a contributing solution to sustainability and the survival of the planet, there is a risk in merely imposing concepts or views of nature on children or teaching them facts in isolation. How can you children be eco-warriors and not eco-worriers (Outhoff, 2023) and how can pedagogy be done differently? Almost two decades ago, discourse centred on bubble wrapped children and pedagogical failings to address children's increasing alienation from nature (Davis, 2009). There has been progress in the intervening time, but in conducting a review of research literature, Hedefalk et al (2015, p.976) suggest that having factual knowledge about natural phenomena and the impact of humans on the environment is not enough for children to act sustainably. There is a sense that educators should support children in becoming knowledgeable and being exposed to the environment in practice, to effect behaviour.

Trees typically feature in preschools during the Autumn term as part of an environmental/ecological curriculum, which support children's understanding of the seasonal cycle of nature. Children go on nature walks, gather leaves and chestnuts or conkers and bring them into the classroom to learn about deciduous and evergreen trees. In this curriculum format children come to learn about nature objectively with varying levels of engagement.

Resisting the tendency to distance and sanitise encounters with nature, the line of curriculum development in Seaview was not prescribed, it flowed and meandered over months. Arboreal like, the documentation along with direct experiences in nature, branched

out generating new engagement with and understandings of trees, changing children's perceptions of place and agency in the world/community.

We found a BBC video one that showed the roots under the ground and even though it was for adults, I think at this stage they were interested in trees, mainly because a tree was no longer just a thing that was outside... it was something alive that helped us that had all these different parts. So, their minds were so open at this stage. That video showed that tree roots help each other under the ground, they talk to each other. It's called the fungal network, the wood-wide-web. The fungi would go out and get all the minerals and the resources and bring it back to the roots and it would go up through the roots into the tree.

There were certain trees like the black walnut that tried to kill off the trees around it (they were the baddies) and in this case the fungal network sends out a warning system. I learnt far more than the kids. I never knew all this. The kids were fascinated, they were literally rooted and said, 'play it again, play it again'. It was the fungal network that really fired their imagination. Imagine Sarah told the children that 'when you are out in the woods again you know that while the leaves are moving and shaking, and we have lots of sound but underneath the roots are talking to each other, and they are connecting'. I found that mind blowing. That video was amazing. It was pitched at older children, but the video resonated with them. So, we had gone from the trees to the roots, and we planted bulbs in clear plastic containers so they could see their own bulbs and roots and the system forming and it gave them another visual cue and understanding. We also went out to investigate roots nearby, where there are big, big roots over ground, and they cut into a bank. The children loved that

because they could actually climb on the roots, whereas before they thought they were branches.

There are many points that could be drawn out and explored from this story, primarily the need to be in nature to enable connection with nature, the power of engaging in experiential learning and of following interests. However, I wonder if from a posthuman perspective there is more? I read and re-read the data, watching video clips wondering what I was missing. What is the data trying to show? The children were interested in the root system that became visible in the clear containers, they were enthralled with the video that explained the fungal network and they brought together knowledge and experience as they climbed over the exposed roots of an established tree in the community. The data glowed (MacLure, 2013, p.661) in that it started to glimmer, focusing attention, resisting analysis and refusing to render up its meaning. What bubbled up in re-watching videos and re-viewing documentation were the ways in which children's interest and attention were drawn to the small things. Aided by the educators, the curriculum and the material resources, the children were interested in the minutiae, in the intricate features of the leaf and the roots. Children come to know and be with the trees, not merely by tracing the shape of leaves or doing bark rubbings, which alone may signify superficial engagement, but in attending to the micro and to that which interests or connects with them.

I began to think about the disservice that is done when generic, template-like, broad brush-stroke curricula are used in early childhood education. When decisions and pathways are laid down for children, their competence and abilities (Rinaldi, 2006) in engaging with the materiality of the world is missed. The focus through much of the literature is on how

children learn from nature, with both human (child) and nonhuman (nature) distinctly separate. Barad (2007) reminds us that this artificial separability is a fallacy, because intra-action is already and continually happening. The skill is to understand, see and have a sense of what is happening in the intra-active process with which we are entangled. Seeing is but one way of understanding, as Haraway (1991) suggests that seeing is not passive and our eyes are active perceptual systems that build in translations and specific ways of seeing. We need to begin to see with the eyes of our skin (Pallasmaa, 2005), connecting and valuing the materiality of the world around us.

Concluding Remarks

In this section I am arguing with stories and illustrations from documentation that learning occurs through intra-action. As Lenz Taguchi (2010, p.36) advises “it is the material-discursive forces and intensities that emerge in the intra-actions in-between the child and the materials... that together constitute the learning that can take place”. Reading the stories through a posthuman /new materialist lens emphasises that curriculum, the materiality of the environment, the documentation process and the pedagogical approach are all entwined or entangled in learning. The implications for curriculum and pedagogical practice in holding this view of learning, as knowing in being (Barad 2007), are significant.

Firstly, given the global challenges of sustainability, there is consensus that human and nature's forces, fates and futures are inextricably entwined (Taylor, 2017, 1458) and that the response of the Anthropocene is critical to the future of our world. Thus, what, and how children learn through their encounters with nature are important. Educational discourses call for young children to be caretakers or stewards of the world in bringing about environmental

change. However, this approach Taylor (2017, p.1458) suggests is “out of step with concurrent moves within environmental education to promote an eco-centric, rather than an anthropocentric view of the environment and indeed, to challenge the nature/culture divide”. The roots of healthy ecological and environmental futures are to be found in collective agency that resists human exceptionalism and focuses on our entangled relations with the more-than-human world. Education cannot and should not adopt a didactic pedagogical approach, which seeks to place responsibility on children for sustainable development, because knowing about nature is not enough to enable sustainable actions (Hedefalk et al., 2015, p. 976). What the stories in this chapter clearly show is that transformation emerges through intra-acting with nature, knowing in being, which means that,

“we are not outside observers of the world. Neither are we simply located at particular places in the world; rather we are part of the world in its ongoing intra-activity (Barad, 2007, p.184).

Secondly, documentation and stories in this chapter foreground the critical nature of curriculum and pedagogy. In broad terms teachers/educators understand education for sustainable development (ESD) as teaching facts about the environment, as manipulating children’s behaviours and of developing children’s critical thinking skills (Hedefalk, 2015, p. 980). These approaches emphasise and rely on the teaching of facts. Educators must open themselves up to what happens in the moment in the “thickness off the actual present with all its multiplicities (Len Taguchi, 2010, p.61), understanding that learning is enacted through intra-actions with materials, environments, curriculum, pedagogy and time. The stories in this chapter identify that children learn about, in and with nature when they can attend to the detail of things in their own time. As Barad (2007, p.x) suggests, it is in paying attention to

the intrinsic details in each intra-action that “we use our ability to respond, our responsibility, to breathe new life into ever new possibilities for living justly. The world and its possibilities for becoming are remade in each meeting”. Consequently, I argue here for children’s participation in or of co-leadership in the curriculum to ensure they can focus on areas of interest and are not part of a pre-defined approach which limits their lines of development and engagement with the other. Affording opportunities to engage with the materiality of the environment enables meaning making and the generation of knowledge that goes beyond facts.

A third consequence of understanding the entangled nature and performativity of intra-action is a re-imagining of pedagogical time and space. The entanglement of human/non-human matter Intra-acting within the preschool means that it is impossible to know what insights or knowledge will be generated in any given moment and learning is accepted as “a dynamic, relational process of intra-action” (Murriss, 2016, p.13). To understand and see differently, to attend as an educator to the nuances of what is happening for children and what new knowledge might be generated, requires an intentional slowing down of time. The concept of slowing down is not exclusive to early childhood education, with slow scholarship or slow research (Murriss & Bozalek, 2023) emerging as relevant for adults. There is an increasing call for slow pedagogy (Clark, 2022) to enable educators understand what meaning making process might be underway and to glimpse what might be happening in the in-between spaces. Lenz Taguchi (2010, p.116) takes a step further, suggesting that not only should we (as educators) slow down thinking and time but that we should also deliberately slow down our physical movement in the pedagogical spaces. The

pedagogical practice of slowing down is necessary to ‘catch the moments’ (Carlsen & Clark, 2022) that are important, and this is substantiated in the stories shared in this chapter.

Reading the stories or data from Autumn through an intra-active lens has surfaced the need for responsive curricula and intra-active pedagogies to support learning in early childhood, but also as was evident in this case, as a way of seeing children’s relationship in and with nature. Understanding photosynthesis, analysing the leaf, being excited by roots, and being concerned for the trees’ wellbeing, suggests that slowing down and allowing children to follow their interests is critical starting point in disrupting humanist paradigms and dissolving theory/practice, nature/culture divides.

CHAPTER 6:

Story 2: The whiteboard, the posthuman child and time

The whiteboard sits on castors and is tucked under the window in the preschool room (Image 6). Each morning it is wiped clean, presenting as a provocation to the group. The orange pens that are used exclusively with the whiteboard sit in the lip, ready and waiting. The size of the whiteboard offers possibilities for collaborative work, but it does not dominate the space, inviting engagement with the shiny surface. The whiteboard is situated beside the construction area and was initially introduced to support children graphically plan their projects or work, but how it is used, and the outcomes of the intra-actions cannot be predetermined. Everyday encounters between children and whiteboard/human and non-human matter have different effects.

Image 6: *The whiteboard*



This chapter offers a series of sticky stories that diffractively read encounters with the whiteboard and marker through new materialism (Lenz Taguchi, 2014), posthumanism (Ferrando, 2019) and Barad's (2007) spacetimemattering. The stories are of the mangled past, present and future, of a whiteboard and orange marker that enabled connections and of a boy who begins to re-engage with the world of the preschool. The stories emerge from a 24-minute-long clip of video documentation, which considers what is happening at the whiteboard and what is transformed through these encounters.

Over the past few months, the staff have been concerned about Mark. He seemed emotionally distant to children and educators, which was not typical behaviour. While he continued with his favourite activity, drawing, he refused to discuss his creations, something that previously he had been happy to do. The team encouraged him to talk about his drawings, but Beth highlighted that, "sometimes you feel you are running out of questions, and you know that you are not wanted, you need to get out of his space". Mark's drawings are very distinctive and intricate. They frequently include a fairy tale element but recently he has been physically turning away from the educator when she tries to engage him.

One Monday morning in May, Mark was at the whiteboard and Beth commented on the work he had started: "oh, that's very interesting, you have lines coming down and you have a big line across the top". Mark responded that it was the rain (Image 7) and Beth felt, "oh, I've got something". So began Mark's encounter with the whiteboard. It was a story of windows; and houses without windows; of a wolf and pigs; of chimneys and holes in the roof; of burning and gobbled piglets; and of a mammy pig about to return from foraging for food in the forest. The story was characterised by Mark concurrently drawing and self-

narrating, which left the educators wondering if the drawing prompted or shaped the story, which came first in his mind, the story or the drawing. The episode was also punctuated with wonderings and questionings from the educator, which had the effect of Mark adapting his story as he went. For example, Beth asked if there were no windows or doors how the little pigs would get in and out. Mark responded by drawing a key on the roof, so that the pigs could lock the door after themselves. He was intense, focused and at intervals Mark stepped back (Image 8) to survey his creation, perhaps to look at the flow of the story or to help think about the script.

Image 7: *Mark drawing rain*



Image 8: *Stepping back*



Diffractioning the posthuman child

There is a sense of something powerful happening, a turning point on that May morning when Mark engaged with the whiteboard. The back-story suggests that something had been happening for this young boy over time. The staff had noticed a difference in his being, in his behaviour and they were concerned. It is unclear if Mark planned to work on the whiteboard that morning, but energy erupted as he stepped up to the whiteboard and took the lid off the marker (Image 9) and began. Did Mark know what would materialise as the entanglement of hand and pen touched the surface of the whiteboard? What happen in the intra-action between Mark as a posthuman child and the materiality of the whiteboard?

Image 9: First point of contact – the orange marker



Mark a posthuman child

Barad's ontoepistemological framework, which they name agential realism, lies at the heart of this study. Agential realism rejects the inseparability of human/non-human matter, instead proposing a relational ontology, which troubles the notion of independently existing entities. Already Barad begins to disrupt the notion of what it means to be human and in this Chapter I wonder what it means for Mark to be a posthuman child in the context of this study? Posthumanism, which is explored in chapter 3, seeks to de-centre humans from the world (Bennett, 2016, p.59). It is a mobile term, which can be understood as a "shift in perspective" that requires use to "reflect on our location in this material, dynamic, and responsive process that is, existence" (Ferrando, 2020, p.185). Posthumanism does not set out to negate the human (Murriss, 2016, p.47), but rather it advocates for a 'world with' (human/non-human) and calls into question "the essentializing binary between human and nonhuman on which humanism relies" (Taylor, 2016, p.5). The distinction between humanism and posthumanism calls into question ontological beliefs which relate to the nature of being (and what constitutes being) and epistemological assumptions about "the forms of knowing that produce valuable knowledge" (Taylor, 2016, p.5). So, posthumanism aims to de-privilege the human and create space for the inclusion of all other nature/culture/ non-human matter. Barad's stance is that they take issue with human exceptionalism but bring the argument further, calling into question the configuration and re-configuration of boundaries between human and all other matter (2007, p.136). Reading Mark's story through a posthuman lens suggests that the materiality of the whiteboard and pen, the environment and others are all in relation and interdependent. Barad's agential realism draws on this thinking, offering "a posthuman account of performativity that challenges the positioning of materiality

as either a given or a mere effect of human agency” (2007, p.183). Ultimately, posthumanism disrupts thinking about who matters and what counts (Taylor, 2016, p.5) and in this chapter it concerns Mark as the posthuman boy and the whiteboard/marker as materials that are central to this story.

What does it mean to be a posthuman child? What could this image (10) represent, an independent child standing in front of a whiteboard, understood in binary terms as boy/subject and whiteboard/object? Posthumanism is a response to what has gone before (Murriss, 2016), that is humanism, and raises consideration of what it meant to be human and/or who was included in that category (e.g., women, homosexuals, transsexuals).

There are and have been multiple lenses through which to consider children and childhood (Archard, 2004) and each lens has profound implications for pedagogy and the ways in which learning is understood and children are perceived. A developmental lens is informed by Piagetian thinking which takes a stage theory approach and proposes that there are pre-determined or normative milestones that must be reached before children move to the next step or stage in their education. Within this frame, Dahlberg, et al. (2013, p.48) offer a metaphor of the child independently ascending a ladder one step at a time in linear fashion. There is a sense from Burman (2001) amongst others that developmental discourses have created limiting or reductionist conceptions of what it means to be a child.

Developmentalism has long dominated early childhood, primarily viewing the child in the context of biology and separating out aspects of being, e.g., the social, emotional, cognitive and physical child. The implications of Piagetian theory for early childhood education is that the concept of ‘readiness’ is centralised and pedagogy moves from the

simple to the complex and from the concrete to the abstract (Egan & Ling, 2002, p.94), with children brought through prescribed curricula or lessons to support generally accepted learning stages and achieve developmental milestones. For Dahlberg and Moss, (2005, p.166) developmentalism draws on scientific knowledge to construct universal truths about children. The Piagetian influence has also led to a separation of educator/child in terms of pedagogy and documentation. The approach of educators as objective and independent observers of young children has long been embedded in pedagogical practice. Through a developmental lens Mark would be understood as being a capable and independent learner, physically adept in managing the pen at the whiteboard but perhaps cognitively unsure of the story sequence that was drawn. It may also be that the concerns of the educators regarding his recent behaviour would dominate perceptions of the young boy.

A shift towards social constructionism in the 1970s and 1980s (Taylor, 2013) saw the resurgence of the nature/nurture debate within the academy. Social constructionism, in moving away from the more deterministic nature/biological perspective, offers another lens to understand the child. In this context the child remains an individual but situated in and influenced by the politics, culture, and society in which they live. Social constructionism perceives the child as in a state of being and becoming, as being active with opinions of their own (Dahlberg et al., 2013). Regarded solely through a social constructionist lens, it could be said that in this story Mark is concerned (or troubled) by what is happening in his life and community, his father's fairy houses made from clay and the recent hole in his neighbour's house. The community issues are weighing heavily on him. An observation of Mark might also consider the change in behaviour from distant to more social and wonder or look for explanations, why did he invite Beth into his space on that May morning.

Analyses through a developmental and social constructionist lens offer differing perspectives but maintain the ontological and epistemological separateness of child and others (educator). In both cases, the consolidation of binary positions is limiting, and even Prout (1993), who previously emphasised the social/cultural, has according to Taylor (2013) proposed “the perpetuation of the nature/culture divide to be futile”. However, educators frequently hold onto these perspectives in guiding values and curriculum, relying on a child-centred approach which keeps them “under the thumb of familiarity” (Land et al., 2020, p.4). For Barad (2007) and Lenz Taguchi (2010) amongst others, the issue of binary divides is addressed through a posthumanism and new materialist lens which see the child as “an entanglement constituted by concepts and material forces, where the social, the political, the biological and its observing measuring and controlling machines are interwoven and entwined - all elements intra-act and in the process ‘lose’ their clear boundaries” (Murriss, 2016, p.91). Lenz Taguchi argues that this way of thinking reflects a shift from ‘either-or’, which does not privilege or reduce one to the other. Instead, and drawing on Barad (2007), she proposes an intra-active pedagogy or approach which looks to the intra-actions and what is happening between the material and discursive, in the in-between spaces.

A new materialist lens

Mark, as the posthuman boy is not an independent entity and “existence is not an individual affair” (Barad, 2007, ix). He is part of the world, entangled with the discursive and material. The philosophical ‘material turn’ considers “material as an active agent in the construction of

discourse and reality” (Lenz Taguchi, 2010, p.12) and begins to dissolve the human/non-human barriers. New materialism, as outlined in chapter 3, can be thought of as new ideas that do not necessarily add to what has gone before but rather which “traverses and thereby rewrites thinking as a whole” (Dolphin & van der Tuin, 2012, p.13). In new materialism, matter comes to matter and the dynamism of human/non-human matter brings forth new worlds (Barad, 2007, p.54) or new possibilities through the process of intra-action. Drawing on quantum physics and the work of Bohr, Barad suggests that “things do not have inherently determinate boundaries or properties” (2007, p.138) and extends this thinking in proposing that all matter (human and non-human) is in a state of constant flux or intra-action. Their thinking begins to break down the separation of subject (human) and object (external nonhuman world), which suggests a mutuality or interdependency. In other words, as humans “we are not outside observers of the world... we are part of the world in its ongoing intra-activity.... we are a part of that nature we seeking to understand” (Barad, 2007, p.184). This concept of intra-action has relevance in untangling the story of Mark and the whiteboard (image 11).

Image 11: *Entanglements – boy/whiteboard/marker*



Barad’s notion of intra-action is extended into early childhood education by Lenz Taguchi (2010) in the form of Intra-active pedagogy, which as a central theme, moves away from traditional concepts of inter-personal and instead foregrounds the dynamic, intra-active relationship between the material environment, for example, documentation or the whiteboard in this story, and humans as living organisms, in this case Mark, Beth his educator, and the other children and staff in the setting. Lenz

Taguchi focuses our gaze not on the material or human elements alone, but to the in-between spaces where human and non-human matter rub shoulders, because it is here that interesting thinking and learning emerges. Consequently, through the lens of intra-active pedagogy, this encounter between Mark and the whiteboard can be understood as an “intertwined material-discursive and embodied reality” (Lenz Taguchi, 2010, p.90), and can raise wonderings about what meaning is being made in the encounter.

The expansiveness of the whiteboard seems to allow Mark to use the orange marker to reflect the emotion of his story and inflections that he might use in language. So, in wanting to highlight the vicious intention of the wolf, Mark is drawing more and bigger teeth in emphasising what he is saying (Image 12). As Mark moves swiftly in developing his drawing it is as if, physically, himself and the whiteboard are working in unison and the story along with his narrations are emerging from, and through, that intra-action. It is the expanse of the long whiteboard, positioned at the right height for Mark,

Image 12: The wolf and his sharp teeth



that enables the drawing and story develop in all its complexities. The whiteboard and orange marker are part of the performative production and are not simply passive materials. Lenz Taguchi (2010, p.5) highlights that “notions and beliefs can change as a result of the force of intra-activity with material objects and artefacts”. In thinking about posthumanism and new materialism, it might be that in stepping up to the whiteboard that Mark quite simply sought to draw, apply a marker to a board. But the processes and intra-actions that are evident through and in the stories change Mark and change the board. Mark is transformed with

intensity, energy, concentration and joy pulsating through his body. The totality of Mark presents as something different than has been previously evident. So too, the board changes from a blank slate to a form of documentation, sharing stories with the preschool community. Bennett (2016, p.64) considers what it might mean to ‘think like a brick’ and Aldo Leopard (cited in Bennett, 2016) exhorts us to ‘think like a mountain’. What might it be to ‘think like a whiteboard’?

Spacetime mattering

Child/hood is enmeshed in many temporal constructs, e.g., aging, development, growth, etc. (Myers, 2020, p.107), and situates child and/or childhood within a particular place and time. Building on the concept of intra-action and intra-active pedagogy, Lenz Taguchi (2010, p.175) suggests that “the teacher cannot understand the student, the content, or the methodology in terms of being a fixed entity apart and separated from everything else”. Space and time are mutually enfolding in the story of Mark and the whiteboard.

This encounter between Mark and the whiteboard cannot be understood fully without a sense of what has gone before, about staff concerns for Mark, “he was not in a good emotional place”, about changing behaviours “he was actually selectively mute for a while”, about a consistent attraction to the large white board in the playroom, “he loves to fill the massive board with his intricate drawings”, and about the time and space that Monday morning when Mark made a first response, “it’s the rain”.

Mark’s dad is a potter, and he has a workshop which can be viewed through the shop window in a nearby village. As she drove past his shop one day, Beth realised that what she was looking at in the shop window were reflections of Mark’s drawings and documentation.

His dad was creating fairy houses from clay. The team invited Mark's dad into the preschool to show and discuss his work to see if that could help Mark move into a better emotional state.

The fairy houses and fairy tales, reflected in the documentation, formed connection points between Mark's life outside and inside the preschool, between the past, present and future. The past is carried forward (Hickey-Moody, 2020). The team only begin to gain insights to Mark through a temporal lens, drawing together traces from the past and in these moments the boy cannot be separated out from the fairy houses in the shop or the story that is emerging on the whiteboard (Image 13).

Image 13: *Mark's creation on the whiteboard*



Barad has built the argument that existence is not an individual affair (Barad, 2007, p.ix) and that in the process of intra-acting, all phenomena (be they human or non-human matter) are constantly transforming and becoming. This means that everything is in a process of ongoing change including time and not even the past nor the future are ever closed off (Barad, 2007, p.383) because the past is continually being re-worked through and in the present. In considering the story of Mark and whiteboard, Barad (2007, p.80) helps me understand that “time is not a succession of evenly spaced individual moments” and that there are no determined boundaries between here/now and there/then (2007, p.168). Through the intra-actions at the whiteboard Mark is carrying and re-working the threaded memories and traces of all that has gone before (Barad 2014). It is as acknowledged by Hickey-Moody (2020) in her exploration of art practices that space-time folds what really matters for children, which is then materialised through their creative labours. This is not simply to say that Mark in this story has brought the past to bear on his complex drawing but rather that through the connection with the whiteboard and the orange felt tipped marker the past is mobilised and re-worked, materialising the story in the present which will flow into the future. It is these intra-actions that matter to the making/marking of space and time (Barad, 2007, p.180), there is an ongoing folding and unfolding of what has gone before.

Beth and the team recognise this encounter with the whiteboard to be an important development or turning point because of the past. Past experiences with Mark seep through to the present, where Beth has recognised a moment to intervene and document the process. Without their concerns from the past weeks and months, this encounter may not have emerged as significant. Mark has come to this moment enfolding his past and ongoing interests (fairy stories), his more recent concerns or fascinations (holes in the roof), his story

of future possibilities for the Mammy pig who is about to realise that the big, bad wolf has gobbled up her piglets, and his readiness to re-engage with the pre-school world.

In this encounter with the whiteboard, both space and time matter. The expanse of the whiteboard attracts Mark and allows him to develop the story script graphically and narratively on a grand scale. The breadcrumbs of the story and being able to tunnel back to understand the present was possible through the performativity of the documentation. Within the professional conversation and in viewing the documentation, the video clip, and photographs of Mark drawing on the whiteboard, one of the team (Ursula) remembered how, almost out of character (at that time),

Mark walked with his friend Sorcha to the nearby beach and “talked about fairy doors all the way down”. Ursula felt that “maybe because we weren’t looking at each other and were walking that he spoke about fairies. He picked out the bluebells and said they were the fairies’ hats and dresses. He was so animated, he was telling me about a broken fairy door and then about his neighbour’s roof, there was a hole in the roof which was broken”.

Ursula’s insight has offered something important to Beth and the rest of the team as they try to make sense of Mark and his drawing. It is as though, in Barad’s words (2014, p.179), “boundaries don’t hold; times, places, beings bleed through one another”. The relevance of the chat on the walk to the beach has an effect in how Beth and the team understand Mark and his drawings now and into the future. It is as though the “past was never simply there to begin with, and the future is not simply what will unfold”, they are “iteratively reworked and enfolded through the iterative practices of spacetime mattering”

(Barad, 2007 p.315). The fairy doors (Image 14), the fairy stories, influenced by the pottery of Mark's Dad feature as central ideas on the whiteboard. It seemed to the team that this encounter constitutes a turning point for the boy. Sarah highlights that it was early in the week when this episode occurred with Mark drawing and narrating his story and that since then he has come to her with at least four or five items to show and discuss some pieces of documentation. In the reworking of feelings and thoughts at the whiteboard, the past (of being troubled and of talking about the fairy doors), the

Image 14: *Fairy doors*



present (drawing and narrating his story), and the future (from that point on) are entangled and cannot be untwined. In connecting with the materiality of the whiteboard, moments are slowed down and the orange pen, as an extension of the boy, gives life to his rememberings.

Rethinking pedagogical time - The case for slow pedagogy

The relationship with time in early childhood settings is precarious. There are notions of being busy, or 'busy time' or 'wasting time'. There is book time, which seems to suggest that books are only read at this point, tidy-up time, lunchtime and naptime. The day is punctuated by clock time and since the pandemic there is a lot of conversation around time required to 'catch up', as though time were a transportable resource to be used as required. How time is understood has implications for children and their relationships with others, be that human or non-human. How frequently have children demanded more time to play, more

time to finish their construction or artwork? For educators, do they feel guilty or unproductive in just observing and being with the children. There are alternative ways to consider time as outlined by Clark (2023, p.1), who offers notions of expansive time (Povey et al., 2021), stretched time (Cuffaro, 1995), and whiling or worthwhile time (Jardine, 2013).

Through this story Beth waits on the edge, watching with intent and a sense of expectation. She holds the video and wonders what will emerge. It is in the in-between space, where her questions and Mark's thinking collide, that the narrative on the board slowly and purposefully begin to emerge. Time assumes another quality as it slows down in the engagement of boy, educator, and whiteboard. It appears that the time has arrived for the emotions and stories of the boy to materialise. For Beth, the educator, these moments are pregnant with possibilities, and she gives time to listening, which is a time full of silences, of long pauses, an interior time that is outside chronological time (Rinaldi 2001 p.80),

In Seaview, this process of slowing down and thinking about time differently has been a hallmark of the practice and work with documentation during the year. Time has been given to more focused documentation, with the team exploring children's experiences more deeply. There is a growing culture of engagement and fascination with children's learning in the setting. In practice, this awareness and slowing down has taken time. Beth acknowledges that it is only this year that she is confident in knowing when to interact and when to step back in engaging with the children. "I knew he just wanted or needed my presence, my time, my full attention on that morning and I gave it willingly".

Similarly, Sarah explained that she knows the value of slowing down pedagogically, and that, by sitting and having the time to go through [documentation] with the children you actually get to learn an extra bit about what was meaningful for them. She believes that you only really get to understand what is emerging by waiting, watching and slowing down.

Aside: Our graduates out in practice assure me that full day services are indeed ruled by the clock and care routines such as nappy changing are regimented affairs with the goal to have

The time and space afforded to slowing down practice and documentation has acted as a springboard allowing the team to understand the material-discursive intra-activity that is taking place. Reading the story through the lens of spacetime mattering complicates practice. No longer can time be understood as linear and absolute, but rather agency, space, time, and matter are consistently being reworked through the processes of intra-action and the inexhaustible dynamism of the enfolding of mattering” (Barad, 2007, p.180). In this way, pedagogical time cannot be framed as curriculum by the clock (Murriss, 2016, p.200) and so in suspending time, Beth opens spaces of uncertainty which enable Mark to work through his past which is with him in the present. In this story or episode Mark is re-turning to his experiences, turning them over again and again at the whiteboard, “as an embodied practice of remembering” (Barad, 2014, p.168) and as a way of materialising his thoughts and feelings.

The relationship between time and pedagogy has changed in tandem with world-pace. David Elkind (1981) bemoaned the hurried nature of childhood and Hartmut Rosa (2019, p.415) has more recently identified the need “to run ever faster to maintain our place in the world”. Time has become a commodity that is linked with efficiencies and performativity

(Ball 2016). Clock time impacts on curriculum and practice in early childhood settings. The clock structures both the arrangement of children and educators in the classroom and the practices that are deployed throughout an ordinary day. The clock, as a physical apparatus that represents or measures time, produces particular knowledges about what it means to be an educator and what it means to be a child in an early childhood classroom. The clock is fundamental to how early childhood education is understood, organized, and enacted (Pacini-Ketchabaw, 2012, p.155).

How educators think about time impacts on practice. Is the setting and routine of the day ruled by the clock, is time understood as something to be managed and what are the consequences for children and educators of such a perspective? Too frequently early childhood practice is characterised by clocking time, but the team in Seaview has resisted the domination of the clock and has come to value a slowing down in and a stepping back from practice. There is a routine in place, but in this story time and space are afforded at the whiteboard so that the educator and the child are opened up “to indeterminacy in moving towards what is to-come” (Barad, 2014, p.182). The clock sits on the wall of the setting or on the wrists of the educators, but in reality, it only exists through the practices that are enacted in the ordinary moments of the day (Pacini-Ketchabaw, 2012, p.157). Creating space and time for children and for themselves has taken confidence. As Beth holds the video for 20-25 minutes, recording the evolving story she is intentional and present, in a suspended bubble with the boy. There is a sense that the tyranny of the clock has been transcended, that a slow pedagogy and the entanglement of boy, whiteboard and time has enabled Mark’s story to emerge through the documentation.

Concluding Remarks

The materiality of the whiteboard has offered a lens and acted as a catalyst to conceptualise differently, the concept of time within the early childhood setting, the practices and paces of the educator and the possibilities for and images of the child. The focus of my writings through this story has been on the stretching of time and the ever-present past for the child. Barad's (2007) perspective on time, as a phenomenon that is re-configured through intra-action, means that nothing is or can be pre-determined. The implication for practice is that children cannot be boxed, and the trajectories of their learning and development cannot be limited by the perceptions of adults because of where they live, the families they come from and/or their additional or special needs they may have. In and through every intra-action new possibilities emerge for children. Disrupting and troubling thinking about time as flexible and enduring offers hope for pedagogical practice simply because the past is never tied off and children like Mark in this story, are always re-working the past and its tracings, in the present. The power of understanding time as but one element entangled in intra-actions gives hope for growth and transformation.

There are concurrent responsibilities on the educators to recognise the significance of what is happening in the practice context of a busy early childhood setting and to consciously enact healthy relationships with time. Resisting governance (or over-governance) by clock time and slowing down to see differently is a call that emerges beyond early childhood (Clark, 2023). Observing, listening and being present are core to slowing down and critical in how the child is understood and positioned.

Reading stories in this chapter through a posthumanist and new materialist lens argues for educators to engage with the not-yet-known in working with young children and to understand that pedagogical uncertainty is a permanent and necessary state of being and practice. Thinking in this way has implications for vocational and higher education, where teaching needs to move beyond the more traditional developmental and/or sociocultural theories and approaches. Offering, for example, posthumanist, new materialist and agential realist theoretical perspectives to educators and students, provides alternative ways of thinking, strengthening professional confidence and perhaps enabling them (and us) to resist forces that limit pedagogical practice.

CHAPTER 7:

Story 3 –Entanglements with paint: a diffractive analysis

Paint.....

“anticipate, mix, dab, stab, finger, pat, stir, stroke, flick, colour, laugh, compose, orchestrate, impersonate, resound, squish, slip, rip, splatter, mark, slide, blend, merge, bring together, flow, drop, spill, speculate, wrap, arrange, cover.... mingle, scratch, scrub, wipe, wash.....” (Pacini-Ketchabaw et al., 2017, p.46)

Paint is an essential material that is core to early childhood education. It is presented to children in tubs, in small pallets, with thin and chubby paint brushes; with small sheets of paper and wide stretches of wallpaper; with easels, tables and wall/blackboards; and as individual and group experiences. It can be particular to specialised work with young children in the form of art therapy but also is a staple, daily activity adapted to suit differing age ranges from babies/toddler to young children in preschool. In the ECEC setting there can be a focus on process art, which allows for creativity or in some cases there is an emphasis on templated and product art, which often results in twenty similar butterflies painted and adorning the walls. Whatever the approach to art, paint as a material is an important experience for children within the curriculum and has been critical in its encounters with one child in this story.

Story 3 explores the performative and transformative nature of paint in its entanglement with Michael, a young boy with ‘special needs’ in Seaview preschool.

Paint features in all of Michael's documentation and there is a symbiotic relationship through which paint emerges as not just as inert matter, but as an agentic force in its materiality. Paint in this context is understood "not as a thing but a doing" (Barad, 2007, p.183), a phenomenon, which does not have a fixed essence, but which actively exerts influence in the dynamic continuous process of intra-activity.

This chapter is informed by Barad's (2007) entanglements and intra-action and pays close attention to the forces that flow between boy/paint. It attempts to focus not merely on how Michael experiences paint but how paint might influence thinking and practice. The opening scenarios give context and a series of subsequent small sticky stories which work to illustrate the vibrancy of paint and to consider the ways in which it acts upon the boy. In mapping the entanglements and working to make visible the effects of intra-action, something new emerges (Davies, 2014) from the relationship between boy and paint, which enables communication and generates new connections. Examining the power and effect of paint leads to some consideration of broader social/political assumptions, troubling the concept and language of special needs when read diffractively through posthuman/new materialist theories and disrupting the positioning of children with special needs in pedagogical documentation.

Background

In mapping the general story of Michael, Caroline (his key worker) offers this outline or commentary of Michael who adores paint and painting. He is a young boy, in the Seaview preschool, who has multiple physical and learning needs and is non-verbal. Paint is Michael's

daily go-to experience and it enables him settle into the preschool. Together Michael and Caroline explore the paint. For Caroline, Michael's initial connection with paint was primarily sensorial and his way of making sense of something, but this has gradually grown to the point that now his whole world is involved in paint.... and this is where he comes alive. In growing with the experience, painting has become a regular occurrence, which genuinely seems to make him happy. He has gone from a rolling motion (pushing his fingers through the paint) (Image 15), to a spreading motion with his hands (Image 16), to a pushing motion with his arms spreading paint everywhere (Image 18). He has extended his interest to working on canvas, which appears to give him something that paper does not. He has gradually come to use paintbrushes and enjoy the freedom of big art in open spaces. Through his engagement with paint, Michael expresses more than his creativity; his pleasure is visible and audible to the team in his vocalisations. He often makes a "woo, woo" sound when at work with the sensory materials and the team recognise this as a reflection of his joy in the experience. Similarly, when Michael has been unwell or in a bad mood, his connection with the art has been more aggressive and this is evident from the fingernail scrapings on his paintings. Michael's very presence in preschool is closely linked with painting.

Image 15: *Paint and fingers*



Image 16: *Paint and hands*



Image 17: *Paint and mouth*



Image 18: *Paint and arms*



Caroline's approach in working with Michael was to be led by his interests and inquiries (Hedges, 2022), which are visible and evident in his documentation. Following Michael's interest in paint was challenging in that initially he regularly put the paint into his

mouth (Image 17), as he did with all materials he encountered. Caroline and the team were uncertain how to proceed, mainly because of other health issues that Michael has. Ultimately, Caroline made the decision to refrain from saying, “don’t do that” when he put the paint to his mouth, as she had a sense that something complex was happening in those moments. This experience represents a moment of destabilisation or tension in practice. Should Caroline allow Michael to ingest paint when he has medical complications or is she morally and ethically mandated to help him explore and learn through the only process he has available? As Michael became more comfortable in engaging with paint, Caroline introduced different materials such as bubble wrap or wood, so that each encounter offered new sensory experiences (Image 19). Over time and with the many different sensorial experiences, his need to ingest paint has begun to diminish. Oneness with paint is evidenced by the art generated through Michael’s documentation but other materials such as glue, sticks and paper have slowly begun to attract Michael’s attention.

Image 19: *Exploring junk materials*



Caroline's pedagogical confidence in supporting Michael's engagement with paint was not straightforward. Being a response-able (Barad, 2007) educator is complex and involves values and choices. In taking action, Caroline is being "attentive to the intra-twinning of material and discursive constraints and conditions" (Barad, 2007, p.219). Each moment of these sensory encounters present possibilities and responsibilities. Caroline and her reaction disrupt what might be understood as a traditional approach in working with young children, which may be more protective. She manages in her professional uncertainty (Urban, 2008) and her responsibility emerges through her belief that in the intra-action with paint something else is generated for Michael.

The texture, colour, fluidity of paint, its squidgy feeling between the fingers and drew Michael in, he was one with the paint, intra-acting and generating joy. For Kind (2020, p.77) art (in all forms) is a way of being and knowing, rather than a process which leads to a product. In Seaview the environment with its materials, layout and flexible routines supported the total and immersive painting experience. It is the enticement of the paint and the possibilities hinted at by the materials that act upon and generate something for Michael, perhaps a sense of agency or control. The materials also have a relationship with other materials and in this case, paint on paper connect differently than paint on canvas. Canvas yields under the fingers to the extent that when Michael is in poor form he scrapes across the painting, which responds to his touch and leaves deep groves in the thick covering of paint signalling his unease or the onset of illness. There is a sense that his encounters with paint is a way of thinking and feeling with his hands, with his body and in his movements (Kind, 2020, p.83), he is entangled.

Entanglements

At the heart of entanglements, intra-action and more broadly agential realism lies the belief that, “existence is not an individual affair” as “individuals emerge through and as part of their entangled intra-relating” (Barad, 2007, p.ix). Entanglements as proposed by Barad (2007) are not just a matter of intertwining, in this case Michael and paint, but rather that the boundaries between them are dissolved so that Michael/paint come to be (something different) in their intra-action. In short, “it becomes impossible to say where the boundaries are of each child” (Murriss, 2016, p.12), the educator, and the paint.

Reading Michael’s documentation (painting) diffractively creates an opportunity to understand the enactment of pedagogical practice differently. Diffraction as a method/ology is “a matter of reading insights through rather than against each other to make evident the always already entanglement of specific ideas in their materiality” (Barad, 2017, p.64) and it means re-viewing the data or stories attentively and with care to come to new insights (Bozalek & Murriss, 2022, p.54). The effect of reading documentation/paintings diffractively, as in this chapter, reveals patterns of difference or simply facilitates looking at differences that matter. I believe that at its core, the effects of intra-acting with paint and other materials within the walls of the preschool will not be left behind as Michael progresses in his education, because that which has been nurtured or experienced remains and as Barad (2013, p.17) suggests, “matter materialities and enfolds in different temporalities”. The lived experience and effect of encounters with paint will not fully fade but will leave traces. Whatever is generated in the intra-active spaces between Michael and paint is not and will not be lost because “neither space nor time exist as determine gives, as universals, outside of

matter (Barad, 2013, p.28). Michael is shaped by his past, his present and his indeterminate future through the entanglements with sensory materials.

Emerging communications and connections

Something is generated in the Michael/paint encounter. He dips the top of his fingers into the yielding red paint. At times his hands in their totality become one with and move through the paint. Sometimes Michael meets paint at his lips. Some days his arms become the means of spreading and patterning the paint. Sometimes he stands against the table, he never sits but occasionally he lies on top of the table, almost merging with the paint and paper. But in all these events over the period of 6-8 months, he is alone in experiencing oneness with the materials. One specific day as Michael plays at a table he stretches out, takes Caroline's (educator) hand and places it in the paint. It was a significantly emotional moment, a first time of someone being intentionally brought into his world. Caroline was deeply affected and interpreted this initiative as Michael wondering 'are you feeling what I am feeling'. Has the entanglement with paint and the agentive flow through the intra-active process, enabled embodied communication? It may be that Michael is learning in the encounters. After that event and while out on a group walk in the community, Michael put his hands on the bark of one of the large trees and felt the gnarly bark. Again, for a second time, he took Caroline's hand and placed it on the bark, holding his own hand over hers and she felt this was Michael's way of saying, 'I want you to feel what I am feeling'. More recently and bolstered by his ongoing engagement with paint Michael has begun to communicate his openness to working alongside Hannah in the creative space. Hannah also loves painting and as they

stand side-by-side against the table (Image 20), the experience of painting appears to generate a connection or friendship between them.

The paintings that Michael produces enable wider connections to be made within the preschool. Children in Seaview have the opportunity to present their documentation/work/ideas to the full group for feedback and commentary and this is a regular occurrence. One day, Caroline sought Michael's permission to showcase his paintings to the wider group of children. Sitting on the floor in a circle, the educators asked the children what they thought they could see in the paintings presented. Michael was outside the circle but sitting close by on the sofa and did not move. He remained still but he was attentive to his painting as a focus for discussion. Caroline was emphatic that 'he knew we were talking about him and his work, and he loved it'. Michael was one of the group.

Image 20: *Painting together (Michael and Hannah)*



This story is one of connection and communication and the generation of new insights, which emerge through the relationship of the bodies and the materials as they intra-act and are continually mutually constitutive. Lenz Taguchi (2010, p.41) proposes that “we are nothing until we connect to something else”. For Michael, connections past and present are generated through a multiplicity of languages or as suggested by Reggio, the 100 languages of children (Rinaldi, 2006).

Reading the encounter with paint diffractively Michael’s body can be understood not just a biological structure, but as “a play of... social and affective forces...a relay point for the flow of energies: a surface of intensities (Braidotti, 2002, p.20) and paint has “thing-power”, which can be conceptualised as “the curious ability of inanimate things to animate, to act, to produce effects dramatic and subtle” (Bennett, 2010, p.6). Michael’s body, as a surface of intensities, intra-acts with the thing power of paint and new insights and possibilities (for pedagogy) emerge. Lenz Taguchi suggests that “we can sketch or draw our meaning-making into existence” (2010, p.125). It may be that material-discursive encounters with paint generate new communicative practices into existence.

Three developments emerge from this story. Firstly, Michael intentionally uses paint as a point of connection or transmission. It was an intimate moment when he gently took Caroline’s hands and put them into his paint. Caroline’s deep knowledge of Michael meant that she could interpret his bid or initiative with its weighty significance – this reaching out was the first point of intentional communication, enabled by the relationship between Michael and the paint. A few weeks later, Michael once-again used this ‘hands-on’ strategy when the preschool children were out on a nature walk in the community. In sharing the experience of feeling and rubbing a gnarly bark with Caroline, Michael’s newfound ability to

transfer learning and to communicate with and through non-human matter materialised. In this story and from a new materialist perspective the agency of paint in the relationship generated possibilities for mutual responses (Barad, 2012, p.55). Secondly, Michael's encounters with paint bring him joy and a sense of oneness with the world, creating a physical threshold into which others can be invited. The threshold represents a conceptual holding space, which has no relevance until it is connected to something else (Jackson & Mazzei, 2012, p.6) but I suspect that it also can denote a physical space. Through experience and perhaps a shared love of or need for painting, Hannah was invited into that threshold and for the first time, Michael's social connections extended beyond Caroline. Finally, a painting mediated the relationship between Michael and the group. The assemblage was broadened to include the wider group, with Michael's painting prompting comments from the children, it became the glue, which enabled peer connections. Within the boundaries of the preschool room and through the intra-actions of children with children, children with paintings, children, and educators with the familiar physical space; and the attentive pedagogy of the educators, there was a sense of Michael coming into being through the environment (Kind, 2020, p.75). In that preschool space where boy and materials collide, Michael's identity shifted from child with special needs to acknowledged artist.

Expanding perspectives on special needs?

Disturbing what it means to be a child with special needs in the preschool and exploring the intra-active entanglements of Michael/paint serves to "rework what the (human) body is and what it can do by resisting existing categorisations" (Murriss, 2022,

p.28). Michael's encounters with paint enable him and those around him to resist the label of 'special needs' and instead emerge as an equal and constituent part of the group. What has to be considered here is how does the concept of 'special needs' work to include and exclude?

Michael already is assigned the label of special needs and his key worker/educator is specifically allocated to support him. The issue of labels has been widely argued and contested in early childhood education. In relation to children with special needs, additional needs, or special rights (Cagliari, 2016), labels can open doors for resources, can raise awareness of the child's condition, and can provide comfort in offering explanations of behaviours to families (Lauchlan & Boyle, 2007). So, while labels may serve as a passport for the child with special needs, they potentially place a focus on the child's own deficits and lower expectations of what they can achieve. Norwich, (1999) highlights the complexity of language and labelling. He outlines the labelling cycle whereby contested terms (e.g., special needs) are replaced with what appears to be more positive language (e.g., additional needs) but over time, these new nomenclatures also become problematic. How can we go beyond a limiting label that serves to separate able or normative from disabled or different/deficit and where do the boundaries meet, lie or dissolve?

Reading the story of boy/paint entanglement through a posthuman and new materialist lens moves from an individual label, which locates the problem in the child, to seeing Michael and those with special needs as "posthuman subjects of knowledge – embedded, embodied and yet flowing in a web of relations with human and non-human others" (Braidotti, 2018, p.4).

Reading the encounter through a posthuman lens

A posthuman perspective essentially questions the human/non-human binary and this story of Michael/paint adds layers of complexity in asking “who matters and what counts” (Taylor, 2016, p.6). A humanist approach has been critical in acknowledging the rights of children with special needs [or disabilities] and in Ireland the Access and Inclusion Model (AIM) provides supports, which ensure that all children can participate in mainstream preschool. However, access and participation for children with special needs is juxtaposed with what it means to be ‘normal’ or ‘typical’ within the setting. Children with special needs may stand out and be categorised as someone different (deficient). Too frequently, what it means to be human has worked against those with disabilities (Naraian, 2021, p.17) and there is a risk of exclusion being normalised (Titchkosky, 2012, p.82).

Conversely, there is pressure and responsibility within the humanist frame for children to become or work towards the norm and for educators to deliver the many changes required in practice. In rejecting or softening the defined categories and understandings of humanism, a posthumanist approach calls for an inclusion in how children with special needs are considered. Goodley & Runswick-Cole (2018, p.2) suggest that “disability [*or special needs*] has the radical potential to trouble the normative, rational, independent, autonomous subject that is so often imagined when the human is evoked”. Reading special needs or disability through a posthuman lens refutes a fixed or one-dimensional perspective of the child, but instead offers a view of a dynamic and relational being, full of possibilities.

Reading the encounter through a new materialist lens

A shift away from anthropocentrism to posthumanism, which flattens ontologies, emphasises the material as a critical form of non-human matter (Coole & Frost, 2010, p.203) across all aspects of life and Rosi Braidotti (2013) also explains how productive the new materialist turn can be to unsettle dualisms (i.e. able/disable, normal/special) and increasingly think about people's lives through open systems. Here, I argue that attending to a pedagogy of materiality will serve to re-claim what it means to be a child with special needs within the preschool setting.

I am conscious that Michael remains centralised within this story. Like Hultman and Lenz-Taguchi (2010, p.527) I have tried to consider “what happens if we look at the image thinking that not only humans can be thought upon as active and agentic, but also non-human and matter can be granted ‘agency’?” In thinking this way, I see clearly that paint has offered new possibilities for communication, connection and identity. Without continual and open-ended access to intra-acting with sensory materials, learning and development would not have happened or would not have happened in the time frame and format that it otherwise did. Leander and Boldt (2012) in their study of children with Japanese magna (comics) and the Boldt and Leader (2017) study focusing on Lego play, both suggest that in striving to see differently that we begin with the body and allow our attention to turn elsewhere. So, while I start with a focus on Michael, I am drawn to his encounters with the material.

New materialism attends to the agentic nature of non-human matter and in this story, the paint evokes desires in the young boy. Through this lens, paint shifts from being an inert material in a tub, sitting on a shelf to being an agentic collaborator. The paint materialises in its intra-actions and enables communication and wider connection. In their seminal paper,

Hultman and Lenz-Taguchi (2010) apply a new materialist lens in exploring the intra-action of young girl playing with sand. In an effort to shift the gaze away from the young girl, they mobilise a 'relational materialism', that is "a space in which non-human forces are equally at play and work as constitutive factors in children's learning and becomings" (Hultman & Lenz-Taguchi, 2010, p.527). It is as Kind (2020, p.80) suggests "in the meeting of things, in the touch, in the intersection of materials, in the what the materials propose, that generates something". For Kind (2020) and for Michael, it appears that the touch is everything and, in that connection, ways of being and ways of knowing are made or generated. The thinking of Hultman, Len-Taguchi and Kind, amongst others, resonates with Barad's concept and language of material-discursive, which asserts that matter (material) and meaning (discursive) are not separate and do not pre-exist. In other words, what emerges from the encounter or intra-action of human and non-human matter cannot be known in advance (Bozalek and Kuby 2022, p.82). New knowledge and insights emerge from the entanglement of boy with paint, junk, and other materials in the preschool environment. While early childhood has long identified the environment as the 3rd teacher (Rinaldi, 2006), it is with a new materialist lens that the specific meaning and concretisation of that concept becomes clear. Engaging with materials becomes a "thinking with your hands, thinking with your body, thinking in movement in correspondence with others and with materials" (Kind, 2020, p.83).

Barad (2007, p.149) suggests that meaning is neither fixed nor a property of individual words, rather it is human/non-human matter making themselves intelligible to one another. What meanings emerge or are interpreted from the entanglements in this chapter, matter. Meanings that emerge, through my writings and through my intra-action with Michael's documentation; through my engagement with the educators and through their

interpretations of the documentation; are all contingent, relational and intertwined. The performativity of and meanings from documentation are always open to interpretation, as are the positioning of the boy and the educators. Consequently, there is an ethical responsibility in working with documentation, because how meaning comes to be made matters. Barad (2007, p. 185) highlights the complexities and ethics of being part of the world (and in this case, the documentation and preschool world) in that,

“an appreciation of the intertwining of ethics, knowing, and being – since each intra-action matters, since the possibilities for what the world may become call out in the pause that precedes each breath before a moment comes into being and the world is remade again, because the becoming of the world is a deeply ethical matter”

Documentation: A diffractive reading

Documentation is one way in which children’s learning and development is evidenced to the world. As outlined in chapter 2, documentation refers both to the act of documenting and product of that process (Elfström Pettersson, 2015, p.445). Understood in this way and read through a posthuman and new materialist lens, documentation is vibrant and has thing power, bringing forces and energies to the work (Dahlberg, 2003) and enabling children’s learning and pedagogic practices to emerge. The paintings and the process of engaging with paint as evidenced in Michael’s documentation is not about his “abilities or capacities as an individual, but the learning is that is made visible through the documentation and which shows the relationality that has made the learning possible and how the human and more-than-human render each other able” (Murriss, 2017, p.543). In understanding documentation

as an intra-active process and applying the posthuman and new materialist lenses to the events within this story, Michael is positioned as capable and competent, communicative and connected. However, the framing of children with special needs within documentation in this way is not universal practice in ECEC. Heiskanen et al., (2018) suggest that children with additional or special needs are typically configured differently within documentation, with the main purpose being that of tracking or highlighting their deficits or specific needs. This is echoed by Reddington and Price (2018, p.466) who contend that “the primary focus is on assessing their deficits and creating separate individualized programming to meet universalized standards” and Andreasson and Asplund Carlsson (2013) suggest that children with special needs are frequently presented as objects of ongoing evaluation within their documentation. Children with special needs are positioned in documentation as being, problematic; multifaceted and as learning subjects (Heiskanen et al., 2018). Framing the child as being problematic is the most consistent interpretation or depiction of them within the documentation, with the language of ‘challenges’ dominating. Framed in this way, documentation locates the problem as developmental, within the child, and signposts what improvements might be achieved with interventions. Positioning the child as multifaceted within the documentation tends to emphasise the internal (child’s mood or feelings) or external (environmental) factors that trigger or influence the child’s behaviour and responses. Documenting in this manner weakens the notion of the child as the problem and instead attributes significance to environmental factors, thus identifying special needs within a social model (Oliver, 2013). Where the child’s learning appears within the documentation, and is presented as a positive development, it is typically framed as a progression from what they have previously achieved, and the child becomes an object of constant evaluation. These

three framings of children with special needs within the documentation predominantly use a developmental lens, which serves to separate and strengthen the binary divide between the ordinary children from those with special needs. Developmentalist thinking (Lenz Taguchi, 2020, p.35) has long influenced how children are positioned and responded to generally and specifically in ECEC practice. Children with special needs are constructed and embedded within documentation, which can move with them through the educational system, continuing to present a one-dimensional and frequently limited perspective of their capabilities and learning. It would seem just that the lens used in documentation should be re-focused to include both human and non-human matter and it is evident from the story of Michael/paint that a posthuman new-materialist approach can help produce different understandings of children.

Concluding Remarks

In this section I address the question what is the effect of putting this theory on entanglement to work? These short sticky stories of Michael and his entanglements with paint exemplify the complexity of encounters between human and non-human matter, highlighting the performative nature of the documentation, repositioning materiality within the curriculum and disrupting what it might mean to be a child with special or additional needs in the preschool setting.

This chapter contributes to the growing body of posthuman/new materialist literature and exemplify what Lenz Taguchi suggests is “going beyond the theory/practice divide in education practices” (2010, p.20) and which illustrate Barad’s (2007) theory of entanglement

and agential realism. Adopting these lenses to the stories of Michael/paint are helpful in illuminating the complexity of pedagogy and education more generally. Examining the intra-actions and entanglements between Michael/paint I am slowing down the events to enable a greater appreciation of what is happening in the encounters, to break down the human/non-human divide and to reinforce the notion that matter matters.

The stories in this chapter are concerned with entanglements and a key point emerging is that when encounters such as Michael/paint are understood as intra-actions, it becomes evident that what is possible from this material-discursive connection is not and cannot be known in advance. It is as Barad posits that “individuals do not pre-exist their interaction, rather individuals emerge through and as part of their entangled intra-relating” (Barad, 2007. p.ix), which suggests that Michael’s identity as a learner and as a child in the preschool emerges and comes to be through the encounters with sensory and other materials. New learnings from encounters with paint are materialised and embodied, even as fingers are dipped into the responsive paint. In these events, learning takes place as boy and paint make themselves intelligible to each other, changing and transforming each other in some way through the process (Lenz Taguchi, 2010, p.40) and breaking down the human/material divide. Lenz Taguchi (2010) amongst others has made a case for breaking down artificial barriers between theory/practice to enable us/educators see what might be possible for a child.

Taking an entangled lens to the data or stories has implications for practice and the requirement for educators to be comfortable in uncertainty (Urban, 2008), appreciating that the pedagogies they enact are themselves intra-active material-discursive practices. In short, educators are part of the complex entanglements and should resist simplified interpretations

of what they see, instead considering how the material world intra-acts with the children in order “to arrive somewhere else” (MacLure, 2013, p.662). Hence, adopting the lens of entanglement and intra-action, which proposes an inseparability between human/non-human matter will support educators to think differently about what and how a child can be within their preschool.

In this chapter I highlight the need to re-evaluate and re-cognise the importance of the material in preschool. Consequently, and emerging through my learning from Michael/paint, I argue for a pedagogy of materiality, that is, an approach to teaching/learning, which acknowledges and values the ways in which materials (and equipment) come to matter in their agency (Barad, 1998, p.108). The importance of the material is not new to early childhood, but perhaps has to date been understood, particularly within the Reggio approach as a powerful provocation (Rinaldi, 2006) for learning. A pedagogy of materiality would shift that lens from presenting children and materials as separate entities, as one merely attracting or provoking the other, to understanding them as connected (inseparable) and intra-acting with each other, as a “becoming with” (Haraway, 2008, p.4). The lens would also shift from material (paint) offering possibilities for learning, to engagement with materials as learning in itself. This shift may be supported or enabled through the process of documenting, as it requires a pedagogical slowing down, to generate new meanings and insights from the work. A pedagogy of materiality would also emphasise and value repetition, time and routine within a busy ECEC setting because as highlighted by Pacini-Ketchabaw et al. (2017, p.49) “so often, an interesting aspect of paint assemblages is the importance of repetition. The ‘doing’ of paint – affecting it and being affected by it, even in the simplest case – requires sustained activity on the part of the paint-child assemblage”.

The effect of engaging with Barad's (2007) agential realism and entanglement has repercussions for documentation and documenting. In this study, it was neither the documentation/paintings, the boy, the educators, nor the researcher which generated new perspectives but rather it was the entangled nature of being within the assemblage that enabled agency to emerge and be seen. Taking an entangled approach, as suggested by Lenz Taguchi (2010, p.65), places an emphasis on; "mutual listening and observing that expands the focus from merely dealing with the intra and inter-personal relationship in and between children, children and adults and what is said and done, to be inclusive of the performative agency of the material in the inter-actions of learning events". It was in listening to the documentation that educators came to new thoughts about Michael and the paint. Where documentation is understood and respected as performative, possibilities are opened up to see children and practices in new ways. Paint becomes more than a means of producing a product and children are seen as more than a label.

Finally, in diffracting the entanglement of Michael/paint, I argue that new materialism, intra-action and entanglement offers alternative pedagogical approaches and considerations in disrupting what it means to be a child with special needs in preschool. Within this chapter, I have discussed the how children with special or additional needs are limited by labels or by their own documentation. As highlighted by Barad (2007, p.158), "the luxury of taking for granted the nature of the body as it negotiates a world constructed specifically with an image of 'normal' embodiment in mind is enabled by the privilege of ableism". In other words, Michael's attributed category of 'special needs' or 'disabled' only comes to the fore when contrasted with 'able' or 'typical'. Michael does have special or additional needs but as highlighted in these stories, he is not defined by his condition.

Illustrating the material-discursive encounters in this chapter begins to dissolve those boundaries or divides between boy/paint and special needs children/typically developing children. Furthermore, these stories, re-frame expectations that educators may have of children with special/additional needs and brings to mind Malaguzzi's (1998) '100 languages' which refers to material-discursive tools for meaning making.

What concerns me in this story are the dynamic relations between and across the boy, the paint, the tables, the preschool environment with its easy and slow-moving routines and what is made visible in putting theory to work. Consequently, this story does not offer grand conclusions but has sought to trouble and widen assumptions of common materials, practices, labels and possibilities in preschool.

CHAPTER 8:

Story 4 – Reading affect and care diffractively through documentation

The entanglement of feelings, emotions, affect, atmosphere, and care seeped through the many encounters with educators and documentation in our virtual and physical meetings as part of this doctoral study. The encounters, as educators engaged with their chosen pieces of documentation, were always bounded by care and emanated affect. Consequently, the stories in this chapter work to materialise affect and care. The stories emerge out of respect, giving due consideration to those invisible qualities that were pervasive and did not appear to fit easily into the overall format of this study. This chapter begins by diffracting affect, working to look differently at the data and understand the entangled relationship between educators, zoom and the preschool environment. Using the sticky stories as a guide, I will draw on Stewart (2007) to identify the ordinary affects and the affective atmospheres that emerge through encounters within the study.

The emergence of care, as woven through encounters with Seaview and supported by the thinking of Puig de la Bellacasa (2012) will consider how care is materialised in the preschool room. Stories that are presented seek to open up the complexity of care beyond the humans to consider the material agencies of videos, phones and tables. Care and its status have relevance for but resonates beyond the ECEC setting. Neither care within the setting nor care in the wider social and political context can be separated and both are troubled in the

coming sections. Finally, diffracting the stories or data through theories of affect and care highlight holds some implications for practice.

In the process of this study, new knowledge and insights have been generated in the intra-actions between educators, documentation, researcher, the preschool environment and zoom across all stories. The agentive nature of documentation, within that assemblage, has been evident, but there have been many moments of bafflement (Spivak, 1993, p.248) when I struggled to recognise what was emerging through the encounters. Like St. Pierre (1997, p.177), I wonder, “how can I think differently?”, and how can I do justice to what has emerged through the research? Emotion, affect and care have been persistent, underlying forces, palpable even through my engagement with the teams across zoom, and I wondered if this invisible but pervasive energy or force might be significant to the study. It feels a little un-scholarly, almost risky and ambitious to draw connections between encounters with documentation and the almost invisible qualities of care and affect. However, drawing attention to affect and the ways in which care is done or matters helps to disrupt these ‘neglected things (Puig de la Bellacasa, 2012) and so it feels worthwhile to explore what it might mean to put them to work within the study.

Diffracting stories

Diffraction is a distinctly Baradian concept or methodological tool which attends to and responds to the effects of difference (Barad, 2007, p.72). As Murriss (2022, p.70) highlights “diffraction troubles the human-centred notion of vision”, enabling a wider lens to

see what is emerging from the data. In reading the stories attentively through the theories of affect and care in this chapter, helps me to surface different insights (Bozalek and Murris, 2022, p.54) from the data and to map or foreground the effects of differences in which matter matters (Barad 2007). Lenz Taguchi (2012, p.267) explains diffractive analysis as a “transcorporeal process of becoming-minoritarian with the data, where the researcher is attentive to those bodymind faculties that register touch, level, temperature, pressure, tension and force in the interconnections emerging in between different matter, matter and discourse, in the event of engagement with data”. Lenz-Taguchi’s interpretation of diffraction seems apt in the context of this chapter, given the (almost) intangible but ever-present nature of affect and care in the stories. I use diffractive analysis in this chapter in an effort to “do justice” (Bozalek and Murris, 2022, p.54) to that which emerges from the encounters with educators and documentation.

Mini stories that populate this chapter are sticky, making connections between affect, care, place, materials and people. From the assemblage or encounters ‘more than’ language and ideas emerged from the online sessions during Covid-19.

Session 1 - The zoom screen opens and four educators sitting in a straight row on child-sized chairs around a low, long table, come into focus. The women are tentative, initially folding arms and looking very still. There is a nervousness in the air, bodies are still, voices are quiet, but their eyes move to Beth, the manager, waiting for her to take the lead in presenting the selected piece of documentation. All is quiet, there is no shuffling of chairs and bodies are rigid. Across zoom, Beth hesitates, looking online for the documentation she wants to share.

There is a silence as she searches. It is as though there is an intake of breath amongst the educators, until finally Anna's moon-documentation, (Image 21) appears on the screen alongside a gallery view of the four educators. As Beth begins to tell the story of the documentation, the other bodies seem to relax visibly, they are now on solid ground, this is their area of expertise. They talk of Anna drawing her moonscape with blobs of glue to hold lava and sequins, who said that 'blue is just like the colour of the sky, and it is sparkly like the sea'. Beth indicates that Anna is fiercely competitive and that in wanting to have her moonscape just perfect she enlisted the help of an adult to cut out a gold paper plate in a circular shape. In this moment, all four of the team start to laugh and they join in with back-stories of their own experiences of Anna's determination, creativeness and singlemindedness. Bodies begin to relax and following Anna's work in the documentation, the focus turns to a line that has been drawn into the collage and which leads on to stories of a recent growing interest in writing amongst the children.

Image 21: Anna's Moonscape



The story of Anna's moon, the presentation across zoom, the discussions that lead on from the documentation and the laughter that permeates the interactions are what might be termed ordinary moments (Stewart, 2007). There have been many ordinary and almost mundane moments in my engagement with the team in Seaview that have focused on children's learning through their documentation. Through every encounter, the documentation creates a focal point, almost a pause that allows something else to emerge, new perspectives, new wonderings, new understandings. It is as though the intra-action and entanglements (Barad, 2007) with educators and documentation generate something additional, something that is mutually bonding. Haraway (2007) emphasises the value of the ordinary, almost as a gateway to seeing differently, something extraordinary in the ordinary.

She (Haraway, 2007) suggests that we learn to be worldly from grappling with, rather than generalising from the ordinary, inferring that the ordinary cannot be taken for granted but it is something that should be engaged with. There is also a sense (Stewart, 2007) that in intellectually understanding a situation or context, the ordinary moments, that may offer deeper meanings, are invisible. Instead, Stewart suggests that attention should be paid to atmosphere and attunement, because it is in the slowing down, that a deeper meaning in the banal and ordinary can emerge.

‘An atmosphere is not an inert context, but a force field in which people find themselves. It is not an effect of other forces but a lived affect.... It is an attunement of the senses, a labor to make matter potential ways of living or living through... the intimacies of things thrown together in a sense of something happening that might somehow include an ‘us’ whose ears prick up, whose bodies labor.’ (Steward, 2010, p.14).

In attuning to the data, it appears that in engaging with the materiality of the documentation, within the physicality of the setting, the study creates a space for emotion, affect and care to become visible. It is as though ‘the forces at work in this ordinary scene or event create surging affects’ (Latimer, 2018, p.383) that open up a way of thinking about emotions and the forces of feelings (Hickey-Moody, 2013).

Emotion has been a strong presence through my encounters with the educators in their settings, but as with St. Pierre (1997) in her doctoral study, I struggled to position or locate these feelings. Along with St. Pierre (1997), Kleinman and Copp (1993) have legitimised emotion within research students, suggesting that emotion can be considered data.

However, while emotion and affect can be considered similar and used interchangeably, they are somewhat different (Massumi, 1995). Anderson (2009, p.80) contends that emotion could be considered as relating to the subjective/individual and linked with notions of narrative and semiotic. In other words, emotion is connected with personal and subjective. In contrast, affect can be considered more in the context of impersonal and objective, drawing its properties away from the individual. The thinking of Anderson (2009) and Massumi (1995) align with Barad's (2007) agential realism, in that affect does not locate feelings in the individual but understands them as being relational intensities that emerge as bodies intra-act with one another (Massumi,2002). Dahlberg and Moss (2009) build on Massumi's understandings to describe how affect "functions as a sort of contagion that people get involved in, or rather 'hooked on'" (p. xiii). The laughter that flows across the team as they present Anna's moon (Image 21) does not reside within any one of the educators. Bodies do not end at the skin, they are "not objects with inherent boundaries and properties" (Barad, 2007, p.153) and affect can only be thought of as being generated through dynamic intra-activity. The educators are nervous in the opening session and the affective atmosphere (Anderson, 2009) is materialised in the way they sit, straight in a line against a back wall, shoulders rigid.

Even across zoom, the thick atmosphere of nervousness can be felt, and the screen is dull. The primary or intensity of affect (Massumi, 1995) matters. The affective atmosphere is a very real phenomenon, that occurs across human and non-human materialities and in the in-between spaces (Anderson, 2009, p.78), it is palpable but vague. The atmosphere emerges in response to a collective affect and floats above the assemblage. However, while bodies, within the assemblage, contribute to or create the atmosphere, the affective qualities that

constitutes an atmosphere exceeds that from which it emanates and includes human and non-human bodies that make up everyday situations (Stewart, 2007). In short, the affective atmosphere within this story is more than the team of educators, more than the chairs, walls and laptop, but it is all of those phenomena in intra-action. Putting affect to work, even across zoom reflects the togetherness of the team as a connected entity, not just amongst themselves, but together in their place with their selected documentation.

Session 3 - The zoom screen opens, and four educators are sitting somewhat haphazardly in the after school space. Two are sitting sideways on big chairs, one is leaning in, resting her arms on the chair in front and another is standing dragging her hair into a ponytail. It feels intimate, almost as if I am on a chair opposite them. As I join online, the four educators are laughing, and they seamlessly draw me into the banter around getting old. They wind down the laughter, gather themselves and hold up the documentation they want to discuss.

In the story from Session 1, the screen is a little fuzzy, there is silence, the educators are nervous, and they seem to rely on the back wall to hold them up and keep in a straight line. Together the hardness of the wall and the shoulder-to-shoulder rigidity of the team are a response to the new situation, as if the physical building is supporting the educators, keeping them upright. In the second story (Session 3), again there is attunement between the physical environment and the mood or emotion of the team. The big soft, blue-and-white striped chair supports a couple of educators, they fall into its depth. No longer are the team standing against a wall, they have moved to the centre of a brighter, new extension room which is open and seems to give energy. There is a distinct vibrancy emanating from the team in that

space. The atmosphere is easy and despite the temporary separation or cutting together/apart of educators/researcher/zoom, there is a flow of energy. The conversation of the educators has begun before the zoom connection opened seamlessly and I was part of the informal chat and what felt like an intimate gesture of Sarah pulling back her hair into a ponytail.

In putting affect to work, the connectedness of the team with each other, with the documentation and with their sense of place emerges. It is as if their bodies are attuned to the physicality of the preschool. The building is an old schoolhouse converted into a community centre where the preschool uses the main room. Any yet, this team who are working together over a decade will likely be separated from this setting in the next year. Tensions exist between the community centre Board of Management (BoM) and the preschool team. The building is old and does not fully meet the fire/health/safety requirements of current legislation. Despite the success of the preschool, the BoM is reluctant or perhaps unable to invest in the structural upgrades. What will happen when the team are separated from this building, which has grown with them? There is a strong connection between the building, community, and the preschool setting. The affective atmosphere that permeates the encounters with educators and documentation in that preschool space is as described by Anderson (2009, p.78) “a class of experience that occur before and alongside the formation of subjectivity, across human and non-human materialities and in-between subject/object distinctions”. The affective atmosphere emerges through the complex intra-actions of the educators and the spaces over time.

This team, which comprises of four educators have worked together over many years. As in many parts of the world, there is a staffing crisis in early childhood education in

Ireland, with issues of low pay and status being key drivers of a haemorrhaging sector. The turnover of staff in many settings in the Irish context is high (Pobal, 2022) and yet a cohesiveness radiates as an affective atmosphere from this team over many research sessions. Does the affective atmosphere encourage retention or does retention and familiarity within the setting create the atmosphere and what does it do? Stewart is clear that,

an atmosphere is not an inert context but a force field in which people find themselves. It is not an effect of other forces but a lived affect—a capacity to affect and to be affected that pushes a present into a composition, an expressivity, the sense of potentiality and event. (2011, p.452).

Using the lens of affect generates a different way of understanding what is happening and to attend to the complexity and value of the ordinary zoom encounters.

Working through the data while thinking with affect surfaces something else within the study, something that is almost invisible but ever-present, the phenomena of care. Care is the ordinary stuff or phenomena of ECEC life and in a posthuman frame the politics of care emerge as very real practical, political, and ethical issues. Care relates to concern or commitment and as a verb, ‘to care’ infers a material doing, “an affective state, a material vital doing, and an ethico-political obligation” (Puig de la Bellacasa, 2011, p.90). In early childhood and through this study, the lived experience of care is reflected through the ordinary, every-day mundane practices (Stewart, 2007). If affect floats across zoom encounters, then care is materialised through practices or doing of care (Helen’s video) and through attention to environmental matter (Anna’s table).

Materialising care through the camera

Thinking about care in a more-than-human way, I move to consider how material components within the study also contribute to care. I shifted my attention to cameras, phones and tables.

Documentation is a considered process in Seaview where great attention is paid to the participation and positioning of children. The operating model of the preschool means that each child has a key worker, but those with special or additional needs have a dedicated one-to-one educator. Helen is a young girl with additional needs or special rights (Cagliari, et al., 2016). Una (educator) has taken time to consider what form of documentation would best reflect Helen's strengths.

The video becomes the mediating tool between child, educator, home, and parents. Sitting together on the floor in the preschool room, Una takes the camera and puts it on pause as Helen begins to warm up in her favourite stacking game. Helen is aware of the camera, but her attention is fully focused on the coloured stacking blocks. As Helen begins to get momentum and become more proficient, stacking progressively smaller pieces on top of one another, the video silently begins and focuses in on Helen's hands and fingers, wrists, arms and eyes. Later Helen and Una sit reviewing the footage together. Helen clearly likes it and seems impressed. The clips are named and dated (Helen's documentation with blocks), downloaded, saved to the Seaview drive and then zipped across space and time to Helen's parents.

At home, Helen views the recordings, sitting with her parents, smiling and clapping. She wants to see the recording, the particular clip showing her stacking the blocks, over and over again. Her parents are delighted at her response and engagement, but they are also proud to see Helen's ability to sort, sequence and manipulate the blocks.

Care is materialised in reading this story with a particular lens. Is Una merely doing her job or practicing with care as she records Helen's activities, and what difference does it make, and to whom? Puig de la Bellacasa (2011, p.92) asks "what can this change in the aesthetics of exposing the lively life of things", in short what is the effect of thinking and reading this story through care? What this story or episode shows is a pedagogical labour of care that makes a difference to Helen, her parents and practice within the setting. At home, Hannah and her parents review the video clip, watching it over and over, flicking the keys back and forth to get a full sense of what it was projecting. Replaying the same clip again and again, slowed down the experience or encounter with the video, blurring together feelings of perhaps pride and amazement at Hannah but also gratitude at the care Una gave to the process. In watching the video, the affective, the social, the pedagogical and material fuse. The digital materiality of the video clip affects Hannah, her parents, Una and now the team and myself as the researcher. Feelings resonate and fill the in-between spaces, leaving physical recordings on the video and leaving traces of emotion in everyone.

If care is materialised as "everything that we do to maintain, continue and repair our world so that we can live in it as well as possible" (Tronto, 1993, p.103) then selecting the video as the tool of documentation, builds Helen's self-identity and enables that view of

herself as competent to be seen by others. The video is not recording as Helen initially begins to stack. Una can see that it takes time for Helen to warm up, time for her ability to shine through. Time and care are taken and are evident through the ways Una works with the video. The video is part of the entanglement of caring. It allows for stop/start, cutting together/apart of time and stacking, bringing Helen and her parents the best pieces of work. For Una and the team, the issue of care extends beyond the day and the boundaries between the start and finish of work blur. The evening video viewing at home spurs a WhatsApp message from Helen's Mother who works outside the home and so rarely meets the educators in Seaview. Technology in the form of the video/camera and the phone enables care to emerge and opens up ideas around professionalism and equity.

Care beyond the preschool

Adopting a care lens to the sticky story of Helen clearly illustrates the agency of the phone and the camera. No longer are they pieces of useful but inert equipment. Instead, they are active pedagogical partners generating connections and joy between setting/home, educators/parents, which generate new insights regarding Helen's identity as a learner. Is work in the preschool a technical affair with prescribed approaches to documentation and other practices? If so, what autonomy is afforded and what is valued within the system (Basford & Bath, 2014). Is there space for care and is there time allowed to work and record at the pace of the individual child? Van Laere and Vandebroek (2018) highlight that care is considered subordinate to learning and thought of as a private (individual affair), which is frequently suppressed in favour of education which is seen as being public and professional. This is not unusual in the world of ECEC (Hayes, 2009) where education is understood as

preparing children for school and later life. Caring, in contrast, is considered to be of lesser value, frequently undertaken by lesser or more lowly-qualified staff. The separation of care and education in policy and in practice is not unique to Ireland, where historically and into current times, both were in opposition. Despite a policy rhetoric, which endorsed the inextricable nature of care/education, Ireland adopted a split system model, whereby the care and education sectors were divided and governed by different departments or ministries (Kaga, Bennett and Moss, 2010). The subsequent distributed nature of responsibility for the care and education of young Irish children was widely criticised (Hayes, 2008; OECD, 2004) as it reflected among other things, a deeper issue which juxtaposed the needs of parents for childcare and the rights of children to early education. Consequently, the early childhood system in Ireland has remained ‘fractured across the welfare (**childcare**) and educational (**early education**) domains’ (Hayes, 2008, p.33) despite the efforts of the Department of Education (DE) and the Department of Children, Equality, Diversity Integration and Youth (DCEDIY) to meet halfway. Given the separation of care and education, it is of little wonder that societal value was weighted in favour of education with the recognition of caring suppressed. The low status of caring in society, specifically as it is related to female dominated activity (Lynch, et al., 2021), has created tensions for and in early childhood. Educators and advocates in the sector have mistakenly shied away from foregrounding their work in terms of care, for fear of diluting the educative element of pedagogy. The artificial divide or Cartesian cut between care/education is better and alternatively understood through Barad’s (2007) agential realism, predicated on a relational ontology, which suggests that nothing exists outside of the relationship. Echoing Barad, Bozalek (2021, p.137) suggests “that entities do not pre-exist their relationship but rather come into being through relationships.

The story of Helen illustrates very clearly the integrated nature of becoming/knowing. It is in the in-between spaces where Una, the camera, the stacking blocks and Helen intra-act that “caring” and “attention to the ordinary”, is rendered visible and hence valuable. Putting the documented stories to work allows affect and caring emerge through practices and materials.

Materialising care through a table

Tables are found in every preschool. At times the tables dictate the flow of the human traffic, working to slow down children’s movements. Sometimes, tables are placed in groups or rows perhaps suggesting a didactic approach to curriculum. Tables may be set out to control and manage children and the teacher’s table can sit strategically at the top of the room adopting a powerful position. A table is never merely a table and through a new materialist lens, the inclusion of a new yellow table in Seaview signals a dynamic of care.

The art area in Seaview is central to pedagogy. It is valued as area where creativity, communication and innovation happen. The creative area has received a lot of attention in the Covid-19 and post Covid-19 timeframe. The junk items, painting and drawing equipment, clay and dough utensils, sticking and gluing materials are all organised, categorised, labelled, and accessible. In organising the defined storage areas, the central space for tables went largely unquestioned. As more children were attracted to the materials on display, the table became very crowded and for some off-putting. So, while there was a lot of definition in the area, the single table meant that everything was a mess. In the end, and despite the attractiveness of the materials, there was only a core six children who regularly engaged with the art materials. Those six children became the protectors or sentries to the space and the

table in particular. The others gave up. Beth wondered why they had been reluctant not to bring in a second table. The space had looked ordered and organised, and a second table may have cluttered the area. But the inclusion of a new table that transformed levels of activity and influenced the creative productions. It was the addition of an extra table that emboldened the reluctant children to enter that space. Beth believed that the table called to the children, inviting them into the space. It was Anna who initially stepped into that space, using the table to create her moonscape documentation (above). Peter, another child who was skilled with blocks and other construction materials never transferred his creativity to paper /documentation. Sarah (educator) brought the table to his attention as a provocation. She was slow to direct him or draw him into the area. Instead, she gave him a small basket to select materials he wanted to work with from the shelf. Sarah remained quiet, she waited and stood back as Peter looked around, selected materials, stood against the hard contours the yellow table and created his obstacle course (Image 22) on the now free space.

Image 22: The obstacle course



This story of attention and care to space, which resulted in the inclusion of a table (Image 23), which became part of the dynamic network of entangled relations. Beth and the team connected with the art or creative area. Organising and defining the area and introducing the table raises possibilities for considering how “care matters and how matter cares in early childhood education environments” (Warren, 2022, p.113). It becomes clear that the hard yellow table has novelty value, but it is inviting, just the right height and shape, it yields to and supports the children, as they lean against it. While it can be challenging to read matter, to attune to its performativity, the intra-action between children as human matter and the yellow table as non-human matter generated and together enabled the creativity. The table becomes part of the caring environment, considered in its response as the children touch and feel its contours, invoking connections across human and non-human with blurred boundaries (Springgay, 2021).

Image 23: The yellow table



Care emerges as significant through this study but in the context of early childhood, the concepts, practices and appreciation and labours of care are frequently devalued, taken for granted and are by their very nature invisible. In writing up this section on care, I wonder if I am over-emphasising the extraordinary in the ordinary, as matters of care are present in every context and in many moments of any typical preschool day. However, making care visible is important (Puig de la Bellacasa, 2011) to enable it be understood and valued. The concept of care is liberally and seamlessly interwoven in Aistear, the National Early Childhood Curriculum (NCCA, 2009) and the more recent updated Literature Review (French &

McKenna, 2022), which will inform a new iteration of the national curriculum. Practices related to care, that is care giving, care experiences, being careful and so on are accepted and expected elements of early childhood education, which is essential for children's wellbeing (Nodding, 2003). There is even a sense of care being important in relation to the ECEC environment and the self-care of educators. However, care is "a very slippery word" (Ailwood, 2020, p.340) and is generally understood as being dyadic or one-directional, that is the adult caring for the other (human). Two points arise. Firstly, Toronto's (2010, p.160) concept of care identifies it as "everything we do to maintain, continue and repair our world so that we can live in it as well as possible". Toronto broadens out 'our world' to include our bodies and our environment. Puig de la Bellacasa (2011, p.90) shifts attention to the verb "to care" perhaps as framing it beyond the individual but also to highlight the notion of "material doing" and how care might be mobilised. Care as outlined in the stories above and which relate to educators and children, walls and laptops, videos, and tables, matter. These framings of care, which might be considered superfluous or simply invisible, are critical because they are part of our "complex, life sustaining web", which are essential for liveable relations (Tronto, 1993, p.103). Seaview is a caring setting. The walls of the old schoolhouse provide care and the beautifully laid out environment cares for and nurtures the children's creativity. Care is not the domain of humans alone. These minor stories or moments aim to draw into the care discourse the notion of objectified matter as mattering within the assemblage.

Latimer (2018, p.382) in her discussion on hospitals and healthcare suggests that "a focus on assemblage also allows us to see how there are multiple and potentially competing agendas at work". In this story of care, a focus on the assemblage not only highlights the complexity but also makes explicit the juxtaposition of the preschool building which is of

value to the community and the reluctance of the BoM to consider investing in the building to keep it alive and continuing to care for and with those who pass its threshold. In this case, the infrastructure of the building is taken for granted by those who have the power to do otherwise. Critically, while the educators care for the inner space of their rooms, the neglect of the building's infrastructure could be part of a strategic agenda to reclaim the preschool space for something else.

A second connected point relates to the tension that exists between care as invaluable in ECEC and care as undervalued or devalued in the wider society. Puig de la Bellacasa (2012), Lynch (2021) and Hooks (2000) amongst many, understand care as an ethico-political matter and something that is devalued and taken for granted both in education and the wider society. While care in the context of this study emerges as significant, with educators caring for children and the material environment, and in turn the building and equipment providing support and nurturance to the humans, the mutuality, enactment, and valuing of care is not universal. The all-female team in Seaview educate and care but beyond the group of parents, care within society "is treated as a kind of cultural residual" (Lynch et al., 2018, p.53) that is neglected and repressed. It may be that the affective atmosphere and care, which seems to act as a light glue between the educators offers a protection.

Concluding Remarks

Plugging affect and care into theory through the stories in this chapter has enabled this study deviate from a traditional research pathway and instead use a range of what might be

considered soft data, that is stumble data (Brinkman, 2014), emotional data (St. Pierre, 1997) affective data and/or care data to materialise its impact on practice. What emerges from the stories in this chapter is a line of argument that suggests, even within a new materialist frame, bodies matter, and that affect, and care emerge through bodily intra-actions between human/non-human matter.

Barad's (2007) work on agential realism and intra-action helps thinking about the materiality of physical bodies. If both human and non-human matter, matter, there is an inference that they are co-constitutive acting on each other and building on this point, Manning (2009) suggests sensing and feeling are acts that matter," a body... does not exist – a body is not, it does. To sense is not simply to receive input.... Sense perceptions are body events" (p.212). What Barad and Manning highlight here is that bodies act on bodies and in that intra-action affect and care are generated.

This study begins to address Albrecht-Crane and Slack's (2002, p.191) belief that "the importance of affect in the classroom is inadequately considered in scholarship on pedagogy", which suggests that affect matters in practical terms. Watkins (2006) materialises, and analyses affect in the classroom, mapping affective negotiations between students and teachers which constitute 'a kinaesthetic economy of knowledge exchange'. Affect within the scope of this research refers primarily to the embodied sense that emerges with, through and between the staff team. I argue that affect reflects a togetherness amongst the team, which impacts on their work with children, parents, each other and their environment. My thinking is corroborated by Watkins (2006, p. 3) who explains "I see affect as an effect of the

different practices that teachers use in classrooms and the extent to which they contribute to students embodying a desire to learn and the capacity to do so”.

Care and materialities of care highlight the ways in which spaces, equipment and bodies in the early childhood preschool can be considered important. The ordinary effects of care disrupt the relational balance of ‘care for’ or ‘giving care to’ and highlights care as agentive in its own right, as situated, emergent and leading to change. In the case of the table, change was evident in how creativity was fostered and opportunities for creativity were enhanced. In relation to the video and phone, change that emerged through care, materialised Hannah’s competence and transformed her identity as a learner to herself and to others.

The stories in this chapter show that care is not merely a human affair, it is about practice, curriculum and environment, but beyond the walls of the preschool it reflects wider social and economic tensions. Puig de la Bellacasa (2011, p.93) provides a justification for my emphasis on caring within this chapter as she suggests exhibiting matters of care “is valuable especially when caring seems to be out of place, superfluous or simply absent”. Care is clearly present and experienced in Seaview, as it is in early childhood settings, but that is to not say that caring in early childhood is valued by a wider audience. Earlier in this chapter I suggest that care is frequently taken for granted and so while care in some areas (e.g., eldercare, healthcare or childcare) can be considered transactional, Barad (2007) dismisses this sense of separateness, and identifies care as an agentive force that emerges through intra-actions. We are indeed “opened up to the other from the ‘inside’ as well as the ‘outside’ (Barad, 2012, p.216) when barriers of separateness are erased. Thus, affect and care do not just reflect positive feelings, rather they illustrate the forces that manifest in the work and

relationships, between human/non-human matter, within the preschool. Putting care and affect to work in this chapter materialities and highlights the ways in which curriculum, pedagogy, equipment, materials and bodies have agency and implications for everyday practice.

CHAPTER 9: Concluding

In this final chapter, I draw together the learning that emerged through the intra-action of educators/documentation as re-counted in the sticky stories and I explore the implications or effects of putting posthuman/new materialist theories and post qualitative methodology to work. The study has been guided by the main research question, ‘What new knowledge and insights are generated in the intra-action between educators and documentation’ and a sub-question, ‘What are the effects of putting post qualitative methodologies and theories to work in early childhood research’? From the beginning of the study, my aim was to understand documentation differently, to see what emerged in putting theory to work and this guided me to the use of a ‘post’ paradigm. My interest in documentation and my engagement with literature began with Rinaldi (2006) and Lenz Taguchi (2010), which signposted me into the work of Barad (2007) and Murriss (2016) amongst many others. To do justice to the theories I encountered and to ensure coherence across the study, I engaged with post qualitative theory (St. Pierre, 2014) and discovered Jackson and Mazzei (2012) who enabled me to think with theory. However, to make an original contribution to the field, I was challenged not merely to make sense of and use new post theories/methodologies, but also to understand the discourse of documentation and how it is currently framed by practice and literature.

Through the study I have argued for the performativity of documentation, which went beyond seeing it ‘as’ and instead understanding what happens in the ‘doing’ of documentation. Through diffractive reading and plugging data into theory, I found that documentation matters for practice/theory and for those involved in the process. Through the study, a practice space was created for educators to engage with documentation, which had

the effect of disrupting and expanding thinking on curriculum and practice; making visible the entanglement of materiality and learning; and re-positioning children with additional/special needs in the ECEC setting. The findings also surfaced and emphasised the value of the affective elements and atmosphere that emerged through the relationships in the intra-active process, and which created a sense of collegiality and collective belonging in the setting. The insights that emerged between educators and documentation impacted on their professional identities, influencing their pedagogical work and relationships with children and parents. It is as Prior (2008) suggests that what documents do rather than what they say is key, and what emerged in the intra-action between educators and documentation were the effects of enactment, not merely how or why the documentation was generated, but what it unveiled. Finally, the study has engaged deeply with philosophy and methodology in an attempt to think differently about concepts, research, data, and what might be revealed of documentation and pedagogical practice. Venturing to understand and engage with a post qualitative approach emphasises that curiosity and inquiry are necessary dispositions, but so too is theory and methodology as practice. Theories and methodologies cannot be merely abstract concepts and I believe that they must have an effect. In this study the effect of putting to work new materialist thinking has been to shed light on the energy and force of documentation as a material-discursive phenomenon. This final chapter resists the urge to neatly tie off findings in isolated pockets but will work to untangle some overarching insights, and so in the remainder of this chapter I will recap my findings and analyse their implications, consider the limitations and identify my contributions to the field arising from the study.

Summary of findings and implications for practice

An overarching finding from the study is that documentation matters, both as a pedagogical tool and as an apparatus of meaning making (Lenz Taguchi, 2010).

Some main findings and their implications are explored in this section and relate to the performativity of documentation, curriculum, pedagogy of materiality, learning, identities, time, care and the use of post theories and methodologies.

Performativity and mattering of documentation

By bringing current understandings about the nature and practices of documentation into conversation with posthuman and new materialist theories and philosophies, I have demonstrated the performativity of pedagogical documentation within the context of early childhood settings. Seeing and understanding the performativity places greater value and potential on documentation within the curriculum and pedagogical practice.

Key to new insights on the performativity of documentation that emerge through this study is the power of the lens. Exploring pedagogical documentation through the perspectives of Barad, St. Pierre, Lenz Taguchi and Murriss amongst others has surfaced new realities and possibilities for seeing and understanding what is happening in the moments of daily practice. Jones and Jenkins (2008) ask,

Can a new *reality* appear when we read between the lines – or must we only see multiple discursive, speculative, ‘realities’? Can new actors *materialise* in texts, and become real in the past when they were not there before – or can the actors only be discursive subjects? (2008, p26)

What is suggested here is that in the context of this study documentation is materialised as an agentic actor. It has become more than a means of accountability, assessment, making learning visible, engaging with parents or as a form of professional development for educators. The exemplars in the study evidence Barad's (2007) contention that material is vibrant and agentic. Plugging pedagogical documentation into elements of Baradian theories shows how matter, practice and perceptions come to matter in their materiality, making visible the complexities and possibilities of working with children and families. In Story 4 for example, walls become supports for nervous educators, holding them upright and simultaneously creating specific safe and creative spaces for children. Intra-acting with documentation in the forms of paintings and videos enable educators to have broader, more inclusive ways of knowing. In terms of performativity, documentation gives value to specific knowledges and aspects of practice, enabling the whiteboard for example (Story 2) to act as more than a tool of planning for the children.

An implication of understanding documentation as performative positions it a material-discursive apparatus, which allows for further entanglements (Lenz Taguchi, 2010, p.88) and in so doing it transforms thinking and educator identity. The agential nature of documentation gives confidence to the educators in their professionalism and ownership of their practice, which is key within a sector/profession that struggles to gain recognition for the educative work in early childhood. The effects of documenting give the educators control, positioning them as experts, generating knowledge and demonstrating ownership of what is generated. The strength of documentation is that it offers a counterbalance to prescriptive or summative forms of assessments in early childhood because it opens up vistas on practice, learning, curriculum and so on. In short, intra-acting with documentation allows the

educators to assert their pedagogical practice and approach to curriculum and equips them to challenge the dominant discourses.

Re-thinking curriculum

Documentation is powerful in both generating and revealing curriculum in action. Story 1 highlights some of ways in which documentation is active in shaping curriculum in the preschool. As the children engage with the materiality of trees, leaves, and microscopes, they generate new understandings and develop different relationships with the nonhuman other. Aligned with thinking from Reggio (Rinaldi, 2006), documentation enables different thinking about the roots of trees but also prompts different curriculum directions to be taken. It was, for example, through the engagement with the microscope, paying attention to the micro-structure of the leaves and drawing the thin veins that materialised wonderings about photosynthesis, which in turn guided the curriculum over weeks.

The implications for practice in understanding documentation as performative is that curriculum cannot be fixed in advance. Curriculum can be planned and anticipated but as Lenz Taguchi (2010, p.116) advises, we must “always be on the edge and be prepared to immediately diverge from or let of that plan when necessary”. Through this study, I argue as does Osberg and Biesta (2010) that,

we should not try to judge [value or assess] what emerges before it has taken place or specify what should arrive before it arrives. We should let it arrive first, and then engage in judgement so as not to foreclose the possibilities of anything worthwhile to emerge that could not have been foreseen. (Osberg & Biesta, 2010, p.21).

There is always a need for educators to slow down and stand back to see and listen to what might happen next. Documentation then becomes part of the intra-active pedagogy, a mediating tool or apparatus and an agentive force. In this way documentation is a material-discursive practice that enables educators to resist the challenge of structured curricula. Understanding that curriculum cannot be pre-determined or fixed has repercussions for educators, who must be (or learn to be) comfortable in pedagogical uncertainty (Urban,2008), that is, in seeing themselves, the children and the materiality of the environment as entangled phenomena that are agentive in the intra-actions.

From a policy perspective, there are implications in how curricula are framed (close/prescriptive or open/frameworks) and how the outcomes of inspections are interpreted. A prescriptive approach to curriculum or a specificity regarding formats of required documentation, ignore the possibilities for differences in being, thinking and doing. Policy directives need to afford flexibility to educators, enabling them to exercise and develop their professionalism. What emerges from this study and the thoughts of Barad (2007), Osberg and Biesta (2010) imply, is that initial education for teachers/educators must understand curriculum in a more expansive frame the construction of the individual in relation to educative moments” (Slattery, 2006, p.292).

A pedagogy of materiality

Through the study I argue for a pedagogy of materiality which shifts thinking from understanding materials as supporting learning to materials as generating learning. Froebel, Reggio Emilia, Montessori, and others have valued the environment and materials as 3rd teachers and pedagogical partners in supporting children’s learning. A problem is that

materials are understood as prompting learning but not intra-actively generating it. In addition, our contemporary pedagogies “tend to regard as taken-for-granted that learning takes place inside the individual student” (Lenz Taguchi, 2011, p.39), which means that the student is separate from the environment and conditions in which they learn. Hultman (2011) argues that the more connected and the more connections that humans can make the more open they are to forming a greater number of more complex interconnections. In other words, there is a shift from independence to interdependence and an acknowledgement that we are nothing until we are connected to something else (Hultman & Lenz Taguchi, 2010; Barad, 2007).

Doing and connecting are important features of learning in early childhood, where experiential and engagement with materials has more immediate relevance than abstract learning (Bruner, 1996). Children learn with/through material encounters, as was evidenced in this study. Mark was enacting a story with the whiteboard; Michael was materialising an identity as he became one with the paint. Both were strong embodied experiences, which disrupted normative expectations and in both situations, children learned in participation with different forms of matter.

A consequence of a pedagogy of materiality is that understandings of how we come ‘to know’ and ‘to be’ is contested. No longer can learning be a human-to-human process, it must encompass the other be that nature or material. Understanding materiality as being central to the learning process can encourage educators to attend to the early childhood environments and materials, which calls into question the range of equipment and other matter that are included in the setting.

Learning as relational

Barad's agential realism and Lenz Taguchi's intra-active pedagogy both argue for a relational ontology, which dissolves barriers and reveals a dynamic interconnectedness between all human, natural and nonhuman matter. Thus, "thinking and learning is always an encounter; something that 'hits us' as we engage with the world" (Bennett, 2001).

Through the encounters with documentation in this study, what became evident was that learning is not an individual affair, it emerges through intra-actions, flows rhizomatically (Deleuze & Guattari, 1987) and is significant in relation to early childhood. There is a global tendency to understand education as the learning of discrete, value-free skills and knowledges that can be taught independent of cultural, social and economic contexts (Murriss, 2016, p.175). This trend is evident in the OEDS's International Early Learning and Child Well-being Study (IELS), a universalist and technocratic tool (Pence, 2016) which aims to identify key factors that support or hinder early learning and which, according to Malaguzzi (cited in Cagliari, 2016), simplifies knowledge and learning. This study has shown that learning is complex and relational as Barad (2007) suggests learning is one part of the world making itself intelligible to another. Looking at documentation through a posthuman /new materialist lens allows the complexities of learning or coming to know become visible. The documentation has allowed the co-dependency of learner and world (Lenz Taguchi, 2010, p.47) both the human and material be evidenced. In engaging with the whiteboard and orange pen, documented through video, the processes of Mark's learning emerge. Mark is not learning alone in this situation because bodies are not objects with definitive boundaries, rather they material-discursive phenomena (Barad, 2007, p.153). Mark is working through issues (of concern) as he connects with the pen and the whiteboard. Documentation, as part of

an intra-active pedagogy, allows for new understandings of what knowledge and learning are and how they are constructed or generated. In the preschool room everyone and everything are entangled in the processes of learning and so the gaze shifts from the child as an isolated or individual learner to being one element in that process.

An implication of understanding learning as relational is that educators make room for all (Murriss, 2016, p.171) be that human/non-human matter and that educators appreciate that learning is inter-dependent with the material world. A consequence of this is that educators must find ways to use the material-discursive realities of the preschool environment (Lenz Taguchi, 2010). The responsibility and affordances for learning are distributed across all forms of matter. To intentionally support learning within the curriculum requires flattened understandings of what matters in the learning process, and an intentionality to slow down and pay attention to the details of encounters with more than the human. The study also suggests that in becoming aware of the intra-active nature of learning, compels educators to critically analyse taken-for-granted pedagogies and accept that there is no one best way to learn. Understanding learning as relational and contingent suggests that pre-determinations cannot be made about children and their abilities based on geographical, or socio-economic factors.

Reconfiguring identities and positionings

Putting posthuman and new materialist theories to work in this study has disrupted ways of understanding curriculum, reconceptualised learning as relational and resisted the dominating discourse and positioning of children with special/additional needs within ECEC settings. Too frequently, children with additional/special needs are positioned within

documentation as problematic, and special needs are constructed as an individual matter, with children having responsibility to overcome the perceived deficit themselves (Heiskanen et al., 2018). Putting a new materialist lens to work, as exemplified in Story 3, allowed paint to emerge as a performative agent. The materiality of paint acted as a form of resistance, disrupting normative assumptions about children with special needs and positioning the young boy as ‘artist’, shifting the gaze from deficit child to competent child. The documentation (paintings) created a space for Michael in the preschool room and consolidated a sense of belonging or being an equal member of the group. Michael’s paintings became a natural entry point to group activities. The paintings had a ripple effect in that Michael’s family experienced the joy of their son’s creative abilities and they too were presented with another perspective, seeing him in a different light.

A number of implications arise from the study. Firstly, and on a practical level, the impact of every-day access to open ended materials such as paint within the preschool is critical. For Michael, paint was (is) his passion. Facilitating and nurturing children’s interests and passions, in conjunction with the materiality of the environment, co-constructs and shapes identities. Michael’s funds of identity (Hedges, 2022, p.95) encompasses the broad range of life experiences (with human/non-human) that he takes up as being relevant in defining himself and determining directions in life. Nussbaum (2011, p.18) advises that that a key question to ask is “what is each person able to do and be?” This study expands the notion of developing identities in highlighting the critical role of material, in this case paint, in that emerging intra-active space and asks, ‘what is each person able to do and be when in relation with other matter’? The agentic nature of the material shaped Michael’s own sense of self but it also provided a lens for others to see and understand him differently.

Secondly, the study also enables thinking about diversities, amongst children as they encounter others (human/non-human) in their world. Diversities focus not on how children are categorised, Mark for example as being ‘troubled’ and Michael as having ‘special needs’, but on their intra-actions and what happens within that encounter, which is “an iterative (re) configuring of patterns of differentiating-entangling” (Barad, 2014, p.168). That is not to say that these differences do not matter or are not relevant in practice, but diversities become another element of the assemblage that allow for new outcomes and learning with each encounter (Hultman & Lenz Taguchi, 2010). What this study shows, exemplified through stories 2 and 3 is that the notion of diversity is not and cannot be taken as ‘fixed’ or unchanging. It was in the material encounters that strengths and new identities emerged and that thinking processes were revealed because “in a posthuman approach, the myth of normality is exposed” (Frigerio et al., 2018, p.399).

Re-framing time in ECEC

In engaging with the documentation, I have identified the pedagogical importance of time and attention in practice. Barad (2007) has highlighted the movement and fluidity of time, in that the past, present and future are entangled and not waiting in separate linear containers to be found. The story of Mark (Story 2) enacts agential cuts in untangling the assemblage, which feature Mark, the whiteboard, the pen, the video but also the element of time, which is materialised through the Story. The apportionment of time in early childhood is typically driven by accountability to management and others on the team; to inspectors who at least question the alignment between planned and actual activities and experiences (Albin-Clark & Archer, 2023); and by parents who sometimes want to schedule children’s sleeping times

removed from the exertions of daily life in ECEC. The commodification and apportionment of time appears to be constructed to appease interests other than the needs and desires of the children and pedagogical practice. While accountability in all its forms is an important aspect of ECEC, I argue there is a need to resist domination by the clock.

The implications of the study for practice highlight the need for educators to resist the dominant discourses of time and to push back on constructed ideas of learning and what needs to be done or achieved during the day. Rushed time does not equate with completion or learning, rather it leans towards pressure and superficial engagement. The capacity ‘to be’ to move with the rhythm of the child and to slow down pedagogy allows for attention to detail and attunement to the world. Re-conceptualising time differently, flowing with it rather than against it has implications for the wellbeing of children and educators.

Re-positioning care and affect in ECEC

Care and affect have been linked with educators in this posthuman and new materialist study. The story of care and affect opens up innovative thinking that complexifies care beyond the human and this is critical in “resisting hegemonic, unilinear and productionist narratives” (Puig de la Bellacasa, 2017, p.221). Caring-with and caring-for transforms everything, as children and educators connect with others (human/non-human) generating a sense of belonging. Material matter is also agentive in transformation, the soft chair shapes differently in embracing and caring for the educator, the rigid wall holds the tensions of the educators in keeping them sitting straight as a strut or support (Story 4). Caring is reciprocal and mutually transformative in these intra-actions. Puig de la Bellacasa (2011, p.100)

suggests we need to ask ‘how to care’ in situations, but this study has been concerned with what care does and what the implications are for human/non-human matter.

Care is not without its tensions. Care can mean attending to the detail (taking care), which can raise issues of control. Care can suffocate the cared for and exhaust the carer. This study identifies and positions care as an agentic, enabling phenomena that makes a difference to children, educators and the material environment. The implications of positioning care in this way makes visible what it accomplishes, be that a video subtly influencing Hannah’s identity as a learner (Story 4) or a table in shaping creative encounters. Materialising care in this way values it within the early childhood setting but it also argues for the wider recognition of the role of care in society.

Re-focusing lenses on theories/methodologies of the post

Theories and methodologies matter, and they have mattered to me on this research journey. Through the research journey the power of documentation became apparent, as philosophical, theoretical, and methodological concepts prompted questions of how documentation could be understood differently. Was there more to documentation than suggested by the body of literature? To respond to the wonderings, this study embraced a posthuman/new materialist approach and adopted a post qualitative methodology. Locating the research in this way was an attempt to open up documentation practices, and to “pursue the possibility of a materially informed post qualitative study” (MacLure, 2013, p.658).

To some extent this thesis is an argument for working with a post qualitative methodology. Without a broadening of possible approaches to include matter/material/intangibles within the scope of data and thinking with theory as a means of

analysis, the insights arising from encounters with documentation would not have occurred. In adopting a post qualitative approach to the study, I have at times avoided “a tyranny of clarity” (Gane & Haraway, 2006, p. 153), which meant the research journey was uncertain (Koro-Ljungberg, 2016). However, a consequence of taking this methodological path and using a diffractive lens allowed data to glow, such as the effect of viewing the leaf through the microscope. In this story, the curriculum emerged in response to the intra-action of children and microscope, roots and trees. The minimising of human voice within the post qualitative approach forced the gaze away from the voices of the educators and children, instead coming to rest on the documentation which offered very different perspectives. It was the methodology that allowed documentation to emerge as something more than appeared in mainstream literature. Ferrando (2020) contends that posthumanism has to firstly recognise the whole human experience to acknowledge the non-human and to do this requires a methodology that is not constrained. Such an endeavour is challenging and while there is a growing body of researchers in early childhood using post qualitative methodologies, few are focusing on documentation. It is my contention that documentation is both powerful and precarious in our neo-liberal education system and more open methodologies will enable deeper understandings and wider perceptions of its performativity, challenging current discourses. Larsson (2015) proposed that great responsibilities rest with educators to concretise and apply theories within their pedagogical work. I believe that this research, has taken up this gauntlet to illuminate documentation practices in early childhood.

It is Ravitch and Riggan (2017) who highlight that methodology is seldom critiqued or considered in research studies in the same way as literature. Using a post qualitative approach for this study has allowed me to see what the methodology looks and feels like in

practice, because as Lenz Taguchi (2010, p.40) advises, “learning is produced in participation”, it is only in the doing that learning is generated. The effect of putting a post qualitative methodology to work has broadened my understandings of what constitutes data beyond the spoken word, and, in this study, I have come to understand and appreciate the entangled nature of becoming/knowing. The separation of ontology and epistemology as separate entities has dissolved and from this perspective everything changes and is more complex. Neither the educators, the documentation, the environment, nor the researcher stand alone in this study, but neither does the past, present, or future – every tangible and intangible element is connected. This new way of thinking and seeing the world is not without its challenges in theory/practice. How do I/we resist the seduction of representationalism, recognise that epistemology is always ontological, that matter matters and that entangled assemblages have agency (Davies, 2018, p.125)? How can posthuman, new materialist, post qualitative thinking be translated into practice?

The positioning and valuing of theory in early childhood is somewhat contested. Thinking from Reggio understands theory as a set of provisional explanations (Rinaldi, 2006, p.113), but also cautions that while theory is important, an over-emphasis or reliance on it can lead to the educator becoming pedagogically lazy, deferring to the theoretical thinking of others. In contrast, the necessity of and for theory is justified by Jackson and Mazzei (2013, p.269) as a means of shaking researchers/educators out of a complacent view of the world. This approach challenges the status quo and urges a new or different way of thinking about practice. They (Jackson & Mazzei, 2012) see theory as being essential because without it there is no movement, only a re-petition or re-production of what already is. Theory revealed many entanglements within the study and in plugging it in to the data, a space was created for

new perspectives to emerge. St. Pierre (2001, p.142) says that “not only do people produce theory but theory produces people”, reciprocity and intra-action is clearly at play. Theory guides worldviews and through its use my thinking has transformed.

The findings in this study diverge from previous research that suggests that documentation practices can simply retell rather than create new knowledge (Olsson, 2009). I am loathe to overstate the significance of this study beyond myself, where the greatest changes have occurred. The implications arising from this study for practice are small, imperfect and might be considered as incremental steps to influence change. However, in considering ‘why’ a post qualitative approach, St. Pierre (2021) links it ultimately to thinking differently. In respect of this study that would translate the key learning and implications as being, to disrupt existing perceptions of documentation; to enable new insights and understandings to emerge; and continue to think differently about the materiality of documentation. While putting ‘post’ theories and methodologies to work appears straightforward, it is not and as Barad (2007, p.249) advises that to engage with the posts “one has to make a commitment to the difficult and sweaty labor required to successfully navigate that landscape. But the trip through the difficult terrain is well worth it...”

Tensions in using ‘post’ theory/methodology

Post theories and methodologies are not without critics, and I am mindful of contradictions that have arisen for me through this study, the issue of language and the de-centring of the human. A question was posed along my research journey – ‘is there an irony in these post qualitative times that materialist analysis seems to be very discursive - there are

lots of words!'. This rings true in relation to this study. On one hand, a 'post' approach suggests that for too long, language has dominated research at the expense of the other, non-human material. Barad (2007, p.132) questions, "how did language come to be more trustworthy than matter?"

As part of this research, I have tried to attune to more than the obvious in thinking with theory, but I still rely on words to share insights. The problem is that "we always bring tradition with us into the new" (Lather & St. Pierre, 2013, p.630). In this study, I listen to the educators on zoom, knowing that the professional conversations are their interpretations of the documentation. I, in turn, create stories out of their words and use theory to render the invisible visible. These processes depend on words, so how can I escape the bind or hypocrisy of framing the study as new materialist/post qualitative but rely on words or language to make meaning. Ferraris (2013) proposes that inscribed documents should stand alone but how could I listen solely to the documentation? Instead, I have created a space where the documentation prompts thinking with the educators, all of which is mediated by words. There is no easy answer to the issue of language in a post qualitative study, but one avenue may be to engage with the materiality of language itself (MacLure, 2013). Language matters (Barad, 2007; Murriss, 2020), it is in and of the body and impacting on the other, be that human or non-human material. While conceptualising language differently may be the way forward, this too presents challenges, as language in the form of interviews and professional conversations is integral to research processes. MacLure (2013 p.653) suggests that "a materially engaged language would be non-representational, non-interpretive, a-signifying, a-subjective, paradoxical, and embroiled with matter". In a conventional research mode language seeks to make meaning, but equally language can never fully close off or

contain meaning – it is always open. Perhaps in a post qualitative context it is, therefore, the connections that are made possible by language that are key. In the context of this study, it is not about solving the issue of language, but perhaps it is enough to recognise that words are not the only medium that can be used in research.

Another question or critique of a post methodology or theory that has relevance for this study is the de-centring of the human, which poses the question, “is there a danger in the move to the discursive, assemblage, materialist plane of analysis that we lose the human subjects in our analysis”? The effect of engaging with the posts in undertaking this piece of research has engendered a respect for human and non-human matter. There is no danger in this post qualitative paradigm of diminishing or removing the human but rather it is important to maintain perspective and work to de-centre people within the research process. Manning (as cited in Osgood, 2020, p.56) proposes that the guiding questions “what if?” and “what else?” support the de-centring of humans. These questions resist what might be termed the same old stories or answers, and instead compel viewing beyond the expected. This study inadvertently sought to answer these questions, “what if?” post theories and methodologies were used to see ‘what else?’ the data or documentation generated. But of course, it is “easier to talk about decentring the human, to theorise it, than to actually do it” (Taylor, 2020, p.211). It is possible that I, like Lenz Taguchi (2020, p.39) in referring to her seminal paper with Karin Hultman (2010), have failed to fully decentre the human/educators in this study. The effect or impact of using post methodologies in this study has been manifold. Firstly, it has broadened my understanding of matter and its relevance in the research process. It has brought me to a space where ontology and epistemology blend; becoming and knowing are part of the same process. It has heightened my criticality in seeking to see differently or

diffractively. Finally, the post methodological journey has brought me full circle in considering the challenges of engaging with this approach, specifically in relation to language and decentring the human in the study. I have no answers, but again in reverting to Lenz Taguchi (2020) I see that I have not fully engaged with the materiality of the body, and it may be that I have dogmatically over-emphasised the power of matter/documentation through the study by way of justification for, or trying to, connect with the post methodology.

The effect of putting theories and post qualitative methodologies to work has enabled new and different perspectives to emerge from the data. While documentation provokes consideration of “things that might otherwise have remained hidden but were made public” (Richard, 2017, p.82), it is the use of theory and new methodologies that has encouraged a more critical orientation in the research process. As suggested by Jackson and Mazzei (2013, p.269), “without theory we have no way to think otherwise”.

The use of a post perspective is gathering force, but it is not without its detractors. Greene (2013), in her critique, has asked where we are going on this post qualitative journey. Koro-Ljungberg (2016, p.3) retorts that working with new thinking and methodologies is like “a journey without a clear beginning or ending point and a journey with multiple paths to be taken”. Consequently, there is no blueprint for this work and there is little practical guidance available to the novice as the research is mapped as something new, and not a tracing of something that already exists (Deleuze & Guattari, 1987).

Limitations or considerations

It is custom and practice to highlight the limitations of any given piece of research, by way of reflexivity and transparency. Yet, the question arises, what is meant by limitations in relation to this study, which draws on a post qualitative approach? If through the theoretical, philosophical, and methodological thinking within this study there is an acceptance of the entangled nature of being and knowing (onto/epistemology), it must also be acknowledged that research findings or outcomes can never be anticipated because of the ongoing process of intra-action. The post qualitative methodology, as evidenced in this study, can be conceptualised as a fluid movement which “invites scholars to travel and explore” (Koro Ljungberg, 2016, p.98), without clear boundaries or presumptions. Consequentially, the notion of limitations does not easily align with the paradigm, as it infers that there are predetermined criteria against which the research is judged and found wanting. So, rather than examining the limitations of the study, it is more apt to examine some considerations or points of note that have arisen on the research journey and have influenced the final thesis.

Language and concepts.

Tensions, and consequently challenges, arise throughout this study in terms of language, which can be considered a limitation due to its exclusionary nature and which warrants consideration. On one hand post qualitative research aims to dilute the centrality of language as the mode of representation and yet language is used within this study to enable a sharing of new knowledge. Understandings of theory, methodology, and philosophy are mediated by language and so while non-human matter matters, so too language matters.

Fidelity to the language of the topic or paradigm has been relevant to the narrative of this study but challenging to navigate through the literature. I am not alone in this experience as Greene (2013, p.749) in her critique of post qualitative research talks of “exclusionary language”. However, St. Pierre (2011, p.614) shows little tolerance for this sentiment in advising, “read harder when the text seems too hard to read”. Nonetheless, the lexicon of Maclure’s (2011) ‘ruins’ and Heckman’s (2008) ‘mangles’ requires attentive navigation, and it is unhelpful when the academic field is full of linguistic confusion that can cause stumbling. Misunderstandings are evident, for example, in the use of the hyphen. Is it posthumanism (Ferrando, 2020), or post-humanism as Braidotti (2006) describes Haraway’s work, or (post)humanist (Thiele, 2014). Similar uncertainties arise in relation to post qualitative, with Benozzo’s (2020, p.1) frustration evident in asking how should the words postqualitative, post-qualitative or post qualitative be written? Moving away from the hyphen, should the term post qualitative research or post qualitative inquiry or post qualitative methodology be used? Are these terms used interchangeably, or do they signal differing theoretical/philosophical roots? St. Pierre (2019) refutes the concept of post qualitative methodology, which infers a systematic approach to the research design and instead uses the term post qualitative inquiry, as a more open term.

Perhaps these points relating to language are moot points, but they were frequently confusing for a novice post qualitative researcher. Even in raising the issue of language as a possible limitation or consideration within the study, I concluded in agreement with Koro-Ljungberg (2016, p.43) that perhaps language and labels fail to fully represent meaning, and the key is that we “adopt a position of linguistic openness and uncertainty”.

Covid-19

A study cannot be written in the time frame of 2020-2022 without acknowledging the Covid-19 pandemic that has impacted on daily life for all sections of society. The pandemic has created a challenging environment in which to carry out research (Atilas, et al., 2021), but it has also compelled researchers, amongst others, to reconsider the methodologies and designs used in their research (Bertram & Pascal, 2021). The methodology of this study benefitted from face-to-face conversations and an enforced move to an online platform (Zoom), both of which upheld academic integrity and supported scholarly research.

The greatest impact of Covid-19 was on the intra-views which had been planned as face-to-face encounters and which subsequently needed to move online. This study benefitted from two distinct windows, when lockdowns eased and when it was possible to meet educators and engage with documentation on-site after the children had departed. These periods of relaxed regulations coincided with the first and the final sessions of the intra-views, which allowed for introductions and the building of relationships at the start of the research process. Having the opportunity to conduct the final conversation in the setting with the educators resulted in a longer session with supplementary stories and documentation being presented and discussed which added depth and richness to the study. The challenge or perceived limitation was the anticipation of intra-views online. While research from Deakin and Wakefield (2013) suggests that rapport amongst research participants is built more effectively online than in face-to-face research contexts, I was not initially confident of this assertion. But my concerns were proven to be unfounded for two main reasons. Firstly, the group of participants knew and worked together. They presented online (on Zoom) as a group in their own early childhood setting, sitting around a table with their documentation and a

laptop. This gave them a sense of togetherness and familiarity, which meant that their conversation flowed and I, as the researcher, was the outsider, the facilitator. Moving online created a physical distance that allowed the educators space and time to respond and discuss documentation as one. Secondly, the educators and I were at ease using the technology and I had their permission to record the sessions. The video recordings acted as a bonus as they allowed me to revisit not just the audio element of the intra-views, but also to attend to the broader elements that aligned with the post qualitative methodology being used. Without the video recordings, the nuances of the intra-views would not have been so rich.

Contribution and future directions

This study contributes to and shapes new understandings of documentation, specifically as agentic material-discursive matter. Documentation emerges through the study as a flexible tool that in a busy early childhood world, supports educators to be accountable, to act as a means of assessment, to make children's learning visible, to enable relationships with parents, to become a form of professional development, but more importantly and through a posthuman/new materialist lens, to prompt educators to think differently about practice/children/relations/environment.

My main contribution through this study is in opening up a space for thinking with theory (Jackson & Mazzei, 2012), which generates new wonderings about documentation and in so doing, begins to chip away at the theory/practice divide. It is only in tinkering with theories and methodologies that the field of education will be pushed forward (Kuby, 2014,

p.1307). In using theory within the study, I exemplify theory/practice within everyday documentation. I want to encourage others to experiment with theories beyond the early childhood mainstream to enable us to see and understand more. Traditional approaches to documentation have in some cases been technical and overly formulaic. Putting posthuman/new materialist theories in conversation with documentation will expand insights and generate new knowledge. The point is that early childhood is a vibrant field, and we must not stagnate, we need to stretch ourselves and engage at all levels with new thinking and methodologies. In working with Baradian theories, this study helped to “...make visible our theoretical and methodological blink spots... a kind of theoretical heteroglossia necessary for a critical perspective” (Gutiérrez, 2007, p.117)

On a more practical level, the thesis responds to the call of Duhn (2012, p.100) who asks: “What does it mean for early years’ pedagogy to take seriously the agency and vitality of matter that makes up places?”. The sticky stories have exemplified what is possible to see when applying a posthuman or new materialist lens to the data. In addition, the study begins to address questions raised by Rintakorpi and Reumano (2016) who suggest that there has been little investigation into how documentation can influence or transform practice. Not only has this study identified the relationship between documentation and transformative practice, it has made those processes visible for myself and for the educators who participated in the research. It is Ravitch and Riggan (2017) who highlight that methodology is seldom critiqued or considered in research studies in the same way as literature, for example and it is Osgood and Giugni (2015, p.223) who suggest that while there has been a paradigm shift in ‘post’ theorising, there has been less emphasis on posthumanist methodologies. Theory and methodology have been central to this study, providing the thinking tools to see

documentation differently. The thesis is written in a way that attempts not to over-simplify the concepts, but which allows the development of my own understandings emerge and this I feel could contribute to those novice, post qualitative researchers who follow.

Through the study, future lines of research or inquiry emerge. This study was an exploratory exercise and while I learnt much through working with posthuman and new materialist theories, more time and space were required to engage the educators in explicitly seeing the effects of documentation in practice. The educators were adamant that the time spent reviewing and discussing their documentation was a rich form of professional development. However, there are further opportunities to examine with educators in general, the performativity of documentation, widening perspectives on what it reveals about learning, children's thinking, and pedagogies within the setting. Such a focus would support a re-configuring of relationships between the actors and documentation, enabling collective experimentation and invention or innovation (Olsson, 2009, p.97).

A greater focus on the enactment of documentation would/could pre-empt tensions that exist or may exist into the future between practice and policy. In short, so little is currently known of documentation or its possibilities, within an Irish context, that future studies could use findings from this thesis as a basis in coming to know enactment practices, which could influence policy developments.

Finally, through this study, educators presented and engaged with different pieces of documentation in each intra-view. This approach offered opportunities for each educator to participate and to ensure that the power or control did not lie with any one individual. Future research could undertake a case study over time (an academic year) to map the enactment and

performativity of documentation. Such an approach would evidence learning and exemplify an intra-active pedagogy.

Concluding Remarks

This study affirms that documentation matters. It exemplifies the ways in which documentation materialises practice as well as children's learning and offers possibilities for transformative pedagogies. It has afforded me opportunities to think differently about documentation as a dynamic and continuous reconfiguration which is always provisional and uncertain. In reading documentation through a posthuman, new materialist lens, I see new possibilities for pedagogical practice. This study offers a message and means of hope in that "the dynamism of matter – human and non-human – brings forth new worlds" (Barad, 2007, p.54). Deploying documentation as a starting point, the study is a call to value more than the human, to attend to the detail of connection and intra-actions, to be fluid in having pedagogical purpose, to push against that which is taken for granted.

Barad (2007), Braidotti (2006) and the research have brought me new understandings of time, which is event through my writings. Barad (2007) suggests that the past is never tied off and Braidotti (2006, p.206) highlights that "the present is always the future present". The entangled and continuous nature of past, present and future as materialised through the documentation means that transformation is possible with every intra-action. This stance behoves us to engage authentically with children and families, without pre-determinations.

This thesis is my attempt to think differently about documentation, because “thinking differently invites alternatives to methodological orthodoxy” (Ulmer 2017, p.842). Thinking differently disrupts norms and this is critical in early childhood upon which so much depends. It is in this phase of early education that connections with the more-than-human are forged and in turn which manifests in care for and with the world. The documentation in Story 1 shows how the relationship with trees changes fundamentally through encounters. It is difficult to see how nature will ever be understood as being separate from the children who now think with-roots, branches and leaves, because as Braidotti (2013a, p.12) reminds us “posthumanism urges us to think critically and creatively about who and what are actually in the process of becoming”.

As with all good research, I am left with wonderings, what else can be seen from the intra-active documentation, what theories do I need to mobilise to make new knowledge visible. What I do know from this study is that “each intra-action matters since the possibilities for what the world may become call out in the pause that precedes each breath before a moment comes into being and the world is remade again” (Barad, 2007, p.184). At the end of this study, I am not arguing for a posthuman stance that ignores the human, or a “world without us” (Bennett, 2016, p.60) position, as I do not believe this to be tenable or productive. In fact, this position serves to perpetuate a binary system (human versus non-human) that seems to be at odds with the thinking of Ferrando (2020) and others, who argue against human exceptionalism but not against humans, and Barad (2007), who is always seeking the relationality between human and non-human matter. This study has brought me to what might be termed a mild posthumanism or “world with us” (Bennett, 2016, p.63)

position, which is supported by concepts of the assemblage (Deleuze & Guattari) and intra-action (Barad, 2007).

Unpacking the complexities and possibilities of documentation in its enactment requires a lens that allows different perspectives to emerge. Documentation is always vibrant and agentive within the assemblage, but the lens is critical in guiding us to see what is happening in the in-between spaces and at the edge of things. In taking a chance to see the familiar differently change potentially occurs. I have taken a chance in stepping into the unknown and so this study, to paraphrase May (2005, p.72), has developed my thinking so that my ontology and practical engagements with material and educators are inextricably woven together.

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measurement-issues.pdf

Appendices

Appendix A: Legislative and policy requirements (Ireland)

Legislation/Policy	<i>Legislation/Policy details relating to documentation</i>
Child Care Act 1991 (Early Years Services) Regulations 2016	<i>The Child Care Act 1991</i> is a broad piece of legislation which aims to promote the welfare of children. The scope of this Act includes children in State care, foster care and residential care. The Act also incorporates a regulatory

	<p>function in respect of preschool services. The Child Care Act 1991 is accompanied by a set of Regulations, which seek to operationalise the legislation. Regulations were enacted in 1996, 2006 and 2016.</p> <p>The main focus of this Act as it relates to documentation is in terms of records and registers in electronic and/or hard copy form.</p>
<p>Tusla / Quality and Regulatory Framework (2018)</p>	<p>Tusla, The Child & Family Agency is a statutory body, established under the Child and Family Agency Act 2013. The main purpose of Tusla is to support and promote the development, welfare and protection of children and to encourage the effective functioning of families. Tusla, is responsible for the inspection of preschools, playgroups, nurseries and all facilities that cater for young children (birth-6 years).</p> <p>The Quality Regulatory Framework (QRF) was developed in 2018 to provide information on inspection requirements. QRF requirements, specific to documentation include:</p> <p>53. The service ensures effective programme delivery and quality of care. ‘A meaningful programme is designed or adopted taking into account: Ongoing observations and assessments from various sources to create a complete, well-rounded picture of each individual child’</p> <p>49 – Relationships and interactions around children The service respects and values parents, guardians and families of all diversities, e.g., ‘working with parents and guardians by sharing knowledge and observations of the child’s interests, strengths, developmental and care needs, approaches to learning, changes in their life, and any other concerns.</p>
<p>Síolta, the National Quality Framework (DCYA, 2010)</p>	<p>Síolta, the National Quality Framework (DCYA, 2010) inform thinking on documentation. Síolta is designed to define, assess and support the improvement of quality across all aspects of practice and provision in ECEC settings for young children, birth-6 years. The updated</p>

<p>This framework is guidance and is not a legislative requirement</p>	<p>2017 Síolta User Manual incorporates 16 Standards, of which Standard 7 ‘Curriculum’ relates to documentation.</p> <p>Standard 7: Curriculum Encouraging each child’s holistic development and learning requires the implementation of a verifiable, broad-based, documented and flexible curriculum or programme.</p> <p>Component 7.5 The curriculum or programme of activities being implemented is documented and the documentation is available and in use.</p> <p>Component 7.6 Planning for curriculum or programme implementation is based on the child’s individual profile, which is established through systematic observation and assessment for learning.</p>
<p>Aistear, the Early Childhood Curriculum Framework (NCCA, 2009)</p>	<p>Aistear, the Early Childhood Curriculum Framework associates documentation with assessing for learning; planning curriculum and sharing information with parents. This framework is guidance and is not a legislative requirement. It also highlights that information about children’s learning and development can support teacher’s reflection on practice.</p> <p>Aistear defines assessment as ‘the ongoing process of collecting, documenting, reflecting on and using information to develop rich portraits of children as learners in order to support and enhance their future learning’. (Guidelines for Good Practice, p.72)</p> <p>What is assessment? Why is it important? (p.72) Assessment enables the adult to find out what children understand, how they think, what they are able to do, and what their dispositions and interests are. This information helps the adult to build rich stories of children as capable and competent learners in order to support further learning and development. In doing this, he/she uses the assessment information to give on-going feedback to children about how they are getting on in their learning, to provide challenging and enjoyable experiences for them, to choose appropriate supports for them, and to document, celebrate</p>

	<p>and plan the next steps in their learning. Put simply, the adult considers the following questions when thinking</p> <p><i>Assessing for</i> – dispositions, skills, attitudes and values, knowledge and understanding</p> <p><i>Documentation can include</i> written notes, stories, photographs, video footage, and samples of what children make, do and say, such as models, sculptures, pictures, paintings, projects, scribed comments, responses, or statements. Adults and children use this evidence of learning to celebrate progress and achievement, and to plan the next steps in learning. Documentation also enables the adult and/or children to share information with parents (p.73).</p>
<p>Department of Education and Skills – Early Years Education Inspections</p>	<p>The Department of Education (DE), formerly the Department of Education and Skills (DES) commenced a system of Early Years Education Inspections (EYEI) in 2015, which focus on the educative elements of provision in ECEC, across 4 key areas, namely environment/context; pedagogical processes; children’s learning experiences and achievements and management and leadership for learning (DES, 2018) in ECCE settings. These inspections are not currently on a statutory footing but are part of the contractual arrangements between the Government and the setting and at present only focus on the 3 years-6 years of age cohort. The DES inspection process firmly links documentation with assessment, in guiding curriculum planning, building a rich picture of children’s learning and development and reflecting their achievements. So, while the DES conceptualises documentation as being helpful in assessing children’s learning, it is not foregrounded as a tool for reflecting on practice or as providing opportunities for broader, more collaborative learning between children, staff and parents. Documentation is required under Areas 2, 3 and 4 of the Inspection Tool.</p> <p><i>Area 2 – Quality of processes to support children’s learning and development</i></p> <p>5. Information about the children’s development informs next steps in learning</p>

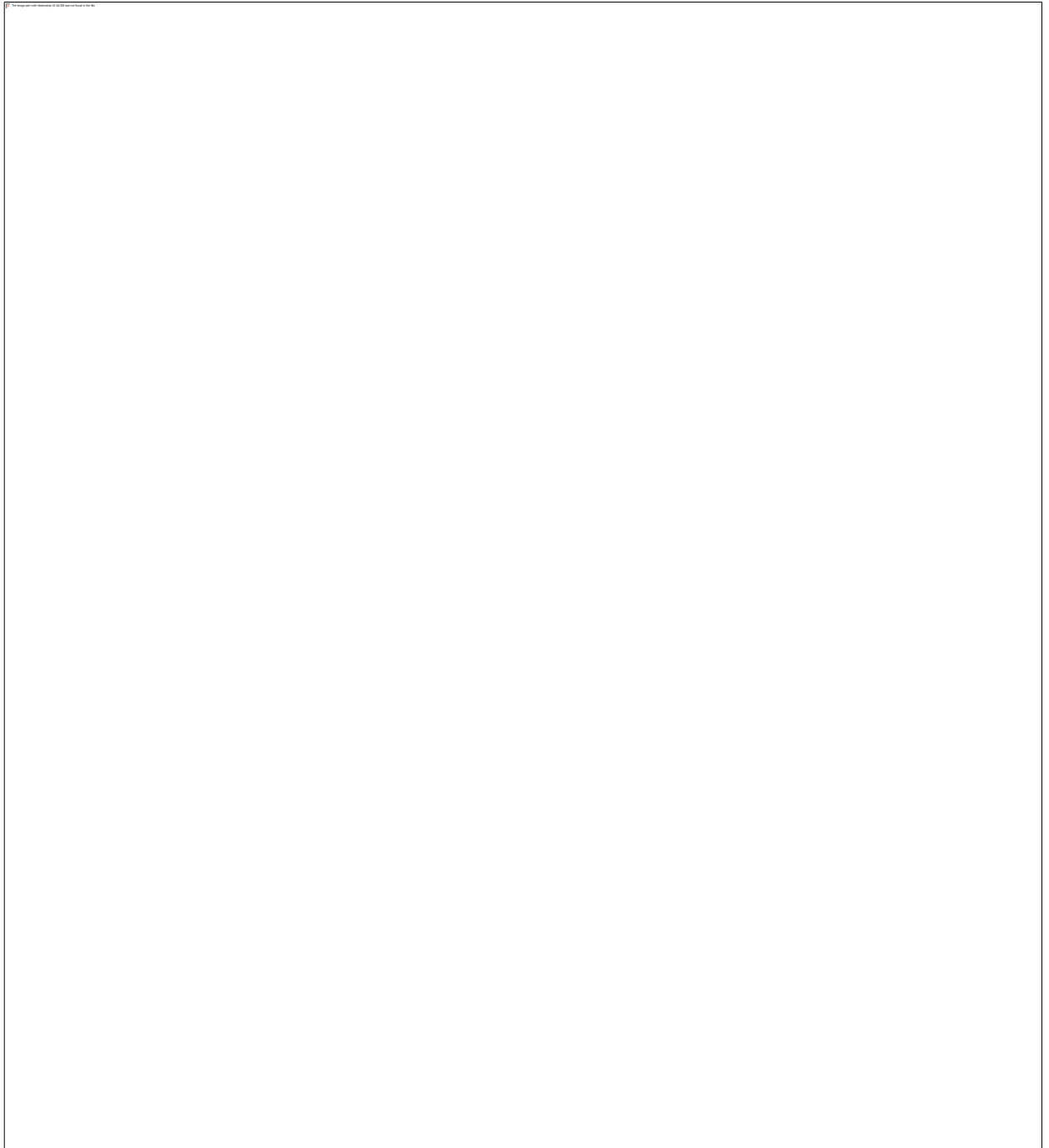
	<ul style="list-style-type: none"> • A variety of assessment approaches is used to gather information about children’s learning experiences and achievements • Assessment for learning approaches are used to inform and progress the next steps in children’s learning experiences and ensure continuity in their learning • Information about children’s learning is regularly documented to build a rich picture of children’s learning and development • Children are regularly provided with appropriate formative feedback to extend their learning and development • Parents are consulted regularly and informed about their child’s learning and development <p>10. Provision for children’s learning and development is closely aligned to their interests and developing capabilities</p> <ul style="list-style-type: none"> • Planning for children’s learning and development builds on the interests, previous experiences and achievements of children • Children are enabled and supported to make connections in their learning and to transfer their knowledge and skills to new learning situations <p><i>Area 3 – Quality of children’s learning experiences and achievements</i></p> <p>13. Children experience achievement and are developing through their learning experiences</p> <ul style="list-style-type: none"> • Children regularly discuss or share aspects of their learning achievements with others • Information documented about children’s learning reflects their achievements in a range of connected learning experiences appropriate to an early education context • Information documented about children’s learning reflects their development with due regard for their individual interests, needs, approaches and cultural backgrounds • <p>Area 4 - Quality of management and leadership for learning</p> <p>17 Planning, review and evaluation are informed by Síolta</p> <ul style="list-style-type: none"> • Management and staff regularly reflect on and review their practice, policies and procedures in
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	<p>order to improve learning experiences and outcomes for children</p> <ul style="list-style-type: none">• Reflective practices are adopted to support professional learning in the setting and to inform planning, review and improvement practice
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Appendix B: Learning record (NCCA)

A large, empty rectangular box with a thin black border, occupying most of the page. It is intended for a learning record as indicated by the title above it.

Appendix C: Ethics approval



Appendix D: Participant information sheet/PLS educators

You are invited to be part of a research project which is focusing on documentation in early childhood. While I will speak with you and the team as a group, I would like to provide you at this initial stage with the details of the project to ensure you are fully informed. Please take the time to reading the following information carefully and discuss it with others if you wish. After reading the details below, please contact me directly if you would like to talk further about my proposal or if you have any queries (Marlene.McCormack@dcu.ie) or (086) 1300428.

The title of my research, which is undertaken as part of an EdD in Sheffield University, is:

Documentation matters: An exploration of the practices of documenting children's learning in ECEC in an Irish context.

As part of my doctoral study, I am undertaking a series of focus group meetings in (name of setting) to develop an understanding of documentation in your early childhood setting. Documentation in the form of observations has always been required by Tusla, Síolta and Aistear and more recently by the Dept. of Education and Skills Early Years' Inspections. My experience is that educators in early childhood work hard on documentation, but it is not always clear what is being documented, why and how. I want to investigate this further with your help. I have approached you and the setting as you have worked with me previously on this topic and you also indicated your interest in being part of this study.

I am interested in working in one room of the setting with staff who are interested in looking at what and why they are documenting. It is important that each staff member in the room is comfortable in being part of the study. It is up to you to decide whether or not to take part. If

you do decide to take part, you will be given this information sheet to keep (and be asked to sign a consent form) and you can still withdraw at any time without any negative consequences. You do not have to give a reason. If you wish to withdraw from the research, please contact me at Marlene.McCormack@dcu.ie.

The study will involve my meeting with you and the other staff in the room once a month over 4 months. The individual meeting or group discussion will be no more than 1 hour. The focus of each meeting will be on samples of documentation that you will select to discuss. Together we will explore what the documentation suggests about children's learning. The monthly meetings will take place in the setting and at a day and time that is suitable for you and your colleagues. I will also ask that you keep a record or diary over the duration of the project, which you will share with me.

The monthly meetings will be recorded and transcribed, so that I have an accurate account of discussions, and these will be shared with you at each following meeting to check for accuracy. Subject to parent's permission and children's assent I will take some photos of the documentation to include as part of the research. The setting, educators, documentation and any photos will all be anonymised, so that no one can be identified from my writing or from the images.

The main disadvantage of engaging with this project is the time required of you in a busy work life. Any discomfort that you experience at any stage of this study should be shared with me or brought to my attention. I anticipate that working together over a 4-month period we will learn a lot about the process of documentation, how it happens and what it says. I hope that you will benefit in having the opportunity to showcase and discuss your work professionally.

Sheffield University and myself as the researcher, take the security and integrity of all personal data held very seriously and so under the General Data Protection Regulations, I wish to confirm that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)).

All the information collected as part of the research will be kept strictly confidential and will only be accessible to myself as the researcher and my research supervisors. You, nor the setting will be identified in any reports or publications unless you have given your explicit consent for this. However, due to the nature of this research into pedagogical documentation, it is possible that other researchers may find the data collected to be useful in answering future research questions. We will ask for your explicit consent for your data to be shared in this way. The audio and/or video recordings gathered during this research will be used for analysis only. No other use will be made of them without your written permission and no one outside the project will be allowed access to the original recordings. In relation to the examples of pedagogical documentation used within the study, consent from the parents and assent from the children will be sought to use these anonymised samples for the purposes of training and publications.

The University of Sheffield will act as the Data Controller for this study, which means that the University is responsible for looking after your information and using it properly. As the researcher, I alone will have access to and responsibility for the study material, which will be kept on the university Google drive. The material will not be shared in its raw state with anyone outside of the project. I would ask your permission to hold the material for up to 5 years to allow me to use it for future publications and to enable the sharing of our learning. This research has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the Education

Department. But, if you have any queries or complaints please contact me at

Marlene.McCormack@dcu.ie or my supervisors Dr Anna Weighall, anna.weighall@sheffield.ac.uk or

Dr. Louise Kay, louise.kay@sheffield.ac.uk.

Many thanks for taking the time to read the information and I will be in touch with you soon.

Kind regards

Appendix D.1: Information sheet/PLS parents

Your child's room in (name of setting) is being invited to participate in a research study which is focusing on documentation in early childhood. I would like to provide you at this initial stage with full details of the project to ensure you are fully informed. After reading the details below, please contact me directly if you would like to talk further about my proposal or if you have any queries (Marlene.McCormack@dcu.ie) or (086) 1300428.

The title of my research, which is undertaken as part of a Doctoral Programme in Sheffield University, is:

Documentation matters: An exploration of the practices of documenting children's learning in ECEC in an Irish context.

This particular setting has been invited to participate in the research, as staff have worked with me in the past on this topic and because they have expressed an interest in working on their documentation. As part of my study, I will be engaging with the staff in the (name of room in the setting) to develop an understanding of documentation in the early childhood setting. Documentation in the form of observations is common practice and has always been required by Tusla, Síolta and Aistear and more recently by the Dept. of Education and Skills Early

Years' Inspections. My experience is that educators in early childhood work hard on documentation, but it is not always clear what is being documented, why and how. I want to explore this further with the help of you and your child by using examples of documentation such as observations, portfolios, individual scrap books or group floor books.

However, it is up to you to decide whether or not I use your child's work as part of my research. If you do decide I can use your child's work, you will be given this information sheet to keep (and be asked to sign a consent form) and you can still withdraw your child's work at any time during the data collection stage without any negative consequences. You do not have to give a reason. If you wish to withdraw from the research, please contact me (Marlene.McCormack@dcu.ie) at any stage.

As part of my monthly meetings with the staff, which will happen over a 4-month period, I will be asking them to discuss samples of documentation (children's work, drawings, observations, wall displays, learning journals and so on) to examine children's learning in more depth.

I am asking for your permission and that of your child, to take photos of their documentation and where possible samples of their work. The documentation and work samples will be used as part of a strengths-based approach. This means that any material gathered will be used to illustrate children's learning.

I do not foresee any disadvantages of engaging with the study for you or your child, but if any unexpected discomforts arise at any stage of the research, you should bring them to my attention. Having images of their documentation and some samples of their work will strengthen the messages coming from the research and make them more real for others who are interested in learning from this study.

All documentation and writings will be anonymised, so that the setting, educator, and children cannot be identified. I will not be working with the children directly, but I have prepared a short Information Sheet that the educators will share with them, again so that they are happy in making decisions about what I can photograph or take (or not). There are no real disadvantages to engaging in this research and as the topic of documentation in early childhood settings is very much under researched in the Irish context, there will be a lot to learn. Therefore, your support for this study is very valuable.

Sheffield University and myself as the researcher, take the security and integrity of all personal data held very seriously and so under the General Data Protection Regulations, I wish to confirm that the legal basis we are applying in order to process your personal data is that ‘processing is necessary for the performance of a task carried out in the public interest’ (Article 6(1)(e)).

The anonymised photos or videos of the documentation will be used with your permission for the purposes of publications and training. The original documentation, collected as part of the research will be retained by the early childhood setting unless you and your child agree to sharing samples of work with me. Any photos images will be kept strictly confidential and will be used only in accordance with your permissions. You, your child, or the setting will be identified in any reports or publications unless you have given your explicit consent for this. However, due to the nature of this research into pedagogical documentation, it is possible that other researchers may find the data collected to be useful in answering future research questions. We will ask for your explicit consent for the images/recordings to be shared in this way.

The University of Sheffield will act as the Data Controller for this study, which means that the University is responsible for looking after your information and using it properly. As the researcher, I alone will have access to and responsibility for the study material, which will be kept on the university Google drive. The material will not be shared in its raw state with anyone outside of the project unless you have given explicit permission. I would ask your permission to hold the material for up to 5 years to allow me to use it for future publications and to enable the sharing of our learning. This research has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the Education Department. But, if you have any queries or complaints please contact me at Marlene.McCormack@dcu.ie or my supervisors Dr Anna Weighall, anna.weighall@sheffield.ac.uk or Dr. Louise Kay, louise.kay@sheffield.ac.uk.

Many thanks for taking the time to read the information. This letter is by way of informing you of what I would like to do, but should you not wish to engage with the study, your child's work will not be included in the exercise without any repercussions. If you do wish to proceed, I will be in touch with you soon.

Kind regards

Marlene McCormack

Appendix E: Consent Form educators

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the Project		
I have read and understood the project information sheet dated DD/MM/YYYY or the project has been fully explained to me. (If you will answer No to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. I understand that taking part in the project will include participating in a focus group, which will be held for one hour each month for 4 months and will be recorded (audio). I agree to share samples of documentation (where permissions to do so are in place) and to keep a reflective diary.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary and that I can withdraw from the study at any time. I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	<input type="checkbox"/>	<input type="checkbox"/>
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>

I understand and agree that other authorised researchers may use my data in publications, reports, web pages, training, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I give permission for the recorded focus group material and the sample documentation that I provide to be kept securely on an encrypted laptop for a maximum of 5 years so it can be used for future research and learning	<input type="checkbox"/>	<input type="checkbox"/>
So that the information you provide can be used legally by the researchers		
I agree that any materials generated as part of this project can be used by the researcher for the purposes of publications, reports, and training.	<input type="checkbox"/>	<input type="checkbox"/>

Name of Participant [printed]
Name of Researcher [printed]

Signature
Signature

Date
Date

Project contact details for further information:

Marlene McCormack (Researcher)
DCU, St. Patrick's Campus
Marlene.McCormack@dcu.ie

Dr Anna Weighall, University of Sheffield
(Supervisor)
Anna.Weighall@sheffield.ac.uk
0044 114 222 3633

Dr. Louise Kay, University of Sheffield
(Supervisor) louise.kay@sheffield.ac.uk.

Appendix E.1: Consent form parents

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the Project		
I have read and understood the project information sheet dated DD/MM/YYYY or the project has been fully explained to me. (If you will answer No to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree for my child to take part in the project. I understand that taking part in the project will mean that I give permission to the researcher to take samples and images of my child's documentation/ work in the early childhood setting.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary and that I can withdraw my child's work from the study at any time before December 2021 (submission date). I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	<input type="checkbox"/>	<input type="checkbox"/>
How my information will be used during and after the project		
I understand that my details and that of my child will not be used after the project	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that my child's work (documentation), observations, group floor/record books, and individual scrap books words may be used in publications, reports, web pages, and other research outputs. I understand that my child will not be named in any of these outputs unless I specifically request this.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>

I give permission for my child's sample documentation to be kept securely on a university encrypted drive for a maximum of 5 years so it can be used for future research and learning	<input type="checkbox"/>	<input type="checkbox"/>
So that the information you provide can be used legally by the researchers		
I agree to that any materials generated as part of this project can be used by the researcher for the purposes of reports, training, and publications.	<input type="checkbox"/>	<input type="checkbox"/>

Name of Participant [printed] Signature Date

Name of Researcher [printed] Signature Date

Project contact details for further information:

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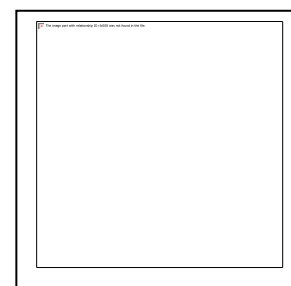
Appendix E.2: Assent form children

To the Staff:

This note is for the children, and I would ask you or a member of the staff to talk with them to ensure that they are comfortable with me taking photos of their documentation. I am happy to come by at any stage and talk with them.

-----My name is Marlene and I am a researcher. A researcher is someone who finds things out.

I want to find out about your drawings, photos and stories that are in your journals and floor-books. I really want to understand what you are thinking and what you mean.



I will talk with (name of educator) about your work.

Sometimes I would like to take a photo of your journals or displays to show other adults who are interested. When I want to take a photo of your journal ... (name of educator) will ask for your permission and if it is okay, you can put a smiley face sticker on your work. When I see the smiley sticker on your work, I know you are happy for me to take a photo of it. If you don't want me to take a photo of your work that is fine; no one will mind. When I take the photos of your journal or drawings, I will use a pretend name so that only you will know it is yours.

Thank you



Marlene.

Appendix F: Seaview – Transcript of professional conversation -

20.5.2021

Line	Speaker	Content
1.	B	<p>Well 2 of ours are ... well Charlotte does not want you in the moment and Max didn't until the other day. Then I tried again because he was doing his fascinating thing, you know.</p> <p>Again, I didn't know, I can only surmise... he didn't seem to be in a great place emotionally recently and he has now come out of it. He seems to be much brighter and linking with the other children again. He was actually selectively mute for a while and anyway he had started to link with the kids much better and he had gotten back in there. But the other day when I approached him about his pictures, which he loves to draw on the big board. He filled this massive board with his intricate drawing, but it was my interaction with him that got him drawing the whole story out. But, then you are thinking, is it his emotional state that is allowing this now because before he was just blocking me, he was actually physically turning away from me if I tried to suggest or wonder and then the other day, he really seemed to like my company but was it then that he had more ideas about his pictures, were his pictures initially because he likes drawing and was there nothing else to it and this is where sometimes the questioning.</p> <p>The key with the questioning is to know when to butt out. If you are getting that (B. shrugs her shoulders) you butt out and you observe from afar. That's where you just start to take your notes, writing, looking at the body language and that type of thing. Its knowing when to do that and then maybe trying again when they finish and making just a comment... that's the skill. Knowing when you have lost it (the possibility) (agreement from the team ah, ah, then laughter).</p> <p>Or even as Sam would say, sometimes you feel you are running out of questions, and they are not responding. You know then you just have to, shut up right now (all say Yeh!). They are not responding, they don't want you there, get out of their space (laughter).</p>
2	S	<p>The thing with Peter, he was doing with clay... and he was just (S. makes a movement with her hands). I was trying with him but then I went okay, he just does not want me there. So, I left him alone, but what happened then was obviously when he was ready, he actually came to me. So, he knew I was there. I hadn't left the area, I just stopped questioning and then he came and told me all about the thing and then he allowed my questions. So, that was interesting</p>
3	M	<p>But that was you Sam being attuned to the children, knowing them, knowing him and knowing the situation</p>

4	S to B	and you had seen it as well, it was so obvious.
5	B	Yes, he was just working out the properties of the clay
6	S	yes, and he just kept doing (S. demonstrates hand slapping clay) (all laugh)
7	B	Seeing the body language
8	B	Charlotte is still like that. She still wants to be in the moment herself, but she always seeks you out now, to explain. That's what happened with the colour mixing the other day. She came up to me the other day and said 'look Brenda' I've made a new colour, which was really interesting, because before I had gone to her whereas now she was coming to me. I think it was because before it was purely exploratory and she needed that time to work out the properties, whereas now her confidence has grown and she really wants to share her discoveries.
9	M	- Is it something about the time of year ... do you think?
10	B	There is a maturity, yeh definitely. What I think is that they have also gone through that process of literally working out the properties and potential of the material. They know they can do it and so there is a confidence that comes with it and they have also learnt from their peers. SO, they have done a lot of mirroring because Charlotte would not have been the first one to start mixing colours, it probably would have been Luca Ryan and we have gone through a lot of paint this year Marlene (voice changes to irony/fun) – (all laugh and in unison say 'a lot of paint').
11	M	So that was Luca who we spoke about the last day.
12	B	Yes, but we have had to direct him away from that, because you can only do that (paint mixing) for so long and then they need to start being more purposeful but I always find the clay fascinating because it is a very different medium and then the other day to shake it up again we put some water alongside the clay to see..... and...
13	S	There was a lot of mud wrestling (every laughs, high pitched laugh). Yes, they were like mud wrestlers (laugh and everyone speaking at the one time) ...
14	B	And they were just..... again they were working out the properties because they had not mixed it with water before
15	S	yes, its slimy and they loved it.
16	M	I am conscious of your time. I suppose I wondered if you had a chance to talk with the children about the documentation. I was wondering, apart from looking at something today if the children look at the documentation much or if you do is there any feedback?
17	U	. Well, with myself and Hannah in the sensory room I record her. I would not record her at the beginning of a new experience or task but when she is beginning to get momentum, so for example if she is doing stacking and she is flying with that and so I would start recording her. She was using a bigger hole, you know when they are stacking onto a

		<p>pole. So, I recorded her when she was really good at that and then I recorded her again when she was stacking with a smaller hole and she is flying at that as well. SO, obviously she cannot give me feedback or whatever but I send them on to the Mam and Dad and she is requesting to watch the recordings over and over again. She is clapping with them.... But you can tell that she is proud of looking at herself doing the tasks. I think that is the way to document with Hannah from now on because she cannot sit down and tell me her story, but I know then what she is enjoying if she is requesting at home to see the recordings. We have a lot of videos, and she would not always request to see them at home but the Dad said that she is constantly requesting that particular video clip. Then he begins to stack at home with her because he knows that is what she wants to do.</p>
18	S	<p>Wow, that is great. From documenting on video, you know the things or themes she has an interest in and if you never showed her that, you would not know how much she likes (or dislikes) something.</p>
19	U	<p>From videoing I noticed when I was doing it (videoing) on the floor she was not doing it (stacking). I realised that she had one hand back the whole time, so she is obviously trying to balance, it's in her head. I have noticed now that standing behind her I say 'two hands' and then she will use her two hands to put it on, where before she was... what's that word..... completely unbalanced and disadvantaged. So, she does not like to sit to do activities, I have noticed that as well. When she is standing at the table... I would be sitting, and she would be standing here, just so engaged. But it is better when there are just the two of us.</p>
20.	S	<p>So, your way of doing that is teaching you more ways as well as her getting something from it.</p>
21	U	<p>So, I know now – I only bring one chair to the table for whatever activity, even if it is only colouring. She might only stay with the activity a minute or two but she is standing doing it, where if she were sitting she would be like (U. body spreads across the table). I don't know if it is all about her upper body. (Staff all nod and join in....lots of verbal affirmation, oh yeh, maybe...)</p>
22	B	<p>We were just commenting on that about Matthew. Again, Matthew is non-verbal and we were talking yesterday about the brush (paint brush).</p>
23	C	<p>He does not like the paint brushes</p>
24	B	<p>But, we think, we were surmising that maybe his centre of gravity is.... And again, maybe he needs to be..... He did the big art outside with the paint brush (B. and C say this at the same time). He painted the castle turret or tower standing up with the brush. So maybe it is about proprioception and his vision, he can only see latterly. I think his central vision is not good and he kind of looks like this a lot (B. turns her head and squints). He is very short sighted, so this is interesting. We are going to try certain things based on our chat to see because Courtney will tell you about him in a second, because obviously we are looking at other</p>

		languages.... Its having to take into account his way of communicating. I think we rely too much on verbal. They are telling us and the fact that you (B looks to U) are linking with home, and you know that she (Hannah) is wanting to see the recordings that she is praising herself for being 'fabulous' (all laugh). She is affirming that she really likes that activity, and you can take that as a given, rather than thinking maybe. But our work with Matthew will be interesting as well because we think we might be uncovering something with him.
25	M	Also, maybe it highlights the importance of the body. You are both highlighting the physical aspects of working with the children.
26	B	Yes, before Matthew would always take his shoes and socks off. He does not do that anymore, but at that time he needed that. He has not done it this year....
27.	All	Team echo.... 'no'
28	M	you are definitely onto something there
29	C	yes, I am trying to capture everything, I have almost 2,000 words recorded here on him. It's like a thesis. (C. has written extensive notes around Matthew).
30	C	<p>Getting back to Matthew, who is non-verbal. We.... Hm, obviously he cannot easily communicate because he has a chewie in his mouth a lot of the time because we are working on the basis that he explores the world through his mouth. So, in terms of discussing documentation with him or him looking through pictures..... he loves looking through pictures and photographs, that would be very much his thing. It's a really interesting idea about maybe doing video recordings (as Hannah had indicated she does with Hannah). I would do some of that but not to that extent, but I might consider doing that. I can't really go through the documentation with him but the benefits of doing documentation for him.... Like is huge in terms of seeing his progress, which has been huge. I have some notes here. So for Matthew, his whole world is involved in paint, whether he is happy or sad or looking for something to do, or if he is at a loss ... paint is his way forward, this is where he comes alive.</p> <p>It has been a real gradual building of what we can do with paint and what we can do through painting. So, for example, we are exploring different ways of helping him to explore the paint and how he approaches it. We have noticed a number of changes for example, physiologically, Matthew because he experiences the world through his mouth, there was initially a lot of drool and saliva and the chewie was constantly in his mouth. You can see (photo on laptop) there is a pom-pom in his mouth. However, over the past few weeks and months, there has been a huge reduction in (B. everything going into the mouth) this</p>

		oral fixation. He has always been slightly orally fixated.... Whatever he comes across always goes into his mouth.
31	B	that is he way of making sense of something
32	C	Yes, definitely it is his way of figuring it out and its one of the reasons he has a chewie. Initially, it was a bit hairy, because you are like.....'oh' and you are constantly fishing things out.
33	B	But we decided that the paint was safe.....it is non-toxic and he has Hirschsprungs (all laugh knowingly). Ah, yes he only swallowed a half bottle of paint..... he'll be fine (all laughing in unison – like they know this child so well they can laugh but not be disrespectful).
34	C	Everything within reason obviously. So, with the paint I have stopped being so worried about it. I was constantly trying to cover his mouth and saying 'don't do that, don't do that'. Now, it's a case of 'why would I ruin your flow when you are in the middle of doing something and clearly having a great time'. When it comes to things like paint, emotionally... I have taken that this is something he really enjoys to do because he is super-motivated. When I say 'will we go paint', he gets off the floor. Initially I had to keep introducing him to it.
35	B	No, it was not initially his go to thing.
36	C	No, not initially.
37	B	But you decided that you wanted something to help his regulation, some 'go to' thing, to settle him in.
38	C	So, something to do when he comes in in the morning. Because initially he would have come in and sat on his own on the sofa. He had a lot of disruption, his originally key worker became unwell and then there was a bit of a re-shuffle of staff and then it was us trying to figure out what is the best for him. It was a case of me trying to get to know him and what was best for him and him getting to know me. This would have been him on a regular basis initially (photo of Matthew on his own). SO, I was kind of saying to his Mum, Una and Hannah would have gone to painting. I would have said 'let's go and paint with Hannah and Una and see how we got on'. So, it was kind of linking him in with his friend and peer, who is very much on his level. He adores Hannah and Hannah adores him. SO, this was a kind of social group thing that I could use every day, that we could, now Hannah hates painting, she has nothing to do with it. But he was much more open or amenable to it.
39	B	And we were saying it at the start his original key worker from St. Michael's House, just did everything for him. I used to say 'leave it to him'
40	C	Yes, 'back away'
41	B	for example, when we were doing songs, she would move his arms for him. He can move his arms and he can move his legs ...leave him, he

		can join in when he is ready and when he realises that someone is not going to do it for him’.
42	C	Yes, he is a lazy boy (all laugh)
43	B	A prince!! (all laugh)
44	S	and his Mammy, she says ‘he is so adorable’ and she too keeps doing everything for him, like lifting him into the car!
45	B	But he is adorable and he will just sit there waiting to be lifted..... learned helplessness
46	C	Yes, he would throw something on the floor, and I would say ‘pick that up off the floor’ and he would look at me and I would be strong about not backing down. I would be quite direct with him, and I adore him.
47	B	The funny thing is that one day he threw his lunch on the floor and Courtney was really cross with him and he was doubly cross with her and he ended up apologising to you. Initially he blanked her with his whole body and then later he came back and hugged you. And that was the first time I thought ‘you have won’. You may have lost the battle Courtney, but you have won the war. That was an important turning point, and it was a case of if you can do that then you can apologise. When you embraced him, he kind of fell into you but that was the turning point.
48	C	<p>I remember it well... he flung his lunch across the floor. The point of that is that him and I have a really good relationship. Look (showing the laptop). Here he is gluing, he does not like gluing. So, you can see that he is not really pushed or bothered because it requires a lot of..... This here is another gluing situation (photo) where he is not interested and saying to himself ‘I’d rather play with Sam, do I have to sit here’? So, obviously because he is non-verbal, we are inferring a lot of things from his body language, his facial expressions, his vocalisations. This was very, very early. You can see her (original key worker) hands, on top of his hands. I did not want to be the one who was doing everything for him, who was constantly moving or lifting him or babying him. I like to bring out some kind of autonomy in him. So, when he was on his own with the paint, initially the teacher (key worker) was always there to assist him, for example she would roll his hands with the roller and then we would sing a rolling song and all of a sudden he would get it that I can do this with this.</p> <p>Here is an early photograph and you can see that he is drooling in this one, and we would always remove the chewie from him at this stage purely because it would get filthy and equally he does not need it because he is trying to work on something himself. SO, it goes on for the next few months.... He is invited to paint every day by me, and we would kind of explore this medium. Initially it was with Una and Hannah and Matthew and his key worker. But Hannah moved away from it as Matthew became more engaged with it. So, then I go on to say that</p>

		it was a bit of a reshuffle and then I went on to figure it out. So, I would invite him to paint every day and we would explore the paint together. Matthew loved the paint, loved the feeling of it in his hands and the sensation, Una had covered the roller with the bubble wrap. So, instead of this being a piece of wood, it had this second texture to it. So, he would take the paint and automatically go to put it in his mouth early on. I had said here, 'it is unclear for us if it is the taste or just a reflex or habit or whether it invokes something in him' 'painting was a regular occurrence, which genuinely seemed to make him happy, and it became more increasingly messy as he went from this rolling motion to a spreading motion (with his hands) to a pushing motion. There was a bit before this we mentioned.
49	B	Yes, there was a time, one day, when we noticed as he was exploring the paint that he went from putting the paint in his mouth... he had it on his hands and he took your (Courtney) hand and he put it on the paint, almost to check are 'you feeling, what I am feeling'. We wondered, is that what he is doing there or is he replicating what Maria (his original key worker) used to do. But we did not think this was it. You took him for a walk and were feeling the bark of the tree, where he put his hands on the bark of the tree and he took your hand and he put it on the tree. So, he was saying 'can you feel that'
50	S	'I want you to feel what I am feeling'
51	B	So, it definitely linked back
52	C	Cognitively, he was going a bit deeper. It was also something about the connection between the two of us as well.
53	B	He liked all of that, he was very sensorial. In the last two weeks we are seeing a further change with the paint and it is more intentional. It's not just sensory, its more...
54	M	in what way is it intentional?
55	C	well, for example, I might say to him what would you like to do today and generally there are two things he loves, painting and garden. SO, for example, yesterday was a really good one. Because of my foot (C. had hurt her foot and could not walk far) we could not go to the nursing home with everyone else. So, we stayed back, and I asked him 'what would you like to do'. He got up off his bum and I am not sure if I have a picture here He found a paint brush on the ground; he gave me the paintbrush and he went and he....
56	B	Remember he would not have lifted a paint brush before
57	C	and he does not like implements. I have tried introducing paint brushes to him before and it has not worked
58	B	Sometimes and only outside will be lift a paint brush.

59	C	I don't think he has downward pressure. He would rather push with his hand to feel that pressure or resistance than be anyway delicate with the paintbrush, as that means nothing to him.
60	B	or we feel it could be the eyes as well.
61	C	Possibly he cannot see downward.
62	B	this position works better for him we think – but we are still working on this.
63	C	So, he goes and takes me to the painting, he chooses the colours, he goes back and forth to take the colours he requires
64	M	that's autonomy in action and I am thinking about the contrast in that photo where he is doing everything he can for himself and the previous one where someone was placing his hands for him.
65	C	. Notice there is no drooling!
66	B	Also you will now hear vocalisations – particularly the day Courtney that you were doing the canvas paintings and he loves the rough texture, they cost us a fortune!!
67	C	But I love it
68	B	I bought her 10 for the year and she has used them already (laughter). Anyway you should hear the noises he is making.
69	C	It's like he is having a conversation with the canvas
70	B	But, it's even like he was going 'woo', 'woo' – it sounded like a joy! It certainly not like 'I am bored', it was 'oh, this is great' and he doesn't have many vocalisations but they were altering while he was doing his painting.
71	C	Now I can say to him, 'can you sing me a song' and he will intentionally make a noise and then he looks at you (C. has an inquiring look on her face) (all staff laugh)
72	B	Courtney has also mentioned that he likes scraping the canvas.
73	C	Have a look at this photo, look at the scrapes on the painting He was in a bad mood this week; he was unwell, and you can see that when it comes to his connection with the art and painting it is more aggressive. He was not well, and we sent him home. But this was his way, his mental time out. I asked him if he wanted to do this and he went and got paint and I got the apron and stuff. Canvas gives him something that paper doesn't. I don't quite know what it is yet, but I think it is the textural component.
74	B	Maybe it is the 'give' in the canvas
75	All	All staff join in – yeh, maybe it's the texture
76	C	Yes, the canvas definitely adds another element and more enjoyment to the activity. Whether he is happy or sad or whatever the case maybe, we can infer that
77	B	The thinking combined with the little bit of musicality, we are going to try and introduce a little bit of music while he is painting

78	C	(another photo) – so this is him outside about two weeks ago. We had big art outside and he did take a brush. It was the first time I had given it to him. I showed him which side of the brush was going to the wall and he then took to it himself and was doing it for quite a while, but I think this might have to do with the fact that he loves large paintings and we would always use large pages. With this outside art, the painting area is huge and it is also upright. So, he can see it a little bit better.
79	B	. I definitely think so. When he is standing upright he has more force anyway.
80	All	All staff – ‘yeh’
81	B	Actually, that is something else we said we might try
82	C	‘Easels’
83	B	Bring an easel inside. I think personally I would much prefer to paint upright rather than at a table.
84	Me	Even thinking about Hannah stacking, there is something about control. You have a stronger core, you are grounded
85	B	Especially for Hannah and Matthew as both of them would have a weakness in their core, so it does make sense for them to have an easel to stand.
86	S	It probably allows them get closer.
87	B	You have more of a physical connection.
88	All	All staff – ‘yeh’
89	B	Very interesting!
90	C	I think with him and the fact that we obviously cannot sit there together and discuss what we see like this (Matthew’s journal). Being able to document really shows the huge progress he has made in such a short space of time.
91	B	I think it is more powerful because often we rely too much on the verbal, but we have to look more to the 100 languages. Most children will communicate non-verbally. Just think about the mark making. That is my passion and Max is a prime example. He drew and was constantly drawing and talking. The drawing came first and then the language.
92	C	Yeh, Matthew here is recognising that I can use this brush as a tool as an implement to create something, to have a cause and effect.
93	B	It’s gone beyond the sensory.
94	C	Definitely there is a cognitive and overall developmental improvement. He has matured a lot as well. I think so much comes through his journal.
95	B	We presented his work to the children, and he was sitting there and clapping. (All staff – he was like.... and they were clapping). He was taking all of that in because we were acknowledging his work, the big works of art he was doing. We were asking the children what they

		thought they could see in Matthews' pictures. And you know, he sat of the sofa and did not move.
96	C	He knew we were talking about him and about his work. From a comprehension perspective he is there. When we were having that fight that day, he threw his lunch on the ground, I was like 'you go get it'. He knew perfectly well what I was asking.
97	B	Not even that, he went off and got the change bag.
98	U	And he went and done that without any prompting.
99	C	Yes, when he needed to have his nappy changed he went and got his bag and brought it to me.
100	U	He did that without any prompting
101	B	It's so enabling
102	C	It's phenomenal
103	S	That is amazing Courtney
104	C	I'm so proud of him
105	C	I will add in the part about – I knew there was a section about him bringing me into his world. I don't know if you can see it but here, he has his fingers locked into mine.
106	B	I took the picture where he took your hand
107	C	This was me (photo) of me encouraging his friends to paint in his style to see what it would be like, this was after we had sat down with him and discussed his painting. He is very much part of our world as much as we are a part of his. And, here, this is him a little annoyed with me because he is thinking 'why are these people in my space' but his fingers are locked in with mine because he painted my hands and he brought me into his world.
108	M	every little episode that you share with me have unpacking and unpacking.
109	B	We were just saying that we would love more time to talk together like we have been doing and are doing today because we each learn from each other. We learn with the children, through the children but also through and with each other. We are all discovering different things in what's happening. I might show something and someone would say 'do you think that..' because we all know the children and someone might have a different view or suggest something different. It's that (the discussion) that completes the picture. And then we might go back and say 'yes, I think it was that' or 'no, it wasn't that'.
110	M	– I think that is really good because another question I had was around 'does all this discussion around the documentation help you as educators?
111	B	Oh, yes! (all staff – oh, yes we definitely need it)
112	S	I think because we are all passionate about it. So, if I hear Brenda or Una or Courtney saying something, I am listening because I'm going 'is that something I can use going forward'. You want to hear something

		different from others that you haven't tried or thought about. But you do have to be open.
113	B	Oh, God yes! Definitely
114	C	I think we are open as a group, particularly the four of us.
115	S	I think we are because I think there is a mutual respect
116	B	(Laughter) No, I don't respect you (everyone laughs – raucous laughs - extended) My therapist said I don't have to respect you lot!!!
117	C	Well for me, as a worker within a classroom and because I had never worked with Matthew before and all that jazz and then having to go, 'I need to take over his care, however temporarily or long' having the likes of Una say to guide me a little because he is not verbal, and Hannah is not verbal that is support I found really useful. And then Sam's ability to constantly ask questions.
118	B	Do you not think that Hannah and Matthew are no different to others (everyone joins in – 'no' or 'I'm not saying that') in that we are trying to work them all out. And like when I said about, we had concerns about Max, well we are all trying to work it out. I might be his key worker, but we are all concerned about him.
119	U	I don't know how many weekend texts we had about that child. (all laugh)
120	U	But that's the way it was, we were talking about him constantly.
121	B	There probably was a few things. Well we did do all that and we invited his Dad in to show us... he is a potter and we decided that his (Max) pictures well, I was driving through Balbriggan and I saw his Dad's shop and I said to myself there is Max's drawings. So, we invited his Dad in.
122	All	(everyone joined – all talking, all saying – 'yes')
123	S	They were replicas (Maxes' drawings were replicas of the front of his Dad's shop)
124	U	his drawings were replicas
125	B	. I did think these things (Maxes' drawings) were from Hansen & Gretel because I knew they were big into Fairy Tales at home and I was asking but I was getting nothing (B shakes her head, purses her lips) absolutely nothing. I said 'that reminds me of a story I read long ago called Hansel & Gretel would that be...' And then and I don't know if it is in conjunction with the Dad coming in and him (Max) feeling rather proud of the connection and I did say 'Max, what you are drawing is very like what your Daddy makes' and he just looked at me. Sam you go next because I know you have to go.
126	S	Yes, but a quick thing about your question, because when I was sitting here listening to Courtney and in my head (everyone laughs) I was

		thinking because I have the boy in my group who recently got a diagnosis and loads of the things that Courtney is saying, not loads but some of the things that Courtney is saying about Matthew It is only when you are talking about them that I suddenly went ‘Oh, jeepers, he likes to paint like that (B. – yes, the physicality), he likes to paint standing up, he likes big art and then in my head I was going, ‘I wonder if there is some kind of a connection then as he has recently got a diagnosis between something that occurs with Matthew and something with him’.
127	U	I wonder if it has to do with deep pressure. (everyone says, ‘mm’ and ‘maybe’).
128	S	This boy is everything large scale including touch, hugs, everything is huge and we have noticed over time is that he runs away from fine intricate things. So, Marlene you are asking does it help for us to look at the documentation and discuss what we see. Even from this session my learning has been huge and I will be going on Monday and watching more, based on my thinking from today.
129	C	There is a possibility that there is a slight ASD component with Matthew and there is possibly a rigidity around routine.
130	B	. Yes, we have been wondering is that about home where everything is discommoded but the primary diagnosis is down syndrome but we think there could be traits there of ASD and that’s why.... And that’s okay but maybe that is why we are seeing the similarities
131	S	Yes, I have noticed that he does not like to paint flat
132	B	No he doesn’t
133	S	But recently I took a photo of where he did a flower for Mammy and he did that upright and it was brilliant. It was perfect. His Mam often says about his art..... I hope she is not saying it at home but she often says how great the sisters are at art and how they are always waiting for him to do art. But then, I think it is the way that he has been given the materials here that helps.
134	U	SO, maybe a couple of indoor easels in the creative area could be put in.
135	S	and he loves the castle which was upright
136	U	He was always making it (the castle)
137	B	Oh, my God, I have a photo of him (staff are making connections about Sam’s child))
138	C	This day in particular, he was really involved painting outside and he must have used every colour and every implement that was out there that day.
139	B	I don’t think that is unique. Okay, I do think there is a proprioception issue and maybe a bigger issue with Matthew but he is like Tadgh and Luca Ryan – it’s the big art that attracts them. Look at Luca Ryan – Here is a photo of the castle in the making. But you should see the photos of Tadgh, who would not have lifted a brush or roller. He painted, like I could not tell you.

140	S	That was only one small wall that he brought us to show us. 'Look at my big green wall, I did that'. So, the castle was literally coming out into the middle of the room.
141	B	We got the materials from Recreate – it took over the room. That was your fault as well (everyone laughs) – you were thinking too much!
142	S	and look what a success it was (everyone is in stitches of laughter).
143	B	And she was thinking with Tadgh and they thought they would make a castle and said Brenda 'we want to make a castle'. So, we decided to start to collect boxes and we would never have had enough boxes in Christendom to make this castle and there was too much glue. So, I got in touch with Recreate and they were doing click and collect. But she said they had bought a van and were doing deliveries. So, I asked Sam what size materials she wanted. We both have bad spatial awareness and so we ordered these sheets and oh, my God..... (everyone laughs)
144	S	The guy came
145	C	Oh, let me find the photo
146	U	and he parked outside and asked if we could help with the unloading. I said I would help him but I was thinking 'it's only cardboard'.....'how many sheets of cardboard did they order' (everyone breaks into howls of laughter)
147	S	When I say it was this height, it was massive! (laughing continues)
148	B	I would say that the sheets were this height (B stands up and raises her arms way above her head).
149	U	It was ridiculous
150	B	Well she said they were A something and then I said to her 'just send me anything that might work for a castle'. SO, there was a huge amount of material that came. We got big cardboard tubes that the children love. They were playing with them in the garden, we had 3D constructions.
151	U	they were crawling through them
152	B	They were the turrets in the castle, the towers and keeps and everything. But the size of them and so he came in with all them as well.
153	U	I tell you something they must have been delighted to clear half of their warehouse material. (everyone laughs).
154	M	well, did you use it all.
155	S	yes, every last bit!
156	S	So, when I saw your question – you were asking if we ever go through the documentation with them. I would love to have more time but it was only when I heard that question then I remembered back to something that had happened and at the time I did think to myself 'that's a good way' but I actually never did anything more with it, until you posed the question. So, it was with Peter and you might remember his obstacle course. We have been doing a lot whereby when they are doing something they get to present to their friends. So, this day, I was thinking while he was presenting – it was nearly like when somebody is giving a

		talk and then at the end they say ‘we will open the floor up to a Q&A session’. So, I thought that would be nice to do that for him. So, we did and I said to the children ‘at the end of his talk Peter will have his creation over at the table and if anyone would like to go over and ask Peter about it’. So, that happened but when you posed the question, I remember thinking at the time, ‘that’s a really good way’ because I am not the one that is asking him about his creation and in a way, he was nearly more open to telling his friends about it. But I could listen and observe, so I was capturing the information, but he was talking to someone more on his own level, you know. You can see that here and Luca was so interested, and he was really asking the questions. Now, I didn’t note much about that because I didn’t need to do that and I just noted that he hosted a Q&A session. But, I do remember at that the time thinking that is a good way to see how he feels about what he made and his pride was so obvious but it was pride as well because somebody out of his peer group were interested (everyone joins in – ‘yeh’).
157	B	It’s a bit like your mother saying you are gorgeous, that does not count! (everyone laughs)
158	U	Yes, Mothers have to say that - everyone goes into kinks of laughter)
159	B	The children probably feel the same as us. We would always be positive with them and about their work but if a pal comes along and says something....well that is something else.
160	S	. SO, I don’t know if that is what you were thinking about.
161	M	that is great. I was just interested to know if the children ever really comment back on their documentation.
162	S	One thing that strikes me because we have done it at times, when we sit and say ‘would you like to come and look in your special book’ and they sit. But if you get something wrong (face animates – eyes open as if startled)
163	B	Oh God yes!
164	S	they immediately, even if it is something way, way back here. Or they will say, ‘Oh, I remember that day when I did this’. They might even talk about something you might not have said or raised but then you see that was the more important thing. You may have documented because you felt there was learning, but the thing they have got from it was something totally different. So, by sitting and having the time to go through with them you actually get to learn an extra bit about what was meaningful.
165	B	But I think as well because we document in the moment with them, if say we had a 1:11 ratio you could not document in the moment, but we are free to sit down with them. And I was thinking about your question and the children will either finish their work and invite us in which they do, or we are with them in the moment, and we are writing down or recording and then I have it all to transcribe. But the problem is when

		you have recorded 24 minutes of something..... that is really is something!
166	M	yes, that is the question, how do you make it all manageable.
167	B	Well, I will talk a little about mine (my feedback) in a minutes. SO, when I was thinking about it, because we do it in the minute, even say with Maxes' story and I did say.... 'his story is so good' would you like me to write this up because I have pictures of all you have drawn because it was just on the big board 'would you like to present it and I will help you to the whole group' and he said 'no thank you'. 'Would you like it in your diary' – 'yes please'
168	All	(Everyone agreed 'yeh')
169	B	So, he didn't want that and he does not tend to like that so much
170	C	He does not like the attention
171	B	Not so much. It's different with him when for example his Dad came in and things like that but his work on that day was between him and me. At least, I asked his permission to put something on the board or 'which board would you like it in' 'or do you want to take it home' or 'do you want me to photocopy it then' . SO, I would always ask their permission – this is something I have got much better at. We always ask and sometimes we assume the child wants it up on the board but no they don't. You assume, they would love it if I read their story out to the class but no they don't.
172	M	but that is part of the respectful way you deal with the children. It is the same way everyone one of us would want to present ourselves and our work in a particular way at a particular time.
173	B	I suppose you are right Sam in that a child would come back and you realise what was important for them. Like for example when you were documenting Luca's bull. So, it only became clear after having the conversation with him..... you could have looked on his work purely as a construction, which he is always doing and you might have had a certain interpretation which would not have been wrong but might not have been the real thing. The same with Max because I think if I was to really..... I could have a few questions about..... he loved me being there, there was no doubt about that. So, was it more about the emotional connection he had with me or plus his ability to graphically represent the story. So, you could look on this episode with many different lenses. He did not want me to go and I was with him for 24 minutes.
174	S	Oh, stop showing off! (everyone laughs) or was it because you had tried before with him and maybe he was going 'she keeps coming back here, she must really want to know what I have to say'. He realised your interest maybe.

175	B	It's hard to know but he is definitely and it could be his emotion as well because we had worries about his emotional state, which was not good.
176	S	No, no
177	B	. so it is interesting and I was fascinated in his ability ... the mark making came first and then the story. It was his ability... he had just started the drawing and he was talking... 'This is the little window and the window is broken and the big bad wolf could get in there and they could travel down the stairs this way'. And he was drawing it. That is so familiar to him that I think his purpose might be different, but is that wrong. No, for me I'm still open to the possibility that it was an emotional connection and that he is in a better place. And he knew I had tried before and he had rejected my advances.
178	S	And the funny thing, because I don't know if any of you have had That was Monday, it was early in the week and since then, I have seen at least 4 or 5 things from him that he has come. So, is it now that I don't know. Was there a fear, was he afraid but now that he has told you, does he feel more confident to tell us.
179	U	Do you remember the day we walked to the beach and I was behind him and Sophia and there were fairy doors all the way down. Maybe because we weren't looking at each other and we were walking, he spoke about fairies all the way down. He picked out the bluebells and said they were the fairies hats and dresses. And he told me so much about fairies all the way down to the beach and when we got to the beach – not a word. It was so weird in a good way but he was so animated, he was telling me about a broken fairy door and that then he was telling me about his neighbour's roof, there was a hole in the roof, the roof was broken.
180	B	and it's funny now that you have said that, he had a hole in the roof (of his drawing and story) and the builder had to come and fix it.
181	U	Wow, it must be a reoccurring story in his head.
182	S	That is so funny, it is all coming into his drawings, plus his fairy tales were all coming in as well, a big bad wolf and a fairy with wings. But it was a lot about the 3 pigs and the big bad wolf.
183	U	I would love another year with him.
184	B	We could write a thesis on it. But that is so interesting because he had a hole in the roof and the builder had to come and fix it.
185	M	so even in your discussions you guys are making connections. Even as much as you all talk during the day, you are making more connections now.
186	B	. well yes, the children bring in all their prior learning and they recreate it in their drawings, which is their language and form of expression. He loves fairy stories, he loves fairies, the hole in the roof, the builder was in it then he had the big bad witch coming out of the woods. (everyone laughs)

187	B	<p>A number of people had to leave to do pick-ups (Sam and Una). Before they left Brenda said, ‘we find these sessions really good in that it gets us really thinking deeply and often because Marlene is coming in.... well we are always having chit-chats but now we realise the amount of chit chats we are having, which is great but more of these sessions are desperately needed. It is very much a learning for us, I think (all agree ‘yeh’ and nod).</p> <p>Courtney and Brenda remained behind while Sam and Una leave.</p>
188	C	<p>Courtney talks more about Matthew but summarises I think from the documentation from this session shows us that what he needs at the moment is this north/south pressure, 5uthis standing business. He needs to be able to push forward, which he finds easier than pushing down, as he has little downward pressure and we can see as time has gone on how much he has changed in every way.</p>
189	B	<p>So, going back to Max ... these were the pictures we would have been seeing from Max before and he would tell me nothing, absolutely nothing. See this, a very unique and distinctive type of pictures but nothing. He would actually physically turn away from me and then. As I said, it was only when I was driving up and his Dad makes these things – big fairy houses and castles. The Dad said, well what happened is that he is a potter, and it is more delph he makes. He was making a fairy house for them for their birthday last year and when he was making it, people were obviously looking in the shop window and they saw what he was making. They asked if he would make one for them as well.</p> <p>So, when I was driving and made the connection with Maxes drawing, I invited his Dad to come in and show his work as that is what Max is drawing. Now, even when I said it again to Max he gave me nothing. I was fascinated because he would spend ages drawing and this could have been the whole board of it. So, I had taken photos of it but I had no verbalisation of it but literally I had nothing because he kept turning away from me. He didn’t even look as if he was interested. He did not want me at all.</p> <p>Me – is he generally like that?</p> <p>B. No, he just went through a period and (Brenda continues to show photos of Max at work and his pictures). So, this day I see him, and I see this happening again, here let me show you. I mean this is what we ended up with (showing me a video clip of Max and his work of art). So, unbelievable..... so he started off here.</p> <p>When I went over to him he had this done and was drawing this. This is what he had, so I just commented ‘oh, that’s very interesting, and you have lines coming down and you have a big line across the top’. Now, he said it was the rain and that was fine then. But what started to come out was ...well look at this, look at the intricacy of it all and this was all</p>

him, all his work. He started off with this. I was thankful that he mentioned this was the rain as I felt 'oh, I've got something' so then and initially I had not started to record it and then he starts to draw this house (B. is scrolling through the documentation). 'Oh, its frozen'. So, then he goes on to this piece and then he said (B. looks again through the documentation) 'there is no windows or doors' and then he said 'this is a tiny window' and 'there is someone in the house' but 'there is no door' and I said 'Oh, I am wondering if there is someone in the house, how would they get in or out?' And then he said 'they broked it down because if there was a door, the big, bad wolf would come in'. If it was broken the big bad wolf would see the little piggies

SO, here is the fairy story coming in. So he hadn't mentioned the rain again. It was about the little window and when I said 'if there is no door how would you get in' – I don't think there was an intentionality on his part. I think he was responding and I think he was developing the drawing and the story as he was going. So, I confirmed with him 'so, it is the little pigs that are living in this house?' and he said 'yes'. SO, then I kind of came back to the whole thing of no door and I said 'so, if the little piggies wanted to go out to do their shopping, how would they get out?'

In response, he kept drawing, and he drew a key on the roof, see here, he kind of does a little x or tick mark on the roof. So, he says 'there's a key on the roof' and 'they would get it and lock the door'. So, I said, 'oh, so there is a door?' because he had said there wasn't. So, again he is changing and thinking the whole time. 'Oh, so there is a door and they can keep the key and lock the door after they go out'

And Max said 'and then they go down the stairs and lock the door' and I acknowledged that it was a good idea that they would lock the door. Then he said 'and then the big, bad wolf can't come in'.

So, initially, he was just there is no window and no door and suddenly there is more logic to his drawing and his story. I agreed that the big, bad wolf can't come in and I said 'aren't they very clever that they have locked the door and they are being very careful' and he said 'yeh, and they don't open the windows'. So, he is responding to my questioning. And I said 'what might happen if they opened the top window or bottom window' because he had started to draw a top and bottom window. He said 'the wolf might jump in the bottom window' and 'what do you think might happen if they left the top window open'. He didn't reply to that, but he drew a chimney and said 'and the chimney got broken and it burnt'. So, he is drawing constantly as he is saying this (**narrating to self**).

I said 'oh, I wonder who could fix the chimney if it got burnt' and then the builder comes into his drawing. So he drew (B – oh, this keeps freezing on me), so he drew the builder and this might link back to what U. was saying earlier. This is the builder here, so he says 'the builder is

		<p>coming to fix the chimney but he can't, the chimney would have to be broken forever'.</p> <p>I said 'but if you think the chimney is broken forever do you think they will be able to light a fire again' and Max said 'no'.</p> <p>I said 'I'm sure that's a pity as those piggies like their fire' and then he said, 'but here's another chimney (creating solutions as he goes) so he drew another chimney.</p> <p>Here you can see him on the video clip, drawing his chimney here (B. sorry some of these are not in sequence). I affirmed what he was saying 'so they don't need that chimney because they have another chimney' and then he said as he was drawing it 'and here's another chimney' 'and then he said 'he built the new chimney' and then he was drawing another tiny house. So, this is a tiny house he is drawing 'I draw a little house with nothing on it'.</p> <p>I said 'I wonder who lives in this teeny tiny house and he continues to draw. 'Do you think I might fit in that teeny, tiny house? And he said 'No, no, only somebody very little and the big, bad wolf is coming, this house is made of sticks. This comes back to his knowledge of fairy stories.</p> <p>So, again I would have confirmed, 'ah, this house is made of sticks' and he is drawing the whole time and then he says 'the big, bad wolf would blow the house down'.</p> <p>I said, 'he must be very strong if he can blow the house down' and he say 'oh the pigs, I won't let you in by the hair on my chinny, chin, chin'.</p> <p>'The big bad wolf say "I will huff and I will puff and I will blow your house down". SO Max is drawing and he said, see here he says 'here he is blowing the house down' but then he said 'this is the brick house' (the bigger first house is the brick house and the 2nd house is made of sticks). What was interesting as well was 'em,' I said 'so this is the house made of bricks and this house is made of sticks' and then he brought a 2nd wolf into the scenario. I confirmed that this was the 2nd big, bad wolf and he drew him much bigger.(maybe as Brenda confirms Max draws bigger figures – giving more emphasis)</p> <p>This was only done this week and I don't have it in full sequence. (B. scrolls back through the photos) Here is Max and it's about 9.10am, we had just started the day. This is just the first snippet I got</p>
190	B	<p>B playing the video – do you see the way he keeps standing back, looking at the board and moving back to draw.</p> <p>On the video clip, B. (educator) is asking Max 'oh is it rain without water'</p> <p>Max responding – 'if the rain go into the house it falls down'</p> <p>B. 'is it the rain that makes the house fall down?'</p> <p>Max – 'the water'</p>

		<p>B. ‘the water is coming down, down, down and it makes the house fall down’</p> <p>Max – ‘the top fall down, the top’</p> <p>B. – so this is how the video goes and some of this we have covered. Marlene, I just wanted to show you something. It is to show the intricacy look here (showing me the video). This was the discussion about the rain and he kept standing back. So at this stage he has done his drawing very quickly in the morning. So, this was the level of his drawing. And this was the house and the roof and the rain and this is where it started with the small window and he was saying it was a window with little house but with no door.</p>
191	M	so, it started with a window?
192	B	<p>yes, it started with the window and then he realised through my questioning that it was not practicable and that the 3 little piggies could not get out and so then he drew the key on the roof and then they could lock the door after themselves. But he is talking and drawing the whole time and then this is the extra chimney. This first chimney did not work and the second one is here and the fire. Here is the builder up here and he came and built the other chimney, but he had added in a door at this stage. This is the other teeny tiny house he was drawing. I suggested that perhaps I could sit in it. He took one look and laughed.</p> <p>So, at this point I did think he really liked my company there, he liked the interaction and he was happy to keep this going.</p>
193	M	– well, you were asking him questions as he went, and he was developing the story line. Obviously it might have been a different drawing had you not been there because maybe his thought process would have been different.
194	B	<p>Absolutely, Look here – that was a wolf, the 1st wolf but you can see that when he starts to talk, again it is really intricate the whole time. Then he starts, oh yes, see this..... This was when he puts fire on the wolf. The 1st wolf did not come to a good end! Max was scratching him out of the picture.</p> <p>So, my strategy was to keep going back to confirm what he was saying this was an old house as well that was breaking down and I said, ‘who might have lived in that old house’ and he said ‘somebody a long time ago’. So, he is drawing the house the big bad wolf puts fire on the old house and it falls down ‘he burnt that house’ and then he said ‘the fairy would have come and she would burn him [wolf]’ ‘she flies away with her little wings’ and that is what he is drawing here in this part of the picture.</p>

So, she [fairy] got rid of him [wolf] but she flew away. Here he is drawing another house and again, the roof has wholes and that is coming back to his neighbour's house. Here is the door and here is another big bad wolf. This is interesting..... just look at his face.

So, here is the other big, bad wolf – much more fierce, look at the teeth which is giving emphasis. So Max is drawing first and then saying 'teeth' 'he is searching for the little pig'. He uses such lovely language 'he is searching for the little pig' 'the little pig forgot to lock the door, he forgot to lock this door and this door' (Max as he is pointing to his drawing).

Max says 'the big, bad wolf gets in'.

B. responds 'I would be very afraid if the wolf got in Would you?' You could feel the suspense in the air. But Max ignored my question and instead he kept on drawing. 'He climbs the steps' and then he says 'and he finds the little piggy, he gobbles up the piggy. ' 'Another little piggy has a sword' and then he says 'and he attacks the big, bad wolf' 'the wolf is still alive and it attacks him'.

So, I said 'so, the wolf attacks the little piggy?' and Max is still drawing and he says.....'he gets more bigger' and as he says that the wolf in the picture is 'getting more and more teeth, more and more mouth and strong hands'. He is drawing all the time, as he is saying this.

He is drawing and drawing all the time, and as he drawing more and bigger teeth he is emphasising that in what he is saying.

I said 'oh, he is getting bigger and stronger' and Max said 'now he is going to smash the house down' and he is drawing all the time. Then he starts to get more fanciful and moves away from the fairy stories and up in the corner he is saying 'take all the books out of the case'.

I said 'oh, there is a book case in the house' and he said 'all of them flied' 'the books flied away into someone else's garden'.

I have no doubt but that is coming from something else and I just looked at him very surprised and said 'oh, the books and they flied'. He said 'this little pig was sad'

So again at this point he is heading off on another direction with the introduction of the books because he introduces the books but then stops talking about them and says 'now this little pig is sad because he cracked it'. I said 'oh, I thought the big, bad wolf had eaten all the little pigs'.

I'm not sure what he meant about 'he cracked it'. I don't know if he was linking it back to the house here Earlier he says that the wolf is going to blow the house down and 'he cracked it'. So then when he mentions he cracked it here. I think that is trying to link back. He was saying that

		<p>the wolf cracked the house initially and now Max is saying that the little pig is sad because the wolf had cracked the house.</p> <p>I had said to him 'I thought that the big, bad wolf had eaten up all the little pigs and he said 'the Mummy little pig is finished in the woods eating her food and she is coming to the house as quickly as she can'. So, again he is very quick in turning around or adapting the story line. So, I said 'oh, this is the Mummy of the little pigs' and he said 'yes'. Me – oh, she is in for some bad news</p> <p>B. – isn't it funny how society tries to protect young children from bad news. They would never allow Tom & Jerry any more. This story is full of killings, gobbled pigs, swords (B. is laughing) you know it's funny!</p>
195	M	<p>there is something really interesting about the sequence of his story. The creativity, expression, his way of communicating. I am thinking about him having the time, space, big board, no one bothering him, all the conditions to develop a story.</p>
196	B	<p>We have mark making in every story. Even where they are dismantling, we have a board for them to draw out their designs, because they are engineers when they are down there. But they do use the mark making materials. What I am finding fascinating is that they are all forming letters. We have never done a 'letter of the week', 'a colour of the week' and yet it is all flowing from them. They are all forming letters, just for example they dismantle keyboards and then they are using the letters and reconstructing them.</p>
197	B	<p>From this age, very few would be able to think in advance of a beginning, middle and end. I think that I caught him at the right time, I caught him at the start of his drawing. The other days, he had been drawing for quite a long time and it was pleasurable (and I don't mean to diminish that) and no real thinking that was evident. I'm thinking that on the other days he was representing what his Father was making and so there was nothing to tell me – and that was fine. But also emotionally at the time he was not in a good place. I am wondering therefore if this lovely shared drawing and story was a timing thing or is it just that he was happy now to let me into his story and he enjoyed the communication and was very happy to lead.... For him to draw and for me to question, which perhaps suggested different lines of story development.</p> <p>I don't think he had the storyline in mind when he started. I remember when they moved into their house about a year and a half ago and they were having work done. All this pictures were about building and so he definitely represents whatever is going on in his life. Obviously that is interesting because of the 'hole in the roof'. So he is bringing all that into his stories. And the Mummy arriving at the house and he said 'she is going as quickly as she can'. This is the Daddy (he is in the picture).</p>

		<p>When I said to him ‘this is the Daddy’ he reverted to talking about the crack in the house and 20 minutes in he draws a hole in the window, the broken window. SO, there is something there with the broken window and the hole in the roof. He was drawing the stairs and he was talking He said ‘he follows the stairs, now he is cooking his breakfast. The big bad wolf follows the stone’. All of a sudden he is drawing all these dots (B. scrolls through photos- probably it is in the video). But see here, see the dots... the big bad wolf is following the dots, following the stones (traces of Hansel and Gretel) and then he draws another key on that house and the hole in the roof and he mentions ‘smash in the roof’ and then he comes back again at the end to where he started ‘the rain’.</p> <p>B. I think this is incredible and exciting. I will present it in his diary (not like this) but just look at it. He particularly loves this board, loves it! I also love the way he kept standing back, almost to get perspective. He did that all throughout the process of drawing.</p>
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Appendix G: Seaview – Transcript of professional conversation –

12.11.2021

Line	Speaker	Content
1.	B	<p>This is where the role of the educator comes in and I wonder ‘how can I get this child to engage of their own volition with my presence? It is that very intricate relationship that you need that to draw on your qualities as an educator and the knowingness of the child, just that whole connection, that relationship between the two of you and to take the child to build a relationship with the materials. This little girl</p> <p>We feel her whole personality has livened up. It’s like she’s happy again, really enthusiastic and dying to show you her work and it is phenomenal.</p>
2	S	<p>And while all work is brilliant, her work is particularly creative and she is a particularly creative child</p>
3	B	<p>But her personality could impede that</p>

4	S	Well, that's the thing. I think initially it was that you and I recognised that was an area where she could really come out of herself more. I think it is the initial recognition of us that we saw that she needed that and that we knew how to guide her into that area
5	B	And again, I think it was our journey and your journey in particular with Peter that got you thinking, 'well, that really worked for him' and he would be a similar, a bit more 'give it a go' but he is a very deep thinker, like her and he would want to do it properly and he would want to know, he would want you to be able to tell him what is happening in the core of the earth, just like that. He is a child who turned around recently and said he decided that he would not be an inventor any more he was going to be a brain surgeon and I have no doubt but that he will be something like that. It's a bit like bringing out the multiple intelligences
6	S	Marlene, if you could just come into our room, it would give you everything you needed for the whole year. Honestly, I don't know what it is about that room . I think that each child, they feed off each other and there is a level of excitement about things and I think it is a lot to do with what we have introduced because it really gets their minds thinking and we do focus a lot on instilling a belief that what they do is amazing and I think they feel so confident.
7	B	and I do think as well that we work very well together. For example, when we were coming up at Christmas, I can't stand handprintsit cracks me up..... and yes you are thinking of easy things to do. The easiest thing to do is to do a hand print and make it into a card but we had been to ReCreate and got these little wind-up mechanisms. These made me so happy (listen) (a wind up mechanism that plays 'Silent Night'). Can you hear that?
8	S	I think you need to put it closer to the speaker.
9	B	We got loads of them and then we wondered how we might incorporate them! We showed this to the children and asked them 'well what do you think we could do with this?' The mechanism is a kind of provocation. The only problem is that some of them started to say 'let's make a sleigh' and you're saying 'oh, great, how do I make a sleigh'. But you know one of them wanted a unicorn. Sam and I have analysed this and we had to direct them a little bit more because we knew they would come a cropper with things like sleighs and we had to consider the timeline. We still feel at the end of it, that it was okay. Didn't we Sam
10	S	Oh, yes. We had a Grinch, amazing thing! Do you remember Seamus, he was so excited and he made a connection between the little musical instrument and they are all dismantling machines at the moment? He wanted to bring the other parts of the machines into it as well and we had to say, 'well you can do that on your next one'

		<p>Last year we did lovely Christmas Trees, but they were still more adult guided. This year I feel, it has been much, much more personal with the little wind-up mechanism. It really is their own creation and I know if I got that as a parent, I would have it framed forever. Sam had set up a shop on a table at one side and they could take a basket and put all the bits they felt they wanted to make their production; it was on hard canvas. So, they took the basket, went shopping and then started to create. But it was like when they think ‘how can I make a Santa’s hat?’ and they do it so well and so quick. They do it quicker than we would.</p> <p>Do you remember Julia made a hat out of pipe cleaners? Me, I would have probably just cut a piece of red paper, but she made the hat out of pipe cleaners</p>
11	B	<p>And she wound some silver for the bobble. Like it was amazing...she is four. But it is as we always say to them, ‘whatever you produce is always right, it’s always correct because it is your creation. We are always there to help you but this is yours, it is about you’ I think this approach inspires them in everything else they are doing, whether it is tackling a puzzle or anything.</p>
12	S	<p>As you always say Brenda, within the room we have no behavioural issues and I really do think it all stems from the fact that they are so excited and interested in things in the room so that their mood is always upbeat and happy. So, there isn’t any need to be grumpy or mean.</p>
13	M	<p>I think some of this comes from what I hear from both of you and the other staff and that is ‘respect’ There is also the materials and the provocations that you put out, the time that you allow, you are flexible with time and there is your own attention that you bring to it, the patience to wait, for example with that little girl who waits for the hug. It’s a combination of all those things that probably gives the excitement that you are talking about.</p>
14	B	<p>I think for me, this year, with all its trials and there have been so many since the start. I feel this year is my best from the point of really being with the child, really listening, really understanding what child led is, really understanding and not always getting it right, but when to interact and when to step back. I feel my own personal growth this year has probably been at its deepest.</p>
15	S	<p>It does take a very, very long time though to learn to hold back. You want to help and you think the desire to help is coming from a good place and it is, but it’s not actually good if you know what I mean because it’s better to let them go.</p>
16	B	<p>Who is this whole thing for, what is the preschool for? It’s for the child, so that is what child centred is about, you know. Obviously, the parents who send their children here understand that. They don’t get handprints home and it is always the children’s interpretation of something. I think</p>

		our parents have bought into that and the power that brings, but it's a kind of joy to be with them (children) and learn with them every single day. I do think so much is like slowing down and taking your time and forgetting your plans if something else comes up. Remember, Austin, when he came in and wanted to know why the sun and moon came out. So, we said, 'let's go research this Austin', but that takes confidence to do that.
17	M.	You have trusted in yourself and that does take confidence.
18	B	I think because in Ireland, early years as we know it is not acknowledged as in the power and necessity that it is and so people don't get it and parents don't always get it. If you did a survey, parents are probably still looking for ABC and 123 and yet ours, when I look at it, never do anything like that but yet we would say that because they have had so much engagement in the Art area and the ideas generated, they are now bringing that into all other areas. They are mark making, voluntarily making letters but I think, the language of art for the young child is probably the strongest. It is a way of mark marking but it is not forcing them into doing anything that is recognisable. Then they evolve and you begin to naturally see the letters everywhere..... McDonalds, Pavilions Shopping Centre. We've a writing area and I have magnetic letters and if they want to, they can go and say what they want. If for example they say 'I want to spell Marlene' we will go and put out the letters, but they are not even asking for that. It is a story generating area and they are going and writing lots of letters on this board and then, as Sam has pointed out, one little boy Seamus was saying 'tell me what that says'. So, he is putting all these letters down and he is saying 'tell me what it says' because he knows there is a connection. So, nothing has been forced down their necks.....
19	S	NO, we never said anything. He really amazed me because he knew there was meaning in the letters and that if he put them together that they would tell us something and he came to that himself.
20	B	But that has been gradual over a few weeks.
21	S	Yes, initially they were in the dismantling area and they, himself and Peter had decided that they were going to make a robot together and then they began to draw the robot on the board. SO, that was before the letters episode. I think that was happening concurrently.
22	B	Yes, do you remember you said..... we only put in the dismantling area about 2 weeks ago. The dismantling area is great, you would need to hold onto your laptop. They were so excited at the prospect of being able to take things apart. What was interesting was that Sam said, I will have a chat with them (as we do every day) and they love the chats where we discuss what we are going to do. SO, Sam said 'I will tell them about the board, the big white board that we have'. 'I will introduce them to the idea of the big board as

		a place where they can put their plans, so they can think at the board and then plan through letters, through drawing - whatever way they want.
23	S	Am I remembering correctly that I had not actually told Seamus that yet?
24	B	That's my point. You were planning to sit down and having the chat about the planning, but they went ahead of you and did it. They started to plan on the board before they went to the table to dismantle
25	S	Because we had put the markers in that area and the board was there inviting them almost. The tools they needed, had they wanted to go there, were there already and it was just like a natural progression.
26	B	To get to what we were going to talk with you about today – it's a project that we have been running. We are not sure if it is at its end yet, so again it was adult initiated but then we allow the children to take ownership. Way back in Autumn we were planning, and I really did not want to do Autumn leaves, picking them up and painting them and all the usual stuff you see, where all they talk about is the leaves. But there is so much more. Why does the leaf fall off the tree, what was the leaf before it fell off the tree? SO, we decided to.... well let me say that at the start of the journey I did not know where this would take us because I did not know what level to come in at. I was testing the temperature of the water. What we did was we started with just asking the children to observe and we started to look at the colours we could see in Autumn and we decided that we could see every colour, absolutely every colour. Anna announced that she could see pink leaves so that meant every colour of the rainbow. So, it's true it not just brown or red and orange. SO, then we printed off a few pictures from artists which were very abstract because most of our children still paint abstractly. We looked at how these artists interpreted the colours and shades of Autumn. So, then we asked the children if they would like to make their own pictures of Autumn, of the colours that they saw in Autumn. We did them on canvas (old roller blind that we cut up). Some of them did oil paint, some used pastels, different mediums to interpret what they felt Autumn was about for them. They are displayed in the classroom. From there we went onto investigating.... We went on to explain to them why the leaves fell off the tree. I did my own bit of research and I figured that the best way to tell a child something was through a story. So, I made up a story about 2 trees called Oak and Birch and they were planted at the same time, and they were really happy and they had their Summer days. Children played under their branches and all of a sudden something began to happen to Birch, and the leaves began to change colour. Oak was very worried and wanted to phone the gardener. Birch explained that her leaves change colour because she has to cocoon for the Winter as her leaves would not be strong enough to survive and before she loses her leaves she takes all the goodness out of the leaves and stores it deep in her trunk so that is like hibernation and come the Spring time, she grows new leaves. So we had a story, a bit of a crude one, but

		<p>we laminated it and we read it. So, that explained how birch lost her leaves but not Oak. The children really grasped that, they understood. In parallel, we had a theme of kindness since the start of the year and we were talking about how trees are kind, taking in bad air and putting out good air. What we did then was to discover the leaves microscopically, now that was unbelievable. We had a microscope there and we had a leaf, which when you looked at it under the microscope, it bore no resemblance to a leaf. We explained about the veins on the leaf. They looked at it. Courtney had them in pairs looking at the leaf under the microscope and then they drew what they saw. So, that went up on the board with their words captured and it went beside their interpretation of Autumn colours. We have come away there from Autumn and have focused in on the leaf. Then we go on to.... Their interest was amazing with the microscope. Then we started to look at There was so much but I think it was us explaining about why trees are kind to us taking in bad air and putting out good air, photosynthesis really. So, I'm looking at the Jerome Bruner Spiral Curriculum here and so we started again with a story of Ava, a little girl who lived in a town that was really dirty and the children really got it. We had a basic diagram of the sun shining on the leaf and the bad air and.... They did get it and at that point we began to look at roots.</p>
27	S	<p>I'll take up the story. Brenda and I had a chat, just as another medium for them, we decided that we would look up some videos for them. We found a national geographic 27one, no it was a BBC one that showed the roots under the ground and even though it was for adults, I think at this stage their interests in trees, mainly because a tree was no longer just a thing that was outside... it was something alive that helped us that had all these different parts. SO, their minds were so open at this stage. That video went into looking at underneath the ground and what was going on, for example if I were a tree and you were a tree, our roots would help each other under the ground and our roots would talk to each other. It's called the fungal network, the wood-wide-web. The fungi would go out and get all the minerals and the resources and bring it back to the roots and it would go up through the roots into the tree. The tree gave the fungus sugar, so it was all about the relationship and then the fungus... There was a baddie 'the black walnut'</p>
28	B	<p>There were certain trees like the black walnut that tried to kill off the trees around it, the fungal network sends out a warning system. I learnt far more than the kids. I never knew all this. The kids were fascinated, they were literally rooted and said play it again, play it again. So, some of the terminology went over their heads, well it didn't because it was all in context. But it was this fungal network that really fired their imagination so that Sam would say, 'when you are out in the woods again you know that while the leaves are moving and shaking and we have lots of sound but underneath the roots are talking to each other and they are</p>

		connecting'. I found that mind blowing. That video was amazing. It was pitched at older children, but the video resonated with them. So, we had gone from the trees to the roots, and we planted bulbs in clear plastic containers so they could see their own bulbs and roots and the system forming and it gave them another visual cue and understanding. We also went out to investigate roots nearby, where there are big, big roots over ground and they cut into a bank. They loved that because they could actually climb on the roots.
29	S	they would have initially said they were branches but not anymore, Now they would say, 'they are not branches, they are roots'
30	B	. I want to show you a few bits ... it is about us tuning in to the children. We have to listen and consider is what we are delivering right for these children. Am I captivating the whole class.... Not just one or two.
31	S	I think the fact that we used so many styles of teaching that if one child wasn't clued in to one way, then there was another forum. So, their imagination was bound to be captured in some way. I learnt a lot in the process as well. Years ago, I might have said, I'm not going to go there because they might not get that but I find we don't do that anymore in fact we probably say 'yeh, they will be well able for that'.
32	B	(co-host and shows me the art work documentation) Austin's tree is green – he just wanted an evergreen
33	S	A lot of those drawings were on acetate. We learn with them all the time. <u>It is not just a school for them learning</u>
34	B	Look at the detail in what Austin told us about his picture – the bad air, the sun, the tree, the roots. They did these on acetates and then we projected them up onto the big screen. We invited them to depict everything they knew about the tree. I would say that if you asked them 2 months ago you would have got the tree but not the level of detail. You certainly would not have got roots and look what the child has drawn here is photosynthesis. There is another one here I will show you. Again, this is Charlotte and her picture is slightly different. She has gone from here down. In this she has said 'these protect the tree because if any bugs go on the leaves they would die'. She is talking about the fungal network there. The fungal network sends out a warning signal if there is anything out there attaching the trees. So again in this picture she has the roots the clear air the dirty air. 'The fungi give food to the roots and the tree' 'Curley roots, twirling around'. In the pictures, there is a huge emphasis on what is happening underground. What we are looking at here is the 'I wonder'. SO you are hoping that from this, it is not just about learning about the tree and the roots. Its' that everything they look at in the future, the things they can't see that they will say 'I wonder'. (Critical thinking)

		<p>A bit like dismantling a piece of machinery..... it gives rise to ‘I wonder’ and this is all your possibility thinking. I feel this project, yes it was set by an adult but it only ran so long because we listened to the children and looked at their level of engagement. Just looking at their pictures and the depth of detail cheers me up.</p> <p>Picture - Again Austin’s picture is very complex. He has mentioned the Japanese Flowering Cherry. We decided that because trees are so kind that well, we always went up to the nursing home and we were looking at rekindling this relationship (during Covid) and we had an idea of planting some trees. The children were up for this. Initially I was thinking about planting them outside our doors. I’m not sure how the whole thing happened but we decided we would plant some trees up at the nursing home. We got approval. One of the children’s dads is a horticulturist and he recommended four trees that would work. The children thought this was a great idea because it would give everyone in the nursing home clean air. SO we printed off a picture of the 4 trees and the children were allowed to vote. They put their symbol against the tree that they liked the most and the two that were the most popular were the Japanese Flowering Cherry and a tree called Snowy Mespilus. So, actually the children were so impressed with these trees that Seamus asked for them to be in his Christmas stocking. The trees were put on Santa’s list.</p> <p>Picture - He brought this in because he really loved his trees. They have all depicted their trees in different ways. Here is her deciduous tree and she has put herself in the picture. You can see that the fungus is protecting the tree, the water is here for the tree, absorbing it underground and here is the good air and bad air. I think all this is amazing.</p> <p>Again, this is Charlie’s picture and look at the detail, good air, bad air, trunk branches fungi water.</p> <p>The children have it and for me it is the Jerome Bruner thing. I have never experienced it before. I suppose the last thing we did was plant the trees and it was very emotional because we went up to the nursing home about 2 weeks ago and we planted our friendship trees. We are going to use the trees as a link, and they are just outside where the residents sit and when we went up some of the residents who recognised us from before came out. So, the idea is that the children can now go up and leave notes and gifts on the tree and decorate it. All of that because trees are kind. So, that is our project.</p>
35	S	and they got into 2 newspapers
36	B	This is one of my points, we are not Reggio, we are not steeped in their culture and we don’t have the same educational system. I am wondering though, it seems as though there is serious learning happening all the time in Reggio but it would not necessarily match with our culture.

37	S	I was going to say that too, culturally it would not match.
38	B	Though what I do love about Reggio, is that they never under-estimate the capacity of the child but the educator has to be in the right frame. This project for me has been an eye opener and my role in it has been an eye opener. Sam is more natural than me. I probably would have been more controlling than Sam over the years. If it was a project, I would have decided on the end point, whereas now, certainly no way. Instead, I would let it run and take its course.
39	S	But this will run on. Remember, the children started to talk about what we make from trees. So, we have not even begun to explore that as yet!
40	B	Yes, and we have a beautiful Christmas tree in the garden. When we were playing the video about the root system, and at that time the children did not appreciate all that was happening underneath the ground. Julia said, this poor child is a worrier, 'what happens if the tree is cut down' – she was really worried. I said well, we make things from tress and sometimes if the tree is sick it needs to be cut down because it could damage the other trees. SO, we just touched on this aspect. We said to them, 'well, what are you sitting on' – it's made from a tree. We talked a little about the life cycle and how other things are made from trees. So, the tree does not really die but comes back in a different form, which Julia was happy with. But her mother said that she was concerned about the Christmas trees. We explained that the Christmas trees were grown specifically for Christmas. They brought happiness to families; they decorated our homes. She was really We asked them, 'well, what should happen if we cut the tree down' and right away they said 'we should plant 2 more'. I think we have great thinkers, and I am not sure that the primary school will be ready or able for them.
41	S	Sure there are children in secondary school who would not have the depth of knowledge about root systems. They might not have the curiosity or interest.
42	B	The children have constructed their own knowledge from all that has been said, they are making the information their own and are taking ownership of the knowledge and leading in applying that knowledge.
43	S	I think that puts a value on it all for them. All of this really, really means something for them. They now have and probably always will have a deep respect for trees because they know about trees and all they do to help us.
44	B	I think it is about giving the child a sense of confidence and sense of themselves. It is all going back to creativity and possibility thinking. Children need this now more than ever because they are cocooned and swaddled and when they go into primary school they get less and less play time and then they are off to ballet, gymnastics, sports, and then they are chaperoned everywhere. We have another little boy, we would be a little

		worried about him, so nervous about embracing experiences. When I think about children who only have access to paint once a week, they don't get that freedom of expression because it is not valued. We have another little boy, who would have to be told what to do, but that is not our ethos. We were trying to get him to think of something that he could create. SO, Sam asked him to go off and have a think because he said that he did not know what he wanted to do.
45	S	<p>I said to him one day, have you ever been in the creating area' and he said 'no, I did think I would like to go in there, but I don't think I would know what to do' and we had a chat about things that he liked. He was going off to Scotland and he spoke about the things he loved there, and it turned out there was a dog over there. Between us then and god knows why I went down this road, we had a chat and he eventually he went ' I could create Darragh (dog)'. So, ultimately, it was his idea even though I might have steered him a little but that brought him into the creative area and, oh, my goodness. He turned into a demon! I was his assistant and he ordered me through the whole process, what I had to do, and I wasn't to do it that way. But he was so spurred on by this that we had the chat one day and the next day he came in from home with a bag full of bits and bobs he had found at home that he could use for his creation. (Because of Covid, we sprayed them all obviously....laugh)</p> <p>The head of the dog kept falling off but then he created it so that it stayed on. All the children kept coming over and trying to guess what it was going to be, and he absolutely loved this. He had real ownership of it and he said, 'I don't want to tell them about it until I'm finished'. Then he decided that he wanted to tell them about it at chat time. So, he did a whole section (took time) at the chat time, and he took control of the session. He told them 'Excuse me, you're not to talk' 'excuse me, put your hand up if you want to talk'. I don't know what we unleashed. Then after that we had put the Christmas tree in the room, the dog was created – all that was done, after that I think we talked about making decorations for the tree and he would have never done anything like that. And he said 'now I have an idea for 2 decorations' and so he had no fear of going in there and he believes that he can create whatever he wants to create.</p>
46	B	I think that's our point, it is not about Darragh the dog, it's about everything else. And this little boy we would be worried about. We are hopeful now that he has had a breakthrough – we will do a zoom link with him. I think this has given him a sense of himself that he has not had, a sense of being able to direct his own learning. I think traditionally he has been told exactly what to do and how to do it (not by us) – only by someone who loves him so much they think they are protecting him. But for him it is really inhibiting him. But I think this process of having an idea and being able to follow it through is powerful stuff.

47	S	I think it kind of allowed him to be himself as connected with the other children because they were all creative and he would often stand back and not join in with the others, but in this situation, they were interested and intrigued in what he was doing.
48	B	We feel this development will help him socially.
49	S	He became the leader in the group and felt that power. He loved that power.
50	B	It's all about giving them voice. Even if it happens once, they have a sense and feel of that voice. I remember personally going into secondary and not having a good opinion of myself, certainly not academically and I remember all of a sudden, I knew I was really good at hockey, and it opened up something in me. I thought, well if I can be good at hockey, maybe I can be good at other things. Sometimes you only need 1 thing, 1 experience of having voice or agency to help. I feel that this creative/documentation area is so open ended. It can be individual or group. We are seeing more children working together, creating together. It's a real level playing field – for all children. That area has no holds barred and whatever you do in it is just fine. It's really inclusive, and I can't underestimate what I have learnt from this area this year – what is possibility thinking in action.
51	M	The whiteboard – are they using that now or is it something they will get into the rhythm of
52	S	They are using it all the time and it is in an area of the room that was never used and now they are down there all the time
53	B	it was the home corner, and we were trying to have mark making in every area. That area was not used previously but it is now – 100%. Seamus is in there all the time, sketching and lettering.
54	S	and Seamus leaves whatever he is doing up on the board and the next day, he comes and adds to it – like he has had another thought or idea