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Spatially Democratic Pedagogy: A pedagogical intervention to support children's design and co-creation of classroom space. A new trajectory for Froebel's Kindergarten spaces?

by

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Abstract

The Foundation Phase curriculum framework was introduced by the Welsh Government in 2010 (and revised in 2015). It applies to all children aged 3 to 7 years in Wales and includes a number of additional pedagogies and rights based approaches which support more participatory understandings of learning and the child (WG, 2015). However, these additional pedagogies are expected to be played out within existing constructions of space. Dominated by *continuous provision,* spaces are to include sand, water, writing, construction and role-play. Recently rebranded as "Learning Zones" (Taylor et al, 2015), these spaces are becoming increasingly structured around a centralised concept of space, activity and outcome, creating a paradox by framing both space and pedagogy as prescribed and not participatory.

In response this PhD explores Spatially Democratic Pedagogy (Clement, 2017) as an alternative approach to the construction of classroom space. Using Froebel's (1899) communal gardens as the pedagogical blueprint and reflecting them through recent sociomaterial (Fenwick, 2011) and democratic (Moss, 2014) understandings of learning and space, this research aims to support children in the design and co-creation of their classroom space. Its Design Based Research frame (Reimann, 2011) aims to, "solve real-world problems through the design, enactment and analysis of an intervention" (DBR Collective, 2003).

Current constructions of classroom space within the Foundation Phase were found to be complicit in restricting children and teachers' ability to participate in learning. Notably, co-creating space with children, based on their designs, appeared to offer opportunities to support participatory practice. This research contends it is the construction of space that is important when considering participatory practice within the Foundation Phase.

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Chapter One: The research

1.1 Why Spatially Democratic Pedagogy?

Beginning my professional career as an early years teacher I had been trained to provide, and enjoyed creating, classroom spaces I believed to be inviting, fun, challenging and supportive. My classroom spaces always included a book corner, an art space, a science area, writing table, maths and role-play areas as well as other easily recognisable spaces for desk based activities and whole class 'carpet time'. Providing these spaces was an integral part of my professional role, with teaching and learning seen to happen within the classroom spaces I provided.

My first reflection on these classroom spaces came in my second year of teaching. One afternoon after reading the picture book *The Smartest Giant in Town* to my reception class, Max (4), wanted to make himself a giant's tie. We chatted briefly about what he was going to do before Max went off to find his materials and quickly got down to the task of making the tie. At this time I was teaching at an International School in Northern Italy and the school was transitioning into using the International Baccalaureate. The primary programme used inquiry as its vehicle for learning, and planning and activity within the classroom were often driven by children's questions and self initiated activities. The giant's tie which Max produced was so long it dragged along the floor and was admired by many of his peers. During the activity I had noticed Max had chosen to work at a table close to the door that was only used at lunchtime for children from nursery and reception to eat their packed lunch. Max had collected all the resources from the craft area and worked intently on the 'lunch table'. I thought I had created the perfect area for Max to create his tie. The art space had a large table, shelves with all the pens, pencils, paints, scissors, string, elastic, fabric Max might have needed and was where our craft activities usually took place. However, Max had chosen the empty, bare table which had no defined use during our class time. The activity continued as a number of children in the class on seeing the giant's tie also wanted to make one. Max then organized a group

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of children around the table and they were all now making ties. The table over the subsequent months became a place where children would show others how to make things. If anyone showed an interest in what another child had made they would go to the table and the child would bring the materials they needed and they would teach them how to make it. On reflection, the children had created their own space.

My second reflection on the construction of classroom space happened the following year. Over the summer I had to move classrooms and everything in my classroom was 'boxed up' and moved to the new room. Everything arrived apart from my library corner which had gone missing. About two weeks into the new term a number of boxes full of books arrived in my classroom. I had made a large space for the book corner and there were plenty of empty shelves and book boxes to display and store the books. The children were excited to see a number of large boxes arrive in the classroom. I suggested we might need to sort the books before we put them on the shelves and the children spent the following weeks in the space sorting what books should go where, over time their criteria merged, were reorganized and rethought. The children spent a lot of time in the reading area sorting, reading, chatting, writing labels, discussing the books, categorising and organising. The children's enjoyment and excitement for organising the space was palpable. On reflection, the children enjoyed creating their own space.

These two encounters happened whilst working at the International School of Turin in Italy. Soon after I returned to Wales and completed an MSc in Early Childhood and started working as a year one teacher. Wales was just beginning to introduce the Foundation Phase and I attended the five days training for all teachers. Classroom space within the training and supporting documents was structured around 17 'continuous provision' spaces which teachers were to create for children to engage with. As my school transitioned into the new curriculum I also transitioned into a new role in academia. I reduced my teaching to part time and took a part time research position, spending the next four years also working as an early years

researcher. I spent time in over 40 Foundation Phase classrooms engaging with teachers and exploring aspects of the Foundation Phase and its accompanying pedagogical practices. During my time spent in these classrooms I noticed physical classroom space becoming increasingly homogenised, based around similar themes and offering similar activities. I began to reflect on this construction of space, as it seemed to be developing an overly standardised and normalised construction of physical space, which appeared to contradict the positioning of children as participants within their learning. All spaces for learning appeared predefined.

Reflecting on my time as a teacher, and having watched the children competently create their own spaces, this research has ambitions to support children in the design and co-creation of their classroom space, creating an alternative pedagogical approach to the construction of classroom space within the Foundation Phase.

Although situated in the Foundation Phase I hope the spatial practices discussed in this thesis can resonate with an audience beyond the confines of this Welsh curriculum framework. However, to be true to my experiences and personal interest in the Foundation Phase it was deemed appropriate to ground this study within a Foundation Phase classroom.

This chapter initially sets out the ambitions for the research and presents the objectives and the research question. It gives an overview of the theoretical ideas drawn upon and the methodology and methods employed. This first chapter concludes with an overview of the structure of the thesis.

1.2 Ambitions for a different construction of space

The spatial and material nature of people's lives is well established in both geography and architecture (Massey, 2005; Plowright, 2014) but has remained on the fringes of research and practice within early childhood

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education (Vuorisalo et al, 2015). This dismissal of classroom space has resulted in its relegation to the backdrop of learning, where it is seen as the container within which education sits (Fenwick et al, 2011). Constructing space in this way validates human centric notions of learning as 'learning happens' when, "[children] act upon their environment" (BERA, EY SIG, 2003, p.7). Within this construction Stephen (2010), notes it is "acting and thinking with others that drives learning and at the heart of that process is dialogue and interaction" (Stephen, 2010, p.20). This creates an almost passive construction of space, supporting a blindness towards how we think about the spatial and material factors of education practice (Sorensen, 2009), and offering a limited concept of classroom society (Lefebvre, 1991; Fenwick and Edwards, 2013). Consequently, it reinforces the misplaced notion that classroom space is neutral and disconnected from learning (Lenz Taguchi, 2010), and subsequently allows changes in education policy that do not adequately explore, question or consider the changes needed to classroom space (Horne Martin, 2006).

Similar criticisms are levied at the Foundation Phase where learning is equally 'delivered' by teachers, with status given to the communicative role of learning through language. Within this construction the importance of space is equally not recognised. This lack of spatial awareness and engagement with spatial practice is concerning as "[y]oung children are acutely sensitive to their surroundings and very rapidly acquire understanding of the people, places and routines in their lives" (United Nations Committee on the Rights of the Child, United Nations Children Fund and the Bernard van Leer Foundation, 2006).

This thesis is interested in how the non-human elements of space and learning are constructed within classroom space and how they shape the pedagogical dynamics in the context of the classroom. It draws attention to the scarcity of theoretical knowledge, understanding or empirical research within the field of early years education that explores how the design and construction of classroom spaces can be used as a pedagogical approach. Whilst it recognises more recently the disconnect between classroom space, young children and learning is being questioned and there is a growing impetus within research to include spatial and material factors (Lenz-

Taguchi, 2010; Nordtømme, 2012; Fenwick et al, 2011), it will show research has yet to consider these understandings as a way of supporting children's design and co-creation of their everyday classroom spaces. Using architectural theory alongside these developing geographical and pedagogical understandings of spatial practice enables this thesis to position empty classroom space and children's design and co-creation of it as a site of Spatially Democratic Pedagogy. This thesis, in doing so, finds its own theoretical empty space and aims to develop and within it support an additional approach to classroom space.

1.3 Pedagogy definition

This research positions Spatially Democratic Pedagogy as a pedagogical approach to the construction of space. It understands pedagogy as, "the act of teaching together with the ideas, values and beliefs by which that act is informed, sustained and justified" (Alexander, 2008, p.4). Accordingly, this research becomes a presentation of Spatially Democratic Pedagogy as both a theoretical construction and a teaching tool to support children's design and co-creation of their classroom spaces.

1.4 Objectives

Subsequently, the objectives for this study are to:

Create a theoretical base for Spatially Democratic Pedagogy through pedagogical, geographical and architectural understandings of space.

Develop a 'teaching act' that supports children in the design and co-creation of their classroom space.

Document and consider what happens when children are supported in designing and co-creating their classroom space.

1.5 Research question

These objectives are driven by the research question:

What happens when children participate in the design and co-creation of their classroom spaces?

This question is intentionally broad. It serves to develop an opening for pedagogical exploration of children's design and co-creation in classroom space. Also recognising as a pedagogical study the research will be focusing its attention on pedagogical aspects of the process and as such I approach the research question with an "open mind rather than an empty head" (Dey, 1999, p.251).

1.6 Classroom space as a theoretical triad

Positioning classroom space within a theoretical triad of pedagogy, geography and architecture allows this research to consider what we now know about the construction of space and learning which earlier pedagogues may not have known. Developing Spatially Democratic Pedagogy this way reflects Wells and Claxton's (2009, p.1) understanding that theory "embod[ies] the best ideas available" when considering ideas about education. Within this thesis theoretical understandings from geography and architecture are introduced to develop different, more inclusive and dynamic constructions of space within the Foundation Phase which are only made possible by these additional theoretical disciplines.

In addressing the insights the field of geography is able to offer, Taylor (2009, p.661) proposes educational research will need to give "increasing attention to geographical understandings of education, space, environments and learning". The joining of these spatial and pedagogical theories within

the two disciplines of geography and education are seen to exist within two separate arenas; the first is made up of "geographers who pursue educational topics" and the second contains "educators who draw upon spatial theories" (Fenwick et al, 2011, p.148). Taylor (2009) warns of the difficulties for educators (and geographers) working in fields other than their own and highlights the inability he feels individual researchers have to, "develop contributory expertise that spans all areas of overlap between the two subjects" (Taylor, 2009, p.664). Acknowledging these difficulties (and recognising that these difficulties are compounded in this research by the addition of another discipline, architecture), I argue that even though this thesis sits at an intersection of these three disciplines, it is primarily a pedagogical exploration and the use of geography and architecture are only partial and specific to the pedagogical questions posed by the research. The areas are put forward as two disciplines which can offer further insights into the spatial and material practices of current classroom practice within the early years. They are used to serve and enrich our knowledge of the current classroom spaces we are providing for young children.

Developing a theoretical underpinning through these three different disciplines is supported by Massey's (1995, p.5) understanding that "stimulating intellectual developments… [can come from] … hybrid places and by breaching boundaries between disciplines, new conversations can take place". Spatially Democratic Pedagogy is positioned as a new conversation, one that challenges and problematises current classroom space and proposes an alternative space **"**in which alternative discourses and constructions can be produced" (Dahlberg et al. 1999, p.34). It aims to open a dialogue for a new type of 'empty' classroom space within the Foundation Phase.

1.7 Research frame, methodology and methods

The research question and theoretical underpinning articulated above are proposing an alternative construction of classroom space. In

doing so, this research creates an intervention which is yet to be considered or practiced within the Foundation Phase. Methodologically a Design Based Research frame is chosen to support the additional construction of space, as it allows research to develop interventions theory suggests could be productive but are yet to be understood or practiced (Reimann, 2011; Design-based Research Collective, 2003).

Design Based Research is defined by the dual role it fosters, serving both applied and theory building ambitions (Reimann, 2011). It offers an opportunity to simultaneously develop both theoretical contributions to the specific disciplines used to support the intervention, whilst also informing practice through its enactment, bridging the gap between research and practice (Anderson & Shattuck, 2012). This enables this research to make spatial theory relevant to classroom spatial practice and vice versa (Walker, 2011).

For the purposes of this research study the teaching act (Alexander, 2008) sits within the methodology chapter and is presented as both a seven stage pedagogical design tool and as one of the data construction methods (see chapter 4). A three stranded research framework is used to realise, document and analyse this intervention (figure 2, p.106). Strand one is concerned with the process which supports the children's design and co-creation of their classroom space and as such details the intervention itself. This strand draws from the Theoretical Underpinning and (re) considers and (re) uses Froebel's approach to communal garden design to support the seven stage design process. The second strand uses an Action Research model to document the process, supporting the notion pedagogy should be researched by teachers themselves (Stenhouse, 1975). Strand three uses Constructivist Grounded Theory (Charmaz, 2014) to frame the intervention and consider existing classroom spaces and how they are positioned before and during the intervention. All three strands support an iterative approach to the collection and analysis of data, continuously referring back and forth to each other. The process of data collection and analysis is guided by the emerging

reflections and data produced by all three strands supporting the intervention.

The ethical issues relating to the intervention are discussed in the relevant chapters but, overall, were agreed by Canterbury Christ Church University's Education Ethics Research Committee. Initially the children's possible responses to their individual designs not being chosen as the design for the empty space were considerd as one of the more significant aspects of the design which needed consideration. The project's participatory nature and aim to include all children in the final group design and co-creation of the space itself were used to mitigate this ethical concern.

1.8 Structure of the thesis

The thesis is in three sections. The first section sets out the research context for classroom space, pedagogy and participation, discussing all three through their position within the Foundation Phase framework and its wider supporting documentation (chapter 2).

The second section presents and critically engages with both the theoretical underpinning used to support children's design and co-creation of their classroom space (chapter 3) and the methodologies and methods employed to enact, document and analyse/evaluate it as a teaching tool (chapter 4). The theoretical underpinning draws on geographical, architectural and pedagogical understandings of space. Lefebvre's (1991) construct of social space is used to support an understanding of classroom space as a product and producer of political and ideological relationships, which become embedded material practices (Massey, 2005). Architecturally, space also reflects the social, cultural and socioeconomic values and structures of society as well as the functional needs of a building (Crysler et al, 2012; Woolner et al, 2012). Chapter 3 continues to position Jilk's (2005) "useless space" as a way of supporting children's design and co-creation of empty

classroom spaces. The empty space is seen to, "gain meaning through the creative interactions of the learners and the environment" (Jilk, 2005, p.35). Pedagogically using Froebel as a blueprint acknowledges the, "relationship between the social and the material" (Mutch, 2013, p.28) and supports classroom space as sociomaterial (Fenwick et al, 2011), intra-active (Lenz Taguchi, 2010) and democratic (Moss, 2014). Chapter 4 presents the Design Based Research frame and the three stranded research model used to enact, document and analyse Spatially Democratic Pedagogy as a teaching tool. Research strand one describes the intervention itself, giving explicit attention to Froebel's construction of individual and communal garden spaces and the use of design as a teaching tool. Strand two details the Action Research model developed to document the process and the third strand details the constructivist grounded theory frame used to analyse both current constructions of classroom space and the construction of space within the intervention.

The third section of the thesis presents the empirical data and subsequent analytical discussions. Chapter 5 discusses the existing classroom spaces to provide an insight into current spatial practice. Chapter 6 is separated into two parts, the first presents an overview of the intervention and looks at what happened when the children designed and co-created their space. It uses pictures and transcriptions to 'tell the story of the space'. The second part of chapter 6 reflects on the intervention, highlighting significant aspects of the process. Chapter 7 concludes the thesis. It draws the discussion chapters together, gives suggestions for future research and offers the contributions and limitations of the research.

Chapter Two: The pedagogical and participatory context

This chapter situates my research within its policy context. It begins with an exploration of the Foundation Phase, the educational context for the research. It details the initial proposals set out by the then Welsh Assembly, and critically considers its claims for creating early years provision which spearheads locally determined needs, children's interests over curriculum outcomes and children's participation through child initiated, child-led and right's driven policies and pedagogies.

Foregrounding the spatial practices depicted throughout the curriculum framework and supporting documents, the chapter goes on to question how these spaces purportedly created for children, connect to the local, participatory and child-initiated pedagogies described. Current spaces are discussed as supporting developmental and outcome driven practices. The difference between these additional pedagogies and existing space is positioned as causing pedagogical tension.

The chapter continues by considering how participation is framed within the Foundation Phase from both children's rights and pedagogical perspectives. Acknowledging the curriculum framework's strong commitment to children's participation through both discourses, the chapter questions how this commitment is being realised in Foundation Phase classrooms, highlighting a lack of empirical evidence. The chapter then draws on the pre-schools of Reggio Emilia to consider how these more participatory and democratic practices are currently enacted, but notes children are still excluded from the design and co-creation of space. The chapter concludes by positioning children as designers and co-creators of their classroom space, offering an opportunity to support children's interests and consider participation as a spatial and relational pedagogical process (Mannion, 2010).

2.1 Foundation Phase - the beginning

The devolution of education responsibility in 1999 allowed the then National Assembly for Wales (now the Welsh Government) to set out their vision for a new education system. It would address the specific nature of learning in Wales by putting, "local authorities, local communities and locally determined needs and priorities at the centre of the agenda for schools" (NAfW 2001, p.2). More specifically, the programme would seek to, "build stronger foundations" through, "radical improvement for early years provision" (NAfW, 2001, p.12). The proposals which followed, set out in their consultation document, *The Learning Country: Foundation Phase 3-7 years* (NAfW, 2003), were considered to be placing provision for young children at the forefront of the Welsh political landscape (Siencyn & Thomas 2007), creating a national reform programme, to advance the quality and continuity of provision for all children aged 3-7 years (Siraj-Blatchford et al, 2007).

2.1.1 Constructions of learning

Historically, early years Education in Wales has been developmentally grounded, promoting teacher directed activities and focusing on basic skills such as reading, writing and counting (Riggall & Sharp, 2008, p.13). This approach was affiliated to a view of the 'developmental child' who, appraised against a prearranged set of criteria, would passively respond to both the learning environment and the guidance from the teacher (Aasen & Waters, 2006). When considering the new curriculum framework, this 'developmental child' was deemed to be spending too much time sitting at tables, limiting their opportunities to develop language, independence and decision making skills (NAfW, 2001).

Initially, the Foundation Phase was seen to offer opportunities for practice to move away from these more formal traditions through its concerns about the quality and appropriateness of over-formalised learning in the early years

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(Aasen & Waters, 2006; Riggall & Sharp, 2008 & Maynard & Chicken, 2010). It was recognised the adoption and over-emphasis on formal curriculum and teaching could result in lower standards of attainment in the longer term (Taylor et al, 2015, p.10).

The subsequent Foundation Phase framework (WAG, 2008), introduced over the period 2008-2011, was perceived as an approach which was significantly different from previous statutory requirements. It was seen as "an almost Scandinavian model where formal education is delayed" (Rees, 2007, p.11) and considered, "a way of thinking, acting and being within the early years classroom that is substantially different from the requirements of previous statutory curricula" (Aasen & Waters, 2006, p.128). In recognising the importance of this shift, it was acknowledged for successful provision, certain alternative pedagogies needed to be realised (Davidson, 2006). The initial Monitoring and Evaluation of the Effective Implementation of the Foundation Phase (MEEIFP) (Siraj-Blatchford et al, 2006) continued to recognise the need for the promotion of pedagogical approaches which required a shift in attitude and understanding of how children learn.

The different pedagogical approaches were discussed in subsequent supporting documents. Learning through play and first-hand experiential activities are centrally placed as the vehicles for learning (WAG, 2008). The framework places emphasis on children's first hand experiences as these "allow children to develop an understanding of themselves and the world in which they live. The development of children's self images and feelings of self-worth and self-esteem are at the core of this phase" (WAG, 2008, p.6). These approaches are grounded in a curriculum framework that should, "focus more on children's interests ... rather than the curriculum and pre-determined outcomes" (2008b, p.28).

Within this pedagogical construction the teacher becomes the "facilitator of learning" (WAG, 2008a, p.12) and is to support a number of different pedagogical approaches including: a balance of practitioner-led and child-

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initiated activities (Maynard et al, 2013); children's participation in decision making (Maynard et al, 2010); and child-led learning" (Maynard and Chicken, 2010, p.29). These approaches are to support interactions between adults and children which foster, "shared and sustained thinking" (WAG, 2008, p.6) and give children a level of ownership over aspects of their learning (ESTYN, 2011).

However, this re-positioning of learning and the child's more active and participatory role within it is recognised as only a partial shift in pedagogy, with these additional shifts considered to be tagged on to the old curriculum framework so that the Foundation Phase is still "equally characterised by its commonalities rather than its distinctiveness from the early schooling five years ago" (Maynard et al, 2013, p.5). Indeed, Rees (2007, p.15) questions whether parliamentary devolution represents a change in the organisational structures for educational provision or whether it will continue to serve the interactions "between those groups which have been central to the policy-making process all along: politicians, civil servants … professional organisations …. and local education authorities".

Although literature from the Welsh Government is highlighting objectives for putting locally determined needs and priorities at the core of the new programme for schools, there is still an overriding focus on pre-determined outcomes which all children are expected to reach or experience within pre-defined spaces (WG, 2008). Urban (2008) notes more generally, practitioners, when having to achieve externally imposed expectations and outcomes, find it increasingly hard to make decisions about what is relevant for their particular school communities and children. This disconnect between teachers, children and their spaces is not supporting them in the decision making processes the Welsh Government seemingly set out to achieve.

Resonating with McCulloch's (2016, p.47) more general picture of curriculum, of which he says "the most significant feature of the curriculum

is that of continuity from the past. It represents the knowledge that has been accumulated from the past". However, he further states curriculum is also, "the repository of the values and morality selected from past times" (2016, p.47). This makes it important to question what past is being selected in the Foundation Phase. There are a number of possible answers to this question which, in part, is seen to be causing the pedagogical tensions. The framework is recognised to be replicating much of the formal learning which characterised the previous curricula. However, the framework also acknowledges more experiential, participatory and child-led and child-initiated pedagogies. Tensions can be seen here between the differing approaches and weighting given to the more playful and experiential approaches to learning and the more formal approaches.

2.1.2 Tensions in learning

Subsequent evaluations have also highlighted these growing tensions, with resulting opinion that the approach underpinning the Foundation Phase is still, "explicitly developmental with a clear focus on the individual child" (Maynard et al, 2013, p.v). Although it is also recognised as a "radical departure from the more formal, competency-based approach to early childhood education" (Maynard et al, 2013, p.1) with the guidance documents for the seven areas of learning seen to adopt approaches that are "largely aligned to sociocultural ideas" (Maynard et al, 2013, p.53). Within these participatory constructions there is an understanding and acknowledgement that "knowledge is not static, passive or representational" (Moss and Urban, 2010, p.16) and practice should seek to encourage children's participation and interests within learning. However, paradoxically this approach is still to be positioned in classroom spaces which have these very attributes.

These pedagogical tensions continue to been unrecognised within the most recent and wide ranging review of education within Wales, *Successful Futures* (Donaldson, 2015). In fact, the review considered education in Wales from the Foundation Phase to Key Stage 4 and the Foundation Phase

was, in the call for evidence, one of the three most frequently mentioned 'best things' about Welsh education (Donaldson, 2015, p.15). More widely the Foundation Phase is being recognised as "an initiative that, in general terms, enjoys warm support locally and the envious attention of external observers" (Waters, 2016, p.179) and there is now much emphasis placed on extending the principles and practices of the framework to education provision for older children as the pedagogy underpinning the framework is positioned within the review as one of the, "very real strengths upon which we can build" (Donaldson, 2015, p.19). Concern is voiced within this research at the lack of engagement within the review around the pedagogical tensions being recognised and the lack of any consideration given to classroom space in light of the 'new' pedagogies beings discussed.

Indeed, a common feature amongst these recent reviews, is a lack of any detailed or theoretical consideration, evaluation or discussion about classroom space (Taylor et al, 2015; Donaldson, 2015; Welsh Governemt, 2017). Any consideration appears consistently vague as there is a general expectation on teachers to provide rich, fun, stimulating spaces (Taylor et al, 2015; Donaldson, 2015). Classroom space is detailed as one of the twelve pedagogical elements identified by the Foundation Phase evaluation and should offer "a variety of different learning areas/activities for children to engage with" (Taylor et al, 2015, p.22). This constructivist (and increasingly outcome driven) construction of space is discussed in the next chapter and scepticism is levied at the ability children have to meaningly participate within these spaces or follow their own interests within spaces that are provided for them and are increasingly structured around attainment, outcome and a centralised construction of space. Children's interests and participation within these spatial constructs are seen to be increasingly limited by the spaces themselves.

Horne-Martin (2006, p.101) states the requirement of a variety of teaching methods demands, "a variety of spaces". It could be argued the Foundation Phase currently provides a variety of spaces through the different continuous provision spaces on offer. For example, there is an arguable

difference between the role play and the writing station as well as the painting and the construction and children will be supported to engage in different activities within these spaces. However, although it is acknowledged children will do different things in these spaces, this thesis argues that pedagogically these are the same spaces as they employ the same pedagogical approach to support the same constructions of both space and learning.

2.2 Classroom space: continuous provision

Current constructions of classroom space within the Foundation Phase are dominated by continuous provision, one of three types of provision set out in the 'teaching and learning model' (Figure 1). Continuous provision is positioned at the bottom of the triangle, to demonstrate its commanding role within classroom space. It is to be provided by teachers (Donaldson, 2015), enable children to explore, engage and experiment through a variety of learning areas and activities (Taylor et al, 2015), and include water, sand, construction, writing materials and small world (WAG, 2008d).

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Figure 1: The teaching and learning model

Continuous Provision is presented as best practice. (Extract 1; Taylor et al, 2015, p.30). However, these "best practices are defined in terms of

standardised criteria related to developmental learning theories" (Lenz Taguchi, 2010, p.24).

Within this construction of learning, space is deemed effective when, "the materials/apparatus are chosen carefully to provide cognitive challenge within the zone of proximal development and positive outcomes for the activity are either modelled, demonstrated, explained or otherwise identified in the children's experiences and actions, and encouraged'' (Siraj-Blatchford & Sylva 2004, p.727). In response Lenz-Taguchi (2010, p.9) says these spaces judge children's "individual achievement in relation to pre-set goals and outcomes". Goouch (2010, p.18) argues, "such pre-determined outcomes, the intentions of teachers following a curriculum, extolling behaviours and language that are preconceived to be 'appropriate', are all intended to precede or potentially overpower the intentionality of the child". A sentiment also shared by Strong-Wilson & Ellis (2007, p.43) as they acknowledge a child's experience can be "limited by the places they inhabit".

It is pertinent to note classroom space is not always seen to equate to pedagogical practice. Indeed as Robson (2009, p.205) reminds us "the provision we make comes to life through the ways in which it is used", reinforcing a common understanding "it is what we do, or, more importantly what the children do with the environment and materials in it which matters" (ibid). This thesis acknowledges the importance of the teacher's and children's individual and personal understandings and interactions with their spaces. Indeed, both Claire's and the children's personal constructions,

use and reflections on the spatial and material aspects of their classroom is explored in chapter 5. However, it is also important to recognise there are strong arguments for spaces having considerably more influence over learning that this perspective allows (Fenwick et al, 2011; Lenz-Taguchi, 2010). Robson's (2009) view supports a human centric approach to classroom space which fosters an understanding of space as a container, which Fenwick (2015, p.83) argues, "is to miss the turmoil of relationships

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among these myriad non-human as well as human elements that shape, moment to moment, particular dynamics of context". Similar 'container' representations of space and human centric understandings of learning are promoted within the Foundation Phase classroom.

The framework also lacks engagement with any theoretical constructions of space and how they can be considered within teaching and learning. The framework and supporting documents consider continuous provision as space to be set before the children arrive in the classroom. Worryingly this construction of space, although it can be argued to be exemplifying the tensions forming between the more structured ways of working against the more participatory, co-constructive and child-initiated requirements of the framework, is not yet recognised as a contributory factor.

The lack of recognition given to classroom space in its role in supporting different aspects of teaching and learning is magnified by a recent government funded evaluation which has rebranded continuous provision as "learning zones" (Taylor et al, 2015, p.7) (see Extract 1). The evaluation also recommendations that, "exemplar materials" are created to support teachers "how best to utilise these learning zones" (ibid). This shift in language is important as it further promotes a pedagogical approach which supports a tightly framed model of specific learning within specific spaces.

Extract 1: Learning Zones - Best Practice

This 'best practice' example is taken from the final report of the evaluation of the Foundation Phase (Taylor, 2015, p62),

Box 5. Example of Best Practice within the Foundation Phase:

Learning Zones

A mixture of Reception and Year 1 children occupy one classroom in this school, where there is one teacher and one additional practitioner. So space is at a premium. The classroom is divided carefully into learning zones, and each zone is indicated by a clear label on the wall in a display accompanied by children's work. Some of the zones are physically divided; for example a dressing-up area and games area are separated by a bookcase containing teacher resources. The far left corner of the classroom is entirely occupied by a castle (the theme for the term) built and painted by the children for a new role-play area. The creative development area of the classroom is next to the role-play area, where tables and easels provide plenty of space for groups of children to paint, draw, and create. Nearby, there are discovery tables occupied by different castles for children to explore and a numeracy shop where children are able to count money and record their work. There is an obvious difference between the more active activities here and the more prescriptive activities at the other side of the classroom, where there is a semi-circular table that is mainly used for focused tasks with the teacher, and a carpet area for circle time. Here, there is also a reading corner and a drawing table. There is also an interactive whiteboard and the stage area in front of the whiteboard is used for many

activities including show and tell. Children can learn independently in each zone as there are set challenges to complete, including: creating a clay crown for the King or Queen of the castle in the creative area; or bring in an item from home which one might find in a castle for show and tell.

This thesis argues this practice will only serve to further overpower children's interests and ideas. Continuous provision as a "learning zone" is positioned as a technical process, disconnected from both the individual children and teachers within classrooms, the original theoretical and pedagogical traditions for early years, as well as the more participatory and co-constructive pedagogies included in the framework.

Developing an understanding of children's participation as spatial and relational the next section explores and addresses the current constructions of children's participation within the framework and wider supportive and evaluative documentation and how these underpinning participatory values are enacted through classroom space.

2.3 Children's participation

Children's participation is currently recognised as mainstream (Percy-Smith, 2010) and is increasingly given prominence in international and national policy rhetoric (Tisdall et al, 2014). Children's participation is given equal prominence throughout the Foundation Phase framework and supporting documents (WAG, 2008; WG 2008a; WG, 2015; Taylor, 2015). However, recent research has questioned how this participatory rhetoric is enacted, as there is a noted lack of research and recognised practice within Wales (Croke & Williams, 2015; Lewis et al, 2017).

This chapter positions participation as being influenced by "the spaces in which it happens" (Percy-Smith, 2010, p.109), and considers what it means for children to participate using the wider political, pedagogical and spatially driven constructions of space underpinning Welsh Government policy. It further draws on broader spatial and architectural understandings of space to frame children's participation in the design and co-creation of their classrooms spaces as a Spatially Democratic Pedagogy.

It should be noted this chapter is linked to how children's participation is viewed and supported theoretically and pedagogically within the intervention. Children's participation in the research process is discussed separately within the methodology section (see chapter 4).

2.3.1 Children's participation - rhetoric

In the UK children's participation is seen to be overwhelmingly interpreted as children "having a say in decisions" (Percy-Smith, 2010, p.107). However, framing participation as having a say does not automatically require action (Alderson, 2015), always give children's voice influence (Lundy, 2007) or build democratic communities (Clark, 2010). Indeed, the UN Committee has warned that "appearing to 'listen' to children is relatively unchallenging [and] giving due weight to their views requires real change" (2003, para. 12). Within the Foundation Phase while the rhetoric underpinning children's participation in decisions which affect them is widespread throughout the framework and supporting documents (WG, 2015; WAG, 2008; WAG, 2008a; WAG, 2011), evidence to support this in practice is patchy (Croke, 2013).

More generally, Deuchar (2009, p.35) has highlighted pupil voice is often reduced to, "isolated pockets of pupil consultation rather than school-wide democratic practice". These isolated pockets are seen to be positioning children's participation as "tokenistic routines related from an adult perspective" (Bea, 2010, p.215). Similar concerns have been displayed by the Welsh Government who have admitted pupil participation can be patchy and tokenistic (Welsh Government, 2010). Across the UK this sporadic sense of practice is seemingly unchanged as more recently the Children's Commissioners have reiterated these concerns and claim there are still, "inconsistencies" in both "quality and impact" when supporting children's right to participate (UK Children's Commissioners, 2015, p.13).

The Welsh Government have called for a change in culture, "where pupil participation becomes part and parcel of everything the school does, including teaching and learning". (Welsh Government, 2010, para 4). This holds resonance with Dewey's (1916) positioning of participation as both the objective and means of education. Where pedagogically the goal is "that children become part of the community and at the same time, participation is also the means to bring that about" (Berding, 2016, p.51). However, any pedagogical tools or ways of working are yet to be routinely enacted or embedded within Foundation Phase classrooms.

2.3.2 Children's participation in Wales

Within Wales there has been a clear and strong commitment by Welsh Government to support children's participation in decision making through both rights based perspectives and pedagogical approaches (Welsh Government, 2010; 2011; 2015). Indeed, since the country's devolution there has been an epochal shift in the importance given to children's participation and children's rights have been described as "emblematic" of Welsh Devolution (Rees, 2010). However, concerns have recently been raised in both right's driven research (Croke and Williams, 2015; Lewis et al, 2017) and early years pedagogical research (Maynard et al, 2013) about how children are supported in enacting these participatory practices within the Early Years in Wales.

Research on how children enact participatory principles in Foundation Phase classrooms is surprisingly sparse considering the increased rhetoric. Children's participation within the Foundation Phase framework is currently developing through two prevailing discourses. Children's rights, driven by the articles set out in the United Nation's *Convention on the Rights of the Child* (CRC) which has "played a part in developing education policy in Wales" (Maynard et al, 2013, p.8), and requires that children are "being an active participant in decision-making within schools and about their learning" (Maynard et al, 2010, p.5), as well as the introduction of pedagogical approaches which require children's participation through an

array of pedagogical terms and approaches, linked to more socio-cultural, democratic and co-constructive understandings of learning (Maynard et al, 2013; Aasen & Waters, 2006). Terms particularly used throughout the documentation include, sustained and shared thinking, child-initiated learning, child-led learning and children's voice (WAG, 2008a; Welsh Government, 2015). Within this thesis both constructions of participation are drawn together by their equal positioning of children as able to participate.

2.3.3 Participation as children's rights

The current rights driven vision of children as participants was introduced by the Welsh Government in their initial strategic plan for the country, Better Wales, in which they stated "[e]very young person in Wales has the right to be consulted, to participate in decision making, to be heard on all matters that concern them or have an impact on their lives" (NAfW, 2000, p.6). The formal adoption of the CRC, by the Welsh Government, in January 2004 meant the Convention was to be considered "as the basis for policy making for children and young people" (WG, 2015a). In 2011 the *Children and Young Persons Rights Measure* was seen to strengthen the Government's commitment to these rights based approaches with all ministers having to give due regard to the CRC whenever they exercise their functions, positioning the CRC as the basis for all its work (Lyle, 2014).

More recently, in Swansea, the county in which the research is undertaken, Cabinet Members sought to embed the UNCRC within the Authority's Policy Framework, and to mainstream positive approaches to the rights of children and young people. The Children and Young People's Rights Scheme was formally adopted on 21 October 2014 (Swansea Council, 2014). This rights driven view of children's participation was initially presented as a central approach and as putting "local authorities, local communities and locally determined needs and priorities at the centre of the agenda for schools" (NAfW 2001, p.2).

These rights driven constructions of participation are becoming embedded in the way in which participation is framed for young children through Welsh Government education policy. This framing of participation resonates with Percy-Smith's (2010, p.108) claim that there is a "preoccupation with political, rather than other forms of participation". Concerns reflecting the weighting given to these political/rights driven constructions of participation over the more participatory pedagogical constructions of democracy are also being raised within Wales (Crowley, 2012).

In Wales these rights driven constructions of participation are being framed by UNICEF's Rights Respecting Schools Award, with UNICEF recently claiming more than 4000 schools are involved with the award across the United Kingdom. (www.unicef.org.uk/rights-respecting-schools/about-the-award/awarded-schools/). "The Unicef UK Rights Respecting School Award (RRSA) is based on principles of equality, dignity, respect, nondiscrimination and participation ... young people and the school community learn about children's rights by putting them into practice every day" (UNICEF, no date, p.3). It is these rights driven (rather than pedagogically driven) constructions of participation which are currently seen to support the more formal aspects of participation, positioning children within adult framed, representational forms of participation and establishment structures like school councils (Maynard et al, 2013). Worryingly school councils within Wales do not have to include representatives from the early years and are not yet seen to have "a significant impact on school procedures and policies or on approaches to teaching and learning" (Croke & Williams, 2015, p.52).

The more formal representations of democratic and participatory structures resonate with Tisdall et al's (2014) wider acknowledgement there have never been so many formal supports for children's participation. However, these top down participative practices are not seen to position children as a legitimate group within participatory processes (Thomas, 2007) and therefore these participatory practices can become "consultation" (Percy-Smith, 2010, p.109). Currently the positioning of children's participation

through the formal, representative practices such as school councils and different committees foregrounds the process of participation as an individual, representational process, where individuals from each class represent the wider views of children from their year group. These more formal representative approaches are seen to be "abstracted from everyday lives and concerns" (Percy-Smith, 2010, p.107), and often are seen to favour the clever, popular and well behaved children (Davey et al, 2010). These formal practices are seen as disconnected from how children are actually supported in becoming participants within classrooms and Lyle (2014, p.215) argues these more rights driven constructions of the child should have implications for education in Wales, recognising "pedagogical approaches in classrooms will need to change".

Pedagogically supporting this vision of participation as an individual process is also considered difficult. An example given by Stephen et al (2010, p.326) when researching active learning within Scottish classrooms noted, "incorporating even a degree of such an individual and child driven approach remains a considerable challenge in the educational culture typically encountered in primary classrooms". Further reflection on this data led the research team (Martlew, et al, 2011) to conclude moving towards an 'active pedagogy' required teachers to create specific contexts to enable children to follow their interests. They also recognised this becomes increasingly difficult for teachers who work within more formal curricula that support targets and accountability and have a more structured framing for teaching and learning attainments (ibid). It can be no surprise similar tensions and challenges have surfaced when considering the understanding of individual participatory pedagogies promoted within the Foundation Phase classrooms. Crowley (2012) notes it is these individual rights driven processes which seem to have been embedded within education in Wales, rather than the more participatory democratic approaches, which are seen to have the potential to directly engage children in decision-making.

2.3.4 Participation as pedagogy in the Foundation Phase

Children's participation is identified by a recent evaluation as one of the twelve pedagogical elements of the Foundation Phase within which children are "involved in initiating and directing their own learning" (Taylor et al, 2015, p.22). Children's participation is also representing the more sociocultural approaches alluded to in the framework (Maynard et al, 2013), within which participation and more specifically "being an active participant in decision-making" is seen to support children's participation (Maynard et al, 2010).

When reflecting on participatory elements of practice experienced through the recent Foundation Phase evaluation, Taylor et al (2015) identified children's ability to "spontaneously direct their learning, e.g. making mud cakes for the café" (p.136), their ability to "choose which activity to engage with" (p.139) and their ability to, "direct their learning in a variety of learning zones with the addition of enhanced challenges in various parts of the classroom, e.g. following a challenge on creating a nest in the creative area." (p.143). Pedagogically these individual participatory practices are being framed through constructivist models of learning within continuous provision spaces. Children are seen to individually participate within the spaces and with the materials provided for them. Pedagogically children's participation becomes limited to and by these spaces and the activities created for each space. And although children within this construction are participating in which spaces they want to spend time and which activities they might do, they are not involved in decision making about the types of spaces and activities which can be on offer. This is problematic as Bae (2009, p.391) argues participation should go further than mere 'individualistic choice routines'.

Children do not generally participate in any decisions about what classroom spaces they will have, even though children's participation in the planning and creation of space is a requirement. The framework details children

should have, 'opportunities to be involved in the focus, planning and setting up of play areas both indoors and outdoors' (WAG, 2008c, p.7). This participatory approach to the construction of space does not come with any theoretical context or guidance on its practical application. It is not explored or expanded upon throughout the documentation and there is no further insight into how this participatory approach to space could be enacted in the classroom. Adding further uncertainty to this participatory approach is the other, more widely held construction of classroom space, continuous provision, which is provided for children. Continuous provision is required to offer "a variety of different learning areas/activities for children to engage with" (Taylor et al, 2015, p.23) and is expected to promote "discovery and independence" (WG, 2015, p.3). Within this construction it is argued children become 'users' of space, rather than participants in its construction.

The more participatory approach to the construction of space stated briefly in the framework becomes a contradictory aside which is not supported pedagogically and from personal experience is rarely seen in practice. Experience as both a teacher and researcher within the Foundation Phase has given me insight into this practice and children's participation in space is often reduced to being asked what the role play area should become for the 'people who help us' topic, with a number of options given as a choice. A level of scepticism is expressed here as to how children's participation is realistically able to transform classroom space when, in reality, they are enacting participatory practices in spaces which do not change and already present the what, how, when and where of how to use the space. Children's participation within these spatial practices is constructed and constricted. It is not supported by this pre-determined and outcome driven construction of space.

The framework further describes how, "resources should be of good quality, well maintained and should invite participation, offer challenges and cater for different learning styles and stages of development" (WAG, 2008a, p.18). Children's participation within these spaces is couched in the styles and stages of development, linked to curriculum and learning outcomes and

is not explicitly constructed to support participatory practice which enables children to be decision makers in their everyday experiences. Resonating with Maynard et al's (2013, p.49) observation that participation within the framework is not concerned with children's personal growth but is to "promote children's engagement in their learning".

Pedagogically supporting children's participation within the Foundation Phase has been more generally discussed by Maynard and Chicken (2010, p.38) who highlight through their research with Foundation Phase practitioners that practitioners demonstrate a "commitment to, and the pervasiveness and embeddedness of, an approach dominated by prescribed and subject-related outcomes". They further highlighted developing an approach which moved away from this approach towards a more child-led practice "proved to be complex and challenging". In a study exploring Foundation Phase practitioner's use of their outdoor spaces Maynard and Waters (2007, p.263) highlighted the lack of pedagogical support teachers gave when children initiated their own learning stating 'teachers did not get involved in child-initiated exploration or play, or comment upon it'. Teachers were quoted as referring to these times as, "a time to explore and let the children take more of the initiative" (ibid).

The recent Donaldson (2015) review recognises these pedagogical ambitions can only be realised by teachers, selecting appropriate teaching methods. Although it is reassuring this is an acknowledgement that participatory practice needs a shift in pedagogical approach, it is interesting to note at this stage that within the Foundation Phase documentation there is no direct reference to any pedagogical tools which might support this way of working. Aasen & Waters (2006, p.126) highlighted this when the Foundation Phase was first introduced and commented the framework, "contains little about the methods to be used". Little has changed with regard to pedagogies that offer support to children's participation within the classroom.

2.3.5 Current pedagogical enactments of the child as participant

Currently seen to be enacting these more participatory democratic principles are the Italian pre-schools of Reggio Emilia. The pre-schools of Reggio Emilia are chosen to highlight how democratic practices are currently realised in early years education because the initial proposal for the Foundation Phase was considered to have been drawn from practice within Wales and beyond (NAFW, 2003), with "explicit and implicit references" made regarding the Northern Italian pre-schools (Maynard et al, 2013, p.14).

Within the pre-schools of Reggio Emilia children are positioned as co-constructors of learning in an interdependent relationship with adults, families and their communities. The relationships, communications and interactions children have with their parents, other children and teachers are positioned as central to teaching and learning (Edwards et al, 1998). Children, within this rationale are not positioned to experience their education passively but to become participants. As participants children, practitioners, and the wider community create an emergent curriculum, the progettazione (Rinaldi, 1998).

School spaces are explicitly considered within the pedagogical enactments and relationships of the pre-schools, for example, the piazza is a space that represents the main square in Italian cities. It is seen as a space where people can meet and talk to one another (Edwards et al, 1998). These spatial layouts and considerations are seen to have a "pedagogical connotation: the piazza supports the formation of relationships, symbolising the "pedagogy of relationships" in the sense it fosters encounters, group interaction, stories, social relations, and the children's assumption of a public identity" (Ceppi & Zini, 1998, p.37). Pedagogically space has become "a key source of educational provocation and insight" enabling a view of classroom and schools spaces which "can take on a life of their own that contributes to children's learning" (Strong-Wilson & Ellis, 2007, p.40).

However, although considered, these spaces are not afforded the same participatory underpinning as the progettazione. These spatial constructions and practices I note are still created and provided for children. Space is still viewed as provision for children. Children within this constructivist construction of space are still positioned to be manipulating the pre-existing environment. Workshop areas, morning talk areas, piazzas and ateliers all have pre-determined ways of being and working, they are all developed to support specific processes and practices. Although recognised to be less outcome driven, they are spaces still requiring (predetermined) ways of being and using the spaces provided. Children are still acting on predetermined spaces that have predetermined uses.

2.3.6 Participatory practice within space

When discussing barriers to the implementation of participatory practices in Wales, Lyle (2014, p.219) presents the "relations of power" between children and adults as a key factor. This thesis, whilst acknowledging the importance of listening to children's voices in practice as embedded within the relationships they have with the adults, also foregrounds the spaces in which these participatory practices take place and how these spaces are constructed. Lyle's position (2014) explores power through a human centric lens with power relationships happening within space, negating the integral position classroom space also holds within this relationship. Using a spatial understanding of participation disrupts these "power relations that are inherent in adult–child relations" (Lansdown 2005, p.1). This resonates with Percy-Smith's (2010, p.110) call for a "rethink [of] the 'spaces' for participation ... in terms of how the spaces, and by implication power relationships, in different contexts are constructed".

Children within both the Foundation Phase classroom and the spaces provided within the pre-schools of Reggio Emilia are not regularly included in the design or construction of their classroom spaces. It is this habitual way of constructing classroom space which is seen to go some way to explain why children's participation in their classroom space (even

though it is a requirement within the framework) is not widely realised within current Foundation Phase classrooms. As the sole use of constructivist spaces is seen to impede the ability to see any alternative possibilities (Horne-Martin, 2002, p.153).

If we negate children's opportunities to create classroom space this places them as dependant on the existing conditions (Hill, 2003). Within the Foundation Phase, the existing conditions (continuous provision) have been shown to embody constructivist and developmental understandings of learning with an increasing focus on externally imposed activity and outcome. They are supported through human-centric and representational notions of epistemology (Fenwick et al, 2011; Moss, 2014). Children's participation within these spaces has historically been driven by an understanding of free play, with children able to choose the direction of the activity, as noted by Tovey (2013, p.85) who shares an example of children's engagement within spaces provided by Froebel from Middendorff (1848),

Little boxes of blocks are given to them, and they begin without delay to play eagerly. One child remembers how he has just had breakfast with his dear parents, and he quickly builds a table surrounded by chairs … Yonder a child shows us quite a different idea. He has seen a shepherd starting out in the early morning with his flock; and so he represents the shepherd prominently, with the sheep obediently following him. Thus each child follows his individual bent, according as the spirit moves him … Here is a boy who has built an anvil … There is a little girl who has built a town hall. Her father goes there every morning when she comes to kindergarten.

(Tovey 2013, p.85)

However, if we consider this practice in light of the documentation used to support the constructions of space within the Foundation Phase, there is a significant difference. The child within the example above has a relationship with the space and materials that is underpinned by their own experiences,

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their own ideas. Froebel described this way of working as, "self-activity" (Froebel, 1887). Through his pedagogical understanding of self-activity, Froebel asserted that observation and discovery were not enough and also required activities that enable the child to be active and expressive (Courthope Bowen, 1893, p.53).

Spaces within the Foundation Phase framework are increasingly moving away from this type of practice towards spaces which have pre-determined ways of working and pre-defined activities and outcomes within the space. The power to decide what the child will do in the space with the materials provided is passing from the children themselves, as in the example above, to the curriculum framework and supporting curriculum documentation. As further example, Taylor et al (2015, p.7) in their recent evaluation call for the rebranding of continuous provision to, 'learning zones' emphasising an apparent need for 'exemplar materials' which can be given to teachers to organise and structure activities within these spaces further.

In a similar reflection Urban (2008, p.142) highlights teachers are being given activities and outcomes through external organisations and curriculum frameworks and as such views it as an almost impossible task for them to "make judgements themselves in a way that is relevant for their actual working context (i.e. the particular children, families and communities they are working with)". He further states these externally imposed pedagogical requirements will also deprive teachers of their, "professional autonomy" (Urban, 2008, p.142). A similar argument is made within this thesis regarding the construction of space and spatial practice within the Foundation Phase. Increasingly teachers are required to be working with externally imposed constructions of space and are therefore unable to create spaces specifically for or with their children and school communities. This is equally seen to deprive teachers of their professional autonomy as well as children's ability to participate or follow their interests.

2.3.7 Participation conclusion

This chapter has discussed current constructions of children's participation within the Foundation Phase. It has demonstrated how pupil participation is securing its position as a central tenet of the framework and wider Welsh Government legislation and policy. It has also discussed how this rhetoric is often patchy and inconsistent in practice and how significance is either given to formal, representational views of participation, or frames a child's choice of activity as a child's ability to participate in their learning. This chapter questions where are the spaces for children and teachers to enact and support practices which are child initiated, child-led and based on the children's interests?

This restrictive construction of space is positioned as undemocratic, as placing children as consumers and users rather than participants within their spaces. To support children's participation in their learning it is deemed necessary to theoretically and practically consider the construction of classroom space not as a container but as a site of democratic practice. In this way the design and co-creation of classroom space is positioned to develop democratic practice collaboratively through children and teachers and ground it in the everyday life of the classroom.

Considering the lack of children's participation and democratic engagement in practice, Devine (2002, p.312) stated over a decade ago " [t]he absence of children's voice in most decisions regarding the organization of their time and space is contrary to the notion of children as social actors with the right to have their views expressed and heard". Clark & Percy-Smith (2006, p.6) called for a "move beyond debates about the justification for young people's participation and related discussions about participatory methods, to the forms of participation that make a difference in the everyday lives of young people". At this time Flutter (2006, p.191) also highlighted the need to theoretically pursue classroom space which would "embrace and enact democratic principles" within which she concluded "student involvement

must be both genuine and sustained" (ibid). More recently, Nussbaum (2010, p.141) has argued, "we think far too little about what we need to do to transmit these democratic practices to the next generation and ensure their survival" and Blackmore et al (2010, p.12) further note there is a lack of research showing how schools "prepare for, and transition into, new learning spaces in ways that encourage innovative pedagogical practices". Despite the widespread recognition of this work a decade ago, little seems to have changed. Reflecting on the ongoing gap between the rhetoric and enactment of children's participation in Wales, (Lewis et al, 2017) suggest, "we are not sufficiently imaginative to consider how best to support young children in their enactment of this right". This research seeks to take up this challenge and positions Spatially Democratic Pedagogy as an imaginative and innovative pedagogical tool to support children's participation.

Chapter Three: Spatially Democratic Pedagogy as a Theoretical Underpinning - geographical, architectural and pedagogical constructions of space.

Spatially Democratic Pedagogy is created as a pedagogical approach to the construction of classroom space. As such, it requires a theoretical underpinning and a practical teaching tool (Alexander, 2008). This chapter sets out its theoretical underpinning. It seeks to establish a theoretical grounding for the design driven pedagogy that supports children as designers and co-creators of their classroom space. It draws together spatial and material ideas from the three disciplines of geography, architectural theory and design and pedagogy to support children's participation in the construction of space. It concludes by drawing the three disciplines together to present children's construction of space as a Spatially Democratic Pedagogy.

3.1 Geographical constructions of space

Space within this chapter is positioned as a product and a producer of its political, social and cultural practices (McGregor, 2003, p.354), regulating and influencing the social practices and relationships which occur within it (Allen & Catts, 2014). Developing these ideas within the classroom the chapter initially draws on Lefebvre's (1991) ideological and political understanding of space, to position classroom space as dynamic (Gallagher, 2006), intra-active (Lenz Taguchi, 2010) and sociomaterial (Fenwick et al, 2011). It also frames the subsequent relationships which form within the spaces as resulting material practices (Massey, 2005). Classroom space within this construction requires an awareness of the link between the spatial and material and the political and social agendas they promote. Foregrounding space in this way strengthens its agentive role within this thesis and allows the research to question the current positioning of classroom space as the staging for educational practice (Fenwick et al,

2011). The chapter continues by positioning these geographical understandings of space within a pedagogical remit, and concludes classroom space is under theorised and effectively neutralised within current education policy, practice and research within Wales.

3.1.1 Political and ideological space

The more dynamic, geographical conceptualisations of space are often recognised as being strongly influenced by the work of Lefebvre (Gallagher, 2006). Understanding social space as a social product, Lefebvre (1991) considers social space as a fundamental dimension of human societies and as indistinguishable from physical space. Space, for Lefebvre (1976, p.31), is "political and ideological … a product literally filled with ideologies" and is dominated by the capitalist system of production (Gieseking & Mangold, 2014). Lefebvre (1991) contends socially constructed space is perpetuated through the features apparent in these spaces. When considering the role of these spatial features, Gieseking et al (2014, p. 285) use the example, "each day as people wake up to an alarm, commute to work, watch television, or pay bills, this system of space and time is perpetuated and reproduced". It is the spatial relationships formed with, through and by the features apparent in spaces that support our political systems. Within this construct spaces are designed to deliver an expected use and "the 'users' passively experience whatever was imposed upon them" (Lefebvre, 1991, p.43).

Applying this thinking pedagogically, similar readings of classroom features are seen to enable a better understanding of the underpinning theories and ideologies about children and childhood (Clark, 2010). Within these spaces children will also have daily routines driven by the spaces themselves. They will have whole class stories on the carpet, use the continuous provision spaces at set times, eat lunch in the hall, go outside to play. The spatial features apparent within these different spaces will continue to support the political and ideological understandings of learning and children. Such an inclusive view of classroom space contrasts with the understanding that to date places space where its meaning and role is predominantly relegated to

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the backdrop (Fenwick et al, 2011) and its pedagogical agency perceived as essentially non-existent. It is the agentive child, acting upon these spaces that has agency, the spaces are set as the stage on which children learn.

However, when developing an understanding of space as a product, Lefebvre (1991, p.xvII) reminds us that, "[i]f space is a product, our knowledge of it must be expected to reproduce and expound the process of production" and then consequently, "the object of interest must be expected to shift from things in space to the actual production of space" (Lefebvre, 1991, p. 36). Considering the production of space, and for the purposes of this study specifically the production of classroom space as profoundly political and cultural, allows an understanding of the production and experience of space to be specific to particular groups and cultures in specific places and at particular times (Gieseking et al, 2014). Consequently space, seen through this lens, is to be understood through the patterns and practices of our everyday acts of social activity in our everyday social spaces (Lefebvre, 1991). Its features, spaces, activities and the relationships and roles it supports can be linked to the political positioning of education within its specific political, cultural and social milieu.

Classroom space within this understanding is not an isolated space, an autonomous structure independent from the broader social factors at play at any given time. It is not considered as a finalised construct, a space that is fixed, but instead can be viewed as an ongoing product of relations that are continuously "negotiated, and re-organised" (Vuorisalo et al, 2015, p.68). This also serves to perpetuate the pedagogical space as a construct of its wider institution, as reflecting the wider political requirements of the school as a political, social and cultural establishment (Markström, 2010). It serves to remind us space is not neutral and the learning within space is not only supported by the relationships between the people within classroom space but by the spaces in which these happen.

3.1.2 Spatializing culture

Foregrounding these links between spaces and political and social agendas resonates with Low's (2014, p.34) "spatializing culture" in which she uses spaces and places to uncover "material and representational injustice and forms of exclusion". Low (2014, p.34) further understands "theories and methodologies of space and place can uncover systems of exclusion that are hidden or naturalised and thus rendered invisible to other approaches". Developing these ideas within a classroom context it becomes apparent classroom space within the Foundation Phase has been neutralised and therefore has been rendered invisible to comment or critique.

Again, it is important to recognise Lefebvre's (1991) reminder here, that as our spaces are seen to embody social and political relationships, we must question what these relationships are and what social and political agendas they promote. 'Spatializing' (Low, 2014) classroom practice in this way enables the theoretical underpinning to view and link classroom space to its wider cultural, political and pedagogical positioning. Classroom space becomes the social space in which children live and educational research should be encouraged to explore the spatial practices of our daily social action. Drawing attention to these spatial productions which in early years education is often deemed to be natural, neutral and simply "the way things should be" (Low, 2014, p.34) forces an engagement with the political, cultural and social agendas at play.

Developing the ideas of Lefebvre (1991), Gieseking et al, (2014) equate the changing of spatial experience with the changing of society and social circumstance. However, this is not something which has historically been recognised within early years education (Horne Martin, 2006) and is similarly not being recognised in the Foundation Phase. Early years education and practice in Wales is undergoing great change and the Foundation Phase is emerging through this curriculum transformation but there is limited recognition and consideration given to the pedagogical space

that is being (re)formed. (There is a request within the framework to spend more time outdoors, which is also recognised as developing tensions between formal and informal pedagogies (Maynard and Waters, 2007; and Maynard et al, 2013)).

3.1.3 Living together through space

Confronting classroom space in this way allows this thesis to ask "the most fundamental of political questions which is how are we going to live together" (Massey, 2013, no page). Using this question to reflect on current Foundation Phase classrooms and view space through this theoretical lens we become able to more readily question, what is Foundation Phase classroom space? And what do Foundation Phase classroom spaces tell us about how we will live together?

When we think about space in this way it allows us to move beyond the idea a classroom is just a physical space or a physical locality. We can now also discuss the political circumstances underpinning the spaces we are creating for young children. We are able to question the prominence of the continuous provision spaces, which are the predominant construction of space in the Foundation Phase. These spaces are seen to be providing the spatial vehicle for the detailed curriculum outcomes and standardised knowledge accumulation, which has been recognised to be foregrounded within the framework (Maynard et al, 2013). These spaces are also well established more widely within early years Education and are perceived as important markers of 'quality' (Siraj-Blatchford & Sylva 2004). Within the Foundation Phase, these spaces are argued to have contributed to the apparent tensions between the more formal aspects of the curriculum and the more participatory, socio-cultural underpinning agenda also promoted through the Foundation Phase documentation (Maynard et al, 2013) and the wider vision the Welsh Government has for children's participation in Wales more generally (WAG, 2004).

The current view of the child, from a spatial perspective, (as seen through the continuous provision spaces) cannot be seen to resonate with the powerful/participatory/competent child being promoted and validated through the Welsh Government's children's rights agenda (WG, 2011). Spatially the child within the Foundation Phase is positioned as needing to be provided with spaces and with pre-determined activities to transmit learning. The outcomes ascribed to these spaces are to become increasingly detailed, as shown by the recent re-branding of continuous provision as learning zones which are to include, "exemplar materials" which will demonstrate "how best to utilise these learning zones" (Taylor et al, 2015, p.7). Children within this construction are not able to contribute to what the spaces will be or what they will do in these spaces. The decisions are being taken without the input of the children.

3.1.4 Classroom space and pedagogy

There appears to be an assumption the inclusion of participation as an approach within the Foundation Phase, through the additional rights based agenda and the more progressive pedagogies around child-initiated and child-led learning (Welsh Government, 2015), is to be developed within existing spaces. However, these spaces demonstrate a container view of classroom space, reinforcing predefined learning happens within these predetermined spaces. It reinforces and promotes an understanding that different pedagogical approaches do not need to consider physical space or spatial factors as ideologically framed. Although consideration is given to the additional view of the child (Aasen and Waters, 2009) and subsequently to the possibility of different pedagogical approaches (Maynard et al, 2013), a change of space is not considered alongside these other curriculum changes.

The importance of the spatial changes needed is acknowledged by Lefebvre (1991) who asserts any changes to life or society are meaningless if they do not also create appropriate spaces. Spatial dimensions have recently begun to be discussed in work with Foundation Phase practitioners (Maynard et al,

2013a), however this work responds to the required shift in where children spend their days as they are now expected to spend equal amounts of time indoors and outdoors (WG, 2015). The recent study conducted by Maynard et al (2013a) discusses the importance of meanings ascribed to particular places and explores the meanings teachers and children give to particular spaces and places in their school environments. This positions spatial theories as tools for analysis within the research and as useful tools to critically understand teacher perspectives of indoor and outdoor spaces. However, spatial understandings of classroom spaces are used differently within this thesis. The sociomaterial ideas presented in chapter 3.3.4 are used to underpin the construction of space as a Spatially Democratic Pedagogy. Developing and supporting a Spatially Democratic Pedagogy through these geographical theorisations of space have enabled the creation of a theoretical and practical frame for pedagogy. This is uncharted territory for research on the Foundation Phase. Indeed, this appears to be uncharted territory for classroom space more generally.

Within the Foundation Phase teachers are required to have a repertoire of pedagogies to develop the different constructions of the child (Aasen and Waters, 2009) and different understandings of how children learn. Whilst these different pedagogical approaches have, to some degree, been recognised within the documentation, classroom space has not been afforded the same thought. There is no mention of how we are to view and construct classroom space. The resulting outcome is pedagogy again appears removed from classroom space. The predominant use of continuous provision within Foundation Phase classroom space has prompted this thesis to question if the more co-constructive, socio-cultural, child-led and democratic based pedagogies alluded to in the documentation can be realised in these unchanged spaces. Can democratic pedagogies be realised in pre-defined spaces? Can practitioners work with children to generate pedagogies and learning experiences which include the child in the decision making when the spaces they are working in are already constructed, have pre-determined activities and desired outcomes? Considering these questions through a spatial lens develops a way of thinking about space which draws it into the

discussion on learning where it becomes part of the teaching and learning relationship and one of the factors when planning, rather than the container within which the planning for teaching and learning is done. Developing an understanding of classroom space as a part of the learning sets a requirement that when new pedagogies are developed an understanding of the spatial implications must also be developed. However, when we consider this in light of the current changes in pedagogical epistemologies and practices (Maynard et al, 2013) there is a continuing lack of consideration given to the adaption or creation of different pedagogical spaces within the framework and supporting documentation.

3.1.5 Space conclusion

Using these geographical notions of space at the beginning of this theoretical underpinning has foregrounded the often ignored importance of the spatial aspects of a classroom. This geographical exploration of space has aimed to develop an argument for greater awareness of the links between the spatial aspects of the early years classroom, the political and social agendas they promote, and the resulting practices that are realised within the spaces. It has also set out an argument for the inclusion of spatial considerations when different curriculum frameworks, pedagogical approaches or teaching practices are introduced.

This discussion has also demonstrated classroom space is often relegated to the "staging for educational practice" (Fenwick et al, 2011). It is viewed as a physical space created and staged by teachers. Problematising these current constructions of classroom space and their ability to support these additional pedagogies demonstrates the little regard currently given to how these spaces reflect the Welsh Government's Children's rights and participation agendas and how they continue to reinforce developmental and outcome driven practices.

Creating a Spatially Democratic Pedagogy is positioned as a response to these pre-designed spaces by creating an 'empty' classroom space. This is seen to disrupt the conventional order of classroom space and supports this research in challenging the sole construction of classroom space through continuous provision. Creating Spatially Democratic Pedagogy as a pedagogical tool is seen as a way of thinking and working within classroom spaces which challenges entrenched educational 'truths' which see a separation between theory, policy, practice and classroom space.

Spatially, children within a Spatially Democratic Pedagogy are to play an "active role in constructing a social context and practice" (Nordtømme, 2012, p.320). Children's ability to be involved formally in the (re)creation of their physical environment is currently found to be limited to one off design projects (e.g. Dudek, 2005; Clark, 2010) and to date, the ability for children to be involved in collaborative forms of participation in constructing school spaces is limited (Gallagher, 2006). Informally, children's ability to construct space is pedagogically supported through their ability to build and create different things within the spaces provided for them; for example their ability to create new forms in the construction corner, or make models with play dough. However, the physical classroom environment is still seen as the domain of the teacher to be viewed as, "pedagogically staged space" (Nordtømme, 2010, p.317).

Starting with an 'empty space' is acknowledged as seemingly paradoxical as this chapter has argued "space is never empty [as] it always embodies a meaning" (Lefebvre, 1991, p.154). However, within Spatially Democratic Pedagogy it is crucial to remember it is the very emptiness of space which presents its social and political makeup. It is the emptiness which defines its as yet undetermined and undefined nature. Its emptiness conveys the notion the space needs to be created by the children, not used by the children. Its emptiness is to support the valuable contributions children can make to their spaces. It allows the emptiness to be positioned as politically and socially different to the current constructions of predefined classroom spaces. It positions 'empty' space as dynamic and intra-active and as supporting a

pedagogy which aims to foster democratic and co-constructive roles for children within their everyday lives within the classroom. Presenting emptiness as a basis for pedagogy this theoretical underpinning will continue to demonstrate that emptiness can also embody participatory and democratic meaning through both architectural and pedagogical understandings of space and learning.

The following section takes an architectural view of space and considers how these more unknown and flexible constructions of space are being developed within the field of building design and further how they can support pedagogical thinking on the construction of classroom space and the child's role within its construction.

3.2 Architectural theory

Architectural space, the space of building design, is considered to be situated in cultural, social and socioeconomic frameworks (Cohen, 2005; Crysler et al, 2012; Woolner et al, 2012). Drawing congruence with the constructions of space considered in the previous chapter, architectural space gives form to the values and structures of a society, as well as the more functional needs of any given institution (Davies, 2011). This views architectural space as absorbing political, cultural and social expectations and understandings. In this way architectural space is not an autonomous built entity, but the mediator between people and their wider environment (Heynen & Wright, 2012).

Initially this chapter considers theoretical constructions of architectural space. It draws similarities between the form follows function approach to building design and how classroom space is designed within the Foundation Phase. It also considers more collaborative approaches to the design process, and continues to detail how these understandings are realised through building design projects. The chapter further explores how these

architectural and design led ideas have also focused on children's participation in the design process. Finally, this chapter gives these architectural and design practices a pedagogical remit. Using Jilk's (2005) notion of useless space, it discusses how the design and creation of classroom spaces can be positioned as a pedagogical approach, supporting Spatially Democratic Pedagogy as a new construction of classroom space.

3.2.1 Architectural theory - where is it now?

Twentieth century architecture predominantly followed the modernist mantra, "form follows function", attributed to the architect Louis Sullivan, whose approach to architecture was heralded as the way to liberate the decorative architecture of the time giving emphasis to the more functional aspects of building design. In 1896 he defended his functional approach to building design by explaining,

It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. This is the law.

Louis Sullivan 1896

However this form follows function approach to building design has more recently been claimed to condemn buildings to "utilitarian rigour and constrained purpose" (Scheeren, 2015). Recognising the function for which a building is initially designed may change, the form follows function approach to construction becomes too restrictive and can be seen to limit a building's ability to adapt and change (Davies, 2011).

Within this thesis architectural construction is given a pedagogic remit. Using the architectural construction of form follows function to consider

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continuous provision within the Foundation Phase allows a view of classroom space that similarly foregrounds the function of the space. Spaces are built around their function and children are expected to build in the block corner, read in the book corner and write at the writing station. These function driven spaces are viewed as limiting the ability for children to adapt or change these spaces from their original functions. Architecturally, these spaces created for learning are seen to "communicate a symbolic message about what is expected to happen in a particular place" (Horne-Martin, 2005, p.93), and send the message, "learner, do this but not that [leaving], no active role for the learner" Jilk (2005, p.32). Jilk (2005) further illustrates that these, often outcome-driven learning environments become barriers to any actions that have not been permitted. Within this construct, classroom space both architecturally and pedagogically becomes static and restrictive, each space has a function which is already predetermined and set.

Horne-Martin (2006, p.92) observes that often "changes in education do not adequately recognise the impact of the physical environment". Similarly, if we consider the transition into the Foundation Phase with its additional pedagogies which focus on the more socio-cultural and participatory approaches to teaching and learning we can observe classroom space has not seen any significant changes. It is argued that, in relation to classroom design, little has changed since the introduction of the Foundation Phase and teachers are continuing to work within environments which reflect previous constructivist understandings of pedagogy (see chapter 2).

Institutional architecture constructed through a form follows function approach is considered to pigeonhole life and imagination (Davies, 2011, p.81). Within a classroom remit this approach can similarly be seen to predetermine all spatial interaction between children and their classroom spaces which can also serve to pigeonhole the possibilities for learning by minimising the creative involvement of the children. Children's use of these spaces is developed through their ability to 'read' spaces and make sense of them as they would spoken and written words (Davies, 2011). 'Reading'

these spaces allows children to develop an understanding of what the intentions of teachers and adults are and where the 'power' within these spaces lie. Positioning classroom spaces as architectural and pedagogical texts we can argue that both pedagogically and architecturally these current continuous provision spaces are created with a function and are constructed to show us and tell us what to do.

Through this architectural lens, buildings and spaces demonstrate 'models' of the user and these models are developed in accordance with how an architect conceives the user for whom they are designing (Hill, 2003, p.2). Positioning schools as intricate systems which include pedagogical, social, cultural, socio-economic as well as spatial factors (Higgens et al, 2005), school design can equally be viewed as a socially and culturally constructed process (Woolner, 2010) which demonstrates models of the users, models of children.

Within this understanding school spaces become a product of how children are conceptualised (Cohen, 2005). Spaces are developed in accordance with the "beliefs which are held and assumptions which are made about children and their needs and capabilities" (Clark, 2010, p.173). Considering possible constructions of the user within space, Hill, (2003) presents three types, the passive, the reactive and the creative. A passive user of space transforms, neither its use, nor its meaning. The second reactive user is able to modify space but only has a limited number of possibilities defined by the space. Both Hill's (2003) passive and reactive users become dependent upon their existing spaces. The creative user, according to Hill (2003) is able to create a new space or adapt an original use or meaning. Within continuous provision children are positioned as passive users of space as the teacher is the provider of these spaces and they use these spaces passively, they may do differnet things within the space, for example, they may write a letter or make a get well soon card in the writing area but they are unable to change the writing area itself. It is this absence of children's voices in decisions about their classroom spaces which is critiqued within this thesis as it appears contradictory to the frameworks and Welsh Government's wider

understanding of children as active participants in decision-making. Within this construction the teacher is placed as the architect of these spaces and this role is discussed in the next chapter.

3.2.2 Teacher as architect

Developing an architectural understanding of how buildings are currently constructed and used within a pedagogical remit foregrounds the theoretical and practical constructions of space. The transition from building to classroom design focuses on the processes of design and the values which are supported through their architectural construction. Therefore drawing from the architectural construction of space discussed above this chapter positions the child as the user of the space and the teacher as the architect.

Developing classroom design, construction and use through this architectural lens requires an understanding of and reflection on both the functional requirements needed in the design process as well as the values and power structures that are demonstrated through it (Davies, 2011).

Heynen and Wright (2012, p.41) also state the importance of recognising power when discussing the role of the architect and further recognise that architectural spaces can 'sustain, question or modify political and social structures of power' (ibid). Burke (2007, p.363) more recently reminds us that schools still commonly contain spaces where adults assume positions of power over children. This can be similarly stated within the current construction of continuous provision within the Foundation Phase as the teachers (architects of the space) are given the 'power' to create the space including the resources, activities and outcomes of the space.

It is the teacher's overriding role to provide classroom spaces, before the children arrive in the classroom, which supports the positioning of the teacher as sole architect of current classroom space within the Foundation Phase. Demonstrating this adult led spatial construction within schools Valentine (2000), in her earlier study on school meal practices, concluded

although children may be encouraged to make choices from a range of food provided, they would not be involved in the assortment of choices on offer. Reorienting this understanding to classroom space, we can similarly argue children are able to make choices from the spaces on offer but are not involved in which spaces are on offer. It is pertinent to note although the teacher is seen as the architect, their role is still understood to be situated in their cultural, social, political and economic milieu (Crysler et al, 2012).

A recognised challenge to the positioning of the teacher as the architect is that the child and teacher play roles as both architect and user of the space, and architecturally a building's use, is understood, in part, to be decided by the user (Davies, 2011). The user is also viewed to give meaning to space. Within this argument, the users of space also become architects because meaning is always negotiated (Davies, 2011, p.35). Accordingly, it is acknowledged that children will undoubtedly be involved in the production of their classroom spaces through their use of materials within spaces as well as their reactive interactions with these spaces. Their involvement through these spatial practices is considered in the next chapter but architecturally this chapter is considering predominantly spatial not material factors.

3.2.3 Architectural space as negotiated space

As architectural theory continues to evolve there is an effort to reconsider how the architectural and the social are constructed and how they are related to each other (Crysler et al, 2012). Developing our understanding of this relationship between classroom space and social practices is the relationship between the architect and user of the space. Within this thesis, focus is on the spatial relationship between the teacher as the architect and the child as the user of these spaces. Architecturally, this relationship is complex because, "a building means not what the architect intends it to mean but what all of the users of the language of architecture will allow it to mean …. No single person can decide such a thing because language is shared, and meaning must always be negotiated" (Davies, 2011, p.35).

However, it is pertinent to recognise that continuous provision is negotiated by the way in which it is used and not by what the spaces themselves are. This difference always places children as users of space and always places teachers as the architects of these spaces. Pedagogically children are excluded from the design and construction of these classroom spaces, but architecturally there is an understanding that, "when designers and architects become familiar with the range of views held across a particular school community and beyond, it is more likely that the resulting environment will be fit for all the purposes anticipated or desired" (Woolner, 2010, p.43).

When considering this pedagogically we can argue current classroom spaces do not consider either individual or cohorts of children. Classroom space stays the same irrespective of the group of children. Pedagogically developing this understanding of children's design ideas within each new cohort would, within this view, enable teachers to create environments which would be more specific to particular children and particular year groups, supporting the more participatory and democratic aspects of the framework.

Currently it has been argued "an environment that appears satisfactory to one group of users may be disappointing to another group" (Woolner, 2010, p.43). Tensions are then seen to arise in these spaces when different users have different perceptions and needs (Higgens et al, 2005). Further reflecting on this design process pedagogically it can be argued although the framework requires practice to support children's interests and participation, spaces are not linked to individual children or individual cohorts and do not encourage children's involvement in the design or construction of classroom space. This exclusion within the design and construction of classroom space does not develop the different interests, needs and capabilities of the different children as teachers are required to develop spaces driven by the standardised spaces.

There is an argument here that is linked to the perceived negotiation of classroom space and how children within these spaces are able to subvert the intended use of space and the institutional rules of the classroom as "children are not simply influenced by their environments but act in ways that change them" (Wood, 2014, p.14). Although this thesis acknowledges children can subvert the use of space, this spatial practice is not valued or enacted. It is the value which is placed on these spatial practices and how they explicitly support children's participation that is of most concern within this thesis. As currently children's ideas or voices are not valued or represented as space. They are only able to subvert space, not create it. Current space only values representational knowledge dictated by the framework and other government directives. Within these spaces a child's ability to change the space or the activity within space is not supported. Children's participation in the design and creation of their classroom space is therefore positioned as a reconsideration of the "values and meanings" (Clark, 2010, p.171) of early years education. It is to encourage a (re)positioning of children as actors within their learning.

Demonstrating the transmission of cultural values through school architecture, Taylor (1995, p.37) highlights that, "we expect schools to prepare children for living in a democratic society, yet we provide a learning environment that resembles a police state". Taylor talks about "giant chain-link fences, locked gates, guards, and even guard dogs" (ibid). Although the argument seems less dramatic, and there are no guards or guard dogs, there is an incongruence forming between the democratic foundations of our society and the participatory and democratic understandings within the framework. Consequently, the spaces we are creating for children in the Foundation Phase do not support the enactment of these democratic principles or practices. As spatially within these classrooms, there are no decisions to be made, all of the spaces have already been decided upon and created before the children arrive, all spaces are predetermined (Jilk, 2005).

Such architecture fails to encourage a sense of participation. This argument when placed within current constructions of space within the Foundation

Phase, which are being developed for children before they enter the classroom, further highlights the tensions between the construction of the child as participant and the construction of the child that places them as a passive user and consumer of space. These consumer spatial practices are supporting constructivist pedagogies, within which children are to explore their spaces, with these spaces created around curriculum content and classroom topics.

Architecturally, Davies (2011, p.79) argues that this positions building design as a "servant of the establishment, providing the very mechanisms by which society is shaped and disciplined". The current design of classroom space within the Foundation Phase can equally be seen to be the promoting 'establishment' views. Where each space is linked to either a curriculum outcome, desired skill or activity which represents what is deemed appropriate and expected by the central curriculum framework (Welsh Government, 2015). Considering the architectural relationship between society and building design in this way, resonates with Foucualt's writing on space. Indeed, he is often considered to be of "special interest" when considering the architectural design of a building (Piro, 2008).

3.2.4 Foucault and architectural space

In Discipline and Punish, Foucualt (1977) famously uses Bentham's panopticon as a metaphor for society's architectural disciplinary capacity. Within Bentham's penitentiary, prisoners could be observed at any given time from a central tower and consequently, would behave as if they were constantly being watched. Seen to be succumbing to the 'regulatory gaze' (Osgood, 2006), they would modify their own behavior because of the ongoing feeling of surveillance being developed, even though it was discontinuous.

Architecturally, Foucault uses this design as a "jumping-off point for examining modern disciplinary society" (Gieseking et al, 2014, p.323), and finds similarities reflected in other forms of architecture including hospitals, asylums and schools (Foucault, 1977). Within these structures the essential element is an architectural theme of continuous surveillance and general visibility (Shah & Kesan, 2007). This architectural construction places the classroom teacher as the prison guard and likewise surveillance "at the heart of the practice of teaching" (Foucault, 1977, p176). More recently Jilk (2005, p.32) has also argued that classroom space is created on the premise of "surveillance by those in control". Foucault (1977) is seen to understand this architectural construction as "maintaining power of one group over another" (Piro, 2008, p.30).

School architecture through this Foucauldian lens becomes an important mechanism for power. Power is now not linked to a person, but is supported by the "distribution of individuals in space (Foucault, 1977, p.141). Architecture can now be recognised as an "operation of power, control, and domination" (Piro, 2008, p.30). However, as the next sections demonstrate, there are also ways in which architecture can be an operation of democracy, collaboration and shared practice.

3.2.5 Architecture for democratic and collaborative practice

The following sections will briefly explore some recent building designs which have been explicitly constructed to house and support both formal and informal participatory ways of being, living and working. The first, the Senedd, is the home for the National Assembly for Wales, the seat of Welsh democracy, which supports a formal and representational construction of participation. The second building, the Collaborative Cloud (Scheeren, 2015), is a media headquarters that offers flexible spaces to support more informal, collaborative and everyday democratic ways of working. These buildings have been explicitly designed to house different constructions of

democracy and participation. These constructions of space are used to demonstrate the how different constructions of participation and democracy can be architecturally considered and developed within classroom space.

3.2.5.1 The Senedd - architecture to support national democracy

The Senedd is an architecturally designed space to hold the Welsh National Assembly. The building is designed to support the democratic practices of Welsh Government and, "[a]t the heart of the design is the wish to produce a building that symbolises an open democracy" (Welsh Assembly Government, no date). The building was initially given a design brief to, "generate a sense of open government and public accessibility" (ibid).

Designed by the Richard Rogers Partnership and opened in 2006, the large glass walls were designed to reflect the Welsh Assembly's commitment to transparent democracy. The building itself has been considered a confident attempt to articulate this democratic approach through architecture (Davies, 2015). Inside the building there is a viewing gallery which offers an easily accessible view of the debating chamber and the democratic processes within, incorporating this view is to serve as a metaphor for the transparency of the process of open democracy (Mason, 2014). Although this building is seen to want to facilitate "new types of engagement" (Mason, 2014, p.224), and "proclaim the ideal of a listening leadership" (Fishlock, 2011, p.4), this space does not allow the occupants to be involved in the process itself as the viewing gallery is a space which requires the spectator to sit and listen. Indeed, Mason (2014) highlights how the organisational structures of democracy within the building serve to keep a strict separation between the different types of user e.g. visitor, politicians. This separation between the different types of users can be seen to resonate with the concerns raised by Crowely (2012) when discussing the different approaches to democracy within schools. When reflecting on school councils, foregrounded as one of the democratic/participatory practices within schools which facilitate children's involvement in such practices, they are made up of representatives

of each class in a time and space which is set aside for such a practice. Other children within the school are not participating, she argues it is this more formal, individual and representational type of democracy which is being supported, rather than the participatory democratic approaches which are seen to have the potential to directly engage all children in decision-making.

3.2.5.2 The Collaborative cloud - architecture to support collaboration

Supporting a more informal approach to democracy and democratic ways of working Scheeren (2015) in his recent TED talk presents a view of building design that embraces "collaboration and storytelling", supports "narrative hybrids" and allows "multiple stories to unfold". These spaces are developed as an alternative to the 'form follows function' constraints of previous architectural understanding. They develop another way to think about how space can support different ways of living and working. These architectural ideas also serve to strengthen the understanding that the spatial factors we create are a part of the composition of the ways we live and learn, and give value to how we decide to come together (Masey, 2005).

Scheeren's (2015) 'collaborative cloud' design realises these theoretical principles by creating a physical void, an empty space within the building. The void is explicitly designed as a space to support collaborative and interactive practices. In Scheeren's design the physical void carved through the centre of the building houses the more flexible spaces for collaboration and imagination and the more standardised spaces are arranged around the outside of the void. There are different spaces within the building to support different working practices, similarly this thesis is arguing for schools to replicate this spatial understanding by creating different spaces to support different ways of working.

Spatially Democratic Pedagogy is seen to resonate with the physical void created within the collaborative cloud design as it is similarly designed on the premise an empty classroom space can become a space for multiple

stories as it is provides a flexible space that supports children's, "imagination, collaboration and interaction" (Scheeren, 2015).

3.2.6 Spatially Democratic Pedagogy within useless space

Theoretical understandings of building design that are embracing hybridity, call for spaces which have the ability to "shift and evolve" within the building and its institutional functions (Davies, 2011, p.74), alongside their ability to support multiple stories and collaboration (Scheeren, 2015). Architecturally, this also resonates with Jilk's (2005) 'useless space'. Useless space describes a space which has no predesignated use, rejecting the more conventional deterministic view of space, useless space is understood to be incomplete without the users' involvement (Jilk, 2005).

Pedagogical research undertaken by Broadhead and Burt (2012) considers similar theoretical constructions of space with their 'whatever you want it to be place'. This research focused on children's cooperative play in an open-ended role-play space. The space itself lacked traditional play equipment and did not have any pre-determined outcomes or ways of using the space. Teachers provided loose parts including milk crates, tarpaulin, ropes, barrels and cable reels and the children were then free to use the materials provided, or bring materials from other areas, to create their play space. Staff were encouraged, through observation, to develop the children's experiences based on the children's play. They concluded that this type of space could support children's voice alongside the planned curriculum.

Similarly, Spatially Democratic Pedagogy uses a more flexible approach to space as a pedagogical tool and rejects a deterministic approach to its design, construction and use. Empty classroom spaces, like the open-ended role-play space described above, are also not predetermined. Rejecting determinism about future use of this classroom space, Spatially Democratic Pedagogy also requires users to work cooperatively, however, unlike Broadhead and Burt's (2012) research above, classroom space with

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Spatially Democratic Pedagogy gains meaning through a structured design process that supports more formal and design driven interactions between the children, the teacher, and the space. These spatial understandings collectively advocate for a user who designs and creates the space for themselves. This enables children's participation in the design and use of the space. It is to value and support children as participants in the construction of their spaces rather than participants in the activities within predefined spaces or as participants involved in co-operative play with loose parts.

Exploring these more flexible design possibilities and giving them a pedagogical remit, enables this thesis to reflect on the specifically designed and predetermined nature of continuous provision within Foundation Phase classroom spaces. These spaces send messages to the user about the specific use of each space, and architecturally are seen to become barriers to actions that have not been considered, planned or permitted (Jilk, 2005). Similar discussions are already taking place in pedagogical understandings of classroom space and these are discussed in Chapter 2.

Spatially Democratic Pedagogy positions the architectural notion of 'uselessness' (Jilk, 2005) as an alternative underpinning for classroom space, requiring children to design and co-create their spaces, with the support of their teachers. This approach is positioned as different to current constructions of continuous provision as these classroom spaces do the opposite, in that, there are no participatory or collaborative roles for the users of the space, only partial material autonomy as they are able to use materials in different ways. There are no decisions about the spaces themselves to be made. Everything is predetermined. Classrooms, in this current guise, are positioned as over designed and as leaving no active role for the learner.

Consequently, Spatially Democratic Pedagogy positions useless space to take on a pedagogical remit where the participation of the child is recognised and required. The relationship between the teacher, the child and

the space becomes multi-directional and intra-active (Lenz-Taguchi, 2010).
It becomes a space designed for collaboration, for everyday democratic
practice, and embodies Jilk's (2005, p.35) notion that "useless spaces gain
meaning through the creative interactions of the learners and the
environment".

Space within Spatially Democratic Pedagogy takes on a remit within which
the relationship between the child, teacher and the physical environment is
supported through a sociomaterial (Fenwick et al, 2011) understanding of
classroom space. Space is foregrounded as part of the learning process and
the design and co-creation process between teachers, children and the space
itself becomes the learning. In this guise, classroom space has the possibility
of becoming infinitely malleable, rather than solely reflecting the
predetermined learning objectives achieved through children's reaction to
the predefined spaces.

3.2.7 Children as designers of space

Clark (2010, p.200) questions how, "such points of debate, challenge and
co-construction can be established across the education and design field
beyond the confines of individual research studies". This thesis positions
theoretical engagement with the construction of space and spatial practice as
a way of developing communal design as a pedagogy that supports children
in "debate, challenge and co-construction" (Clark, 2010, p.200), supporting
this way of teaching and learning as an everyday democracy and 'mode of
associated living' (Dewey, 1916, p.87).

Developing an understanding of children's participation in the design and
creation of their classroom spaces also allows this theoretical underpinning
to reposition the values and meanings we hold of children to align with the
more participatory, democratic view of practice promoted through the Welsh
Government's children's rights agenda (Welsh Assembly Government,
2011) and revised Foundation Phase framework (Welsh Government, 2015).

Children are not currently in control of these school spaces and are predominantly excluded from creating the everyday spaces within them. This construction of space affords adult authority and places children in a subordinate position (Vanderbeck and Dunkley, 2004; Gallagher, 2006). Accordingly, it is important to explore and question the spaces we create for children within their social, political and cultural systems (Holtham, 2003; Ball, 201) whilst valuing the complex and interactive relationship between learning and physical space (Woolner, 2012).

Creating Spatially Democratic Pedagogy within the classroom is positioned to modify the current political and social structures of power within the Foundation Phase classroom spaces and give value to children's voices through design and co-creation. Although research and practice in children's participation in classroom design is scarce, valuing children's perspectives and participation in school design had, at the beginning of the 21st century, been gaining momentum (Clark et al, 2003; Burke & Grovesnor, 2003; Flutter, 2006). Championing this approach, Dudek (2000) and Clark (2002) called for the genuine involvement of children in the design process through a "reciprocal process of architects engaged in finding out about children's lives and children involved in the design process"(Clark, 2010, p.171). Similar requirements are set out in Wales' *schools for the 21st century project*, a £1.4 billion building programme introduced by the Welsh Government in 2011, with an aim to work with "local authorities and education partners to meet the needs of the communities and create the best learning provision for that area" (Welsh Government, no date). This inclusive approach to building design is seen to be linked to the children's voice movement (Woolner, 2010) and there has been an important recognition given to engaging children "culturally, spatially and environmentally with buildings" (Wake, 2010, p.1).

Another example is the 'joinedupdesignforschools' project (Sorrell & Sorrell, 2005), it develops an understanding of the pupil as a client and

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allows them to have control and responsibility for these spaces as clients. Through this experience children are seen to develop "creative and life skills such as problem solving, team working, communication, negotiation and citizenship, all of which engender self-belief and confidence" (The Sorrell Foundation, 2004, p.1 in Flutter, 2006, p.188). Developing a role for children as clients, although this is seen to develop participatory aspects of the process, still positions children as subordinate to adults, as consumers rather than as partners or as more equal members of the school community.

In her book, *Transforming Children's Spaces*, Clark (2010) demonstrates how enabling both children and practitioners to articulate their perspectives can further support relationships between the children, practitioners and architects. Resonating with Sundstrom's (1987 in Higgens et al, 2005, p.13) earlier reports of increased satisfaction with environments designed through user involvement. Woolner (2010, p.46) points out this satisfaction could be due to the "involvement itself, the resulting building actually being better, or perhaps both". Another benefit when involving children in the design and creation of their school environment, presented by Sutton and Kemp (2006), is children's ability to offer separate or new ideas for the environment, ideas of which adults may not have thought.

These understandings of design are securing a position for a child's analysis of, and influence on, learning environments and school spaces to be considered (Burke & Grosvenor, 2003; Clark et al, 2003; Woolner et al, 2007). However, this is yet to be embedded in our developing understanding of classroom spaces and there has been a noted paucity of research (Greany, 2005). However, when we consider how often schools get rebuilt/ refurbished we must acknowledge these practices will be greatly limited to small numbers of schools and children. Scepticism is levied here at how many children get to be involved in these design projects and how many children see their ideas or design ideas come to fruition. Giving these architectural practices a pedagogical remit could allow for design practices to be introduced at a classroom space level rather than a building design level, enabling these building design practices to become sustained and a

part of the everyday. This thesis places these architectural and design practices within a pedagogical remit where the construction of classroom space places children's participation as a Spatially Democratic Pedagogy. It is positioned to change children's involvement in design practice from "isolated, abstract events" (Clark, 2010, p.171) to everyday participatory practice, giving children the opportunity to be involved in changing tangible aspects of their learning (Flutter, 2006, p.184).

3.2.8 Design as a pedagogical process

Classroom design has been largely ignored in favour of other 'pedagogical, psychological and social variables' of the classroom (Horne Martin, 2006, p.91). The Foundation Phase is seen to further support and perpetuate the separation of the child from their classroom space. This separation is attributed to a number of factors including, the traditional view of learning which recognises learning as a process which takes place in the mind and the positioning of children as users, rather than constructors of space. Not engaging with these habitual ways of thinking about classroom space, Horne-Martin (2002) highlighted over a decade ago, is creating an obstacle to exploring and creating alternative possibilities for classroom space. These habitual ways of thinking are still present in the Foundation Phase.

This separation of learning and space is seen to have fuelled a "tendency for both architects and educators to see the physical setting and the learning activities of the users as relatively or potentially separate" (Woolner, 2010, p.46). Within this separation teachers are also viewed to be unaccustomed to considering their classroom spaces as active and therefore as making distinctions between learning and the spaces within which the learning takes place (Horne-Martin, 2006). Recognising this separation as unnecessary and obstructive, this theoretical underpinning fosters the integrated nature of learning and space through its use of a sociomaterial epistemology (Fenwick et al, 2011). This framing of space allows Spatially Democratic Pedagogy to become an exploration of how design can become a pedagogic practice that develops its meaning through physical spaces.

Horne-Martin (2006, p.104) calls for research to extend and develop understanding of the relationship between environment and performance and how it can be used 'to support children's learning more effectively'. Design as a process has been viewed as a series of stages which include planning, designing and construction (Sorrell & Sorrell, 2005), and can offer "integrated learning opportunities" which include teamwork, written and oral communication, mathematics, science, and art (Wake, 2010, p.2). It is important to note here although supporting children's learning can be argued to be a key target within any pedagogical approach, it is not the driving factor within this research. The outcomes (and to some extent the process) of Spatially Democratic Pedagogy are unknown and so this research positions itself within a more holistic remit and aims to explore what happens when children design and co-create their classroom spaces not just what learning happens when children are involved in the design and co-creation of their classroom spaces, although this will be considered in the discussion.

Engaging children in the design and co-creation of their classroom spaces as an ongoing pedagogical tool seeks to position the Foundation Phase classroom as a "living space" (Clark, 2010, p.169). The children within this communal "living space" are given the opportunity to become a part of the classroom community, which allows space to become more relevant to children's interests and their participatory and democratic positioning within their classrooms. As Froebel reflected in his writing,

The human being, the child, as a part of humanity must even early
not only be recognized and treated as individual and single, thus as a
member of a greater collective life, but must recognize itself as such
and prove itself to be such by its action

(Froebel, 1899, p.218).

Championing this view of learning requires an understanding of the possibility of pedagogy becoming a process of "collaborative invention"

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(Stephen et al, 2010, p.318), and becomes concerned with how, through participatory and collaborative design of classroom space, children can be encouraged to participate in how they will live in their classroom spaces and how they will contribute to the spaces they choose. Dahlberg and Moss (2005) emphasise how these collaborative ways of working resonate with the wider democratic discourse.

Pedagogically supporting children in the construction of space resonates with Osberg & Biesta (2008, p.313) who discuss an epistemological construction of knowledge which emerges as we "participate in the world", with knowledge existing only within these participatory actions (Osberg & Biesta, 2008, p.313). Current spaces within the Foundation Phase are not representing this understanding of pedagogy and are increasingly requiring spaces that detail the activity and outcome of the space (Taylor, 2015). Spatially Democratic Pedagogy is positioned to resonate with an emergentist epistemology, as discussed by Osberg and Biesta, (2008), which rather than representing existing knowledge is interested in the formation of new understandings, turning schools into "places of renewal instead of replication" (Moss & Urban, 2010, p.17).

Considering this approach spatially allows this thesis to develop a similar understanding of current classroom space, as representing existing knowledge and in turn developing a pedagogical approach which supports replication. The spaces themselves, and the activities and outcomes within them, are representing knowledge that is known and is to be passed on. Spatially Democratic Pedagogy advocates for spaces that foster renewal, they foster children's ideas and designs for space which may not have been in the classroom before and offers the opportunity for space to become a space of renewal, not replication.

This thesis develops an understanding of additional spaces that foster renewal as an alternative construction of classroom space. Nurturing an emerging view of knowledge which develops through a spatial remit, allows

us to imagine active and emerging classroom spaces. Using emergence as a pedagogical approach through collaborative design of space is viewed as positioning children's participation as a meaningful pedagogy that has the opportunity to develop ongoing engagement with space and an ongoing process of participation, rather than a tokenistic pocket of practice.

3.2.9 Spatially Democratic Pedagogy - an architectural construction

The research and literature presented above demonstrates the growing importance given to children's involvement in school building design, and its acceptance by many as demonstrating positive outcomes for the process, production and use of space. However, these processes are currently emerging solely within building design and have yet to be discussed in a pedagogical, classroom space remit. The argument presented here, for children's inclusion in the design and co-creation of their classroom spaces, is supported by the need to "move beyond debates about the justification for young people's participation … to the forms of participation that make a difference in the everyday lives of young people' (Clark & Percy-Smith, 2006, p.6).

Resonating with Scheeren's (2015) collaborative cloud design, Spatially Democratic Pedagogy is positioned to explore the growing commitment to develop spaces that can embrace children, their stories and their collaborative practices with peers and teachers. Pedagogically, creating empty spaces to support collaboration is distinctly different from current classroom spaces which continue to support children's interaction with materials within spaces, rather than the spaces themselves.

Realising these theoretical principles through this architectural design embodies the hybrid understanding of a building, enabling an elaborative network of relationships, activities and different ways of living, working and learning. The different spaces housed within the building are to support

these different ways in which we can live, work and learn. The empty space created in the classroom by a Spatially Democratic Pedagogy is positioned, similarly to the void in Scheeren's (2015) Collaborative Cloud, to promote collaborative interactions and allows us to reflect on Massey's (2013) question how we will live together. Answering this question with a Spatially Democratic Pedagogy approach to space disrupts the current spatial status quo and seeks to open up space for alternative, child-initiated spaces that support and value children's ideas, voices and designs for how they see their classroom spaces evolving and in which spaces they want to spend time. These different ideas and approaches to space are developing our understanding of how spatial factors are woven within the fabric of living and learning and demonstrate and perpetuate how we live.

Architecturally, repositioning children as active players in the design and co-creation of their classroom spaces rather than passive recipients supports an understanding of children's participation with space as an integral pedagogical goal. Positioning Spatially Democratic Pedagogy as a design process and a pedagogical tool supports the idea that design becomes pedagogy. It becomes an everyday approach to space which seeks to make a difference to everyday participatory classroom practices, supporting a more dynamic and ongoing relationship between children and their classroom spaces based on more democratically underpinned approaches.

Developing design as a pedagogical approach is discussed in the next chapter as being closely linked to Froebel's kindergarten practices. Through his pedagogical understanding of self-activity Froebel asserted 'observation and discovery are not enough … especially in the earlier years [and recognises that] something must be added to them – something that renders more of the human being active, and which has to do with giving out or expression' (Courthope Bowen, 1893, p.53). This theoretical understanding manifests itself through the design and construction of objects and spaces that are representative of the educational experiences offered to children (Froebel, 1885). Constructing with blocks, through the gifts and occupations, Froebel saw that, 'the child ascends from the construction of

the simplest wall with or without cement to the more complex and even to the invention of every architectural structure lying within the possibilities of the given material' (Froebel, 1898, p.282).

Developing this architectural practice of children's design of school spaces and Froebel's use of design within the gifts and occupations, the following chapter develops a pedagogical understanding of how these architectural and design pedagogies can be used to support children's participation in the design and co-creation of their empty classroom spaces.

3.3 Pedagogy

Pedagogically Froebel is taken as the educational blueprint for this thesis. His foregrounding of spatial and material aspects within his educational practice saw the development of different spaces within his Kindergartens including spaces for dance, for the gifts and occupations and for individual and communal outdoor spaces (Froebel, 1885). In his gardens he used individual and communal garden design as a pedagogical tool, placing value on the children's co-creation of these garden spaces. In doing so, Froebel fostered a pedagogy which formed relationships between materials, spaces, children and adults, and supported a participatory and democratic approach to living and learning.

This chapter begins with a brief comment on how learning is currently constructed through passive representations of classroom space, with dialogue and interaction placed as the drivers of learning. It recognises current spatial practice as supporting a representational epistemology with classrooms offering standardised, predetermined spaces. Presenting Froebel's role within this thesis, the chapter gives an initial overview of Froebel's positioning within the Foundation Phase framework and highlights how his principles and practices are not subsequently reflected through the documentation. Froebel's approach to the collaborative construction of his

communal gardens are then discussed alongside his view of the connected nature of learning through space, highlighting the interconnection that lies at the heart of his pedagogical legacy. Developing his understanding of agentive spaces the chapter uses more recent understandings of space as intra-active (Lenz-Taguchi, 2010) and learning as sociomaterial (Fenwick et al, 2011) to explore children's design and co-creation of their classroom spaces. This chapter concludes with a presentation of Spatially Democratic Pedagogy. Resonating with the construction of communal gardens within Froebel's Kindergarten, it is similarly positioned as a communal approach to the construction of classroom space, placing emphasis on collaborative, participatory and democratic practice.

3.3.1 Current constructions of learning through space

This vision of an active child acting upon the passive environment is perpetuated nationally within the UK by the collective understanding put forward by the British Educational Research Association - early years SIG (2003, p.7 my emphasis) who state, "It is generally accepted today that children's learning is active, self regulating, constructive in problem situations and, is related to existing knowledge **as they act upon their environment"**.

It is recognised this construction of space and view of children is driven within early years by two prevailing theorists; Piaget and Vygotsky (Stephen et al, 2010). The prevalence of this pedagogy, based on developmental stage theory is seen to have established itself so resolutely in the understanding of learning that it is now considered as 'right', 'best' and 'ethical' (MacNaughton, 2005, p.1). These cognitive and constructivist learning theories emphasise individual achievement set against pre-set goal and outcomes (Dahlberg & Moss, 2005).

Spatially these pedagogies have resulted in spaces for children to experiment, work, be in alone and with peers. Piaget's spatial understanding is considered to highlight, 'the dynamic and continuing interaction of child

and environment' (Schaffer 2004, p. 164) where the classroom space is required to be 'richly resourced' allowing children 'time to explore' (Stephen et al, 2010, p.317). Spatially, at the centre of Vygotsky's social learning theory is the understanding of Mediation (Vygotsky, 1978), with cognition and learning seen to develop through engagement with the social and cultural world of signs and symbols. Within this relationship children are seen to engage with "particular resources, actions and actors that are culturally meaningful" (Stephen et al, 2010, p.317).

Stephen (2010, p.21) also reminds us when adopting a sociocultural view of the child and of learning which is understood to be "concerned with the influence of the contexts in which children learn …. [and how] … tools and resources support and shape learning", space is still considered the backdrop for learning as it is the "acting and thinking with others that drives learning and at the heart of that process is dialogue and interaction" (ibid).

Lenz-Taguchi (2010) reminds us that in all the above ways of understanding learning, the learner is seen as separated from the world itself, as children are seen to be acting upon spaces and the spaces themselves hold no agentive qualities. Resonating with affordance theory (Gibson, 1977), where spaces provide affordances for children but the actions and interactions which follow between children and their classroom spaces are solely created within the child, it is their actions they bring to the space that dictates what happens. The space itself remains passive and without agency and although these spaces and materials are recognised as being used to realise learning, the spaces and materials in themselves are considered passive. The term 'affordances' was initially used to indicate the actionable properties an environment offers as "[a]ccording to Gibson (1977) affordances are all the 'action possibilities' latent in the environment, objectively measurable and independent of the individual's ability to recognise them, but always in relation to the actor and therefore dependent on their capabilities" (Woolner et al, 2012, p.6).

In design theory the term is applied in a slightly different manner, to describe both the actual and perceived properties of an object meaning "[i]f the object is properly designed, its properties and the ensuing actions should be evident to the user" (Koutamanis & Majewski-Steijns, 2011, p.215). Resonating with the architectural understanding 'form follows function' (Sullivan 1896) the spaces and materials we create tell the user what to do. For example, offices that use different seating arrangements individual work stations, group seating or open plan, are developed to support what the spaces are to be used for and what a person's role is within those spaces. This understanding is also reflected in the continuous provision provided by practitioners working within Foundation Phase classrooms. These current constructions of classroom space are designed to tell the child how to use the space. The child will know to read in the reading area, build in the construction corner and make mud pies in the mud kitchen.

Pedagogically creating spaces which all have an outcome and a purpose is seen to fit with a passive and representational epistemology which sees "knowledge [and for the purposes of this study space] to be an accurate representation of the world, of a pre-existing reality" (Moss and Urban, 2010, p.16). It is argued that the spaces created for children and the activities and learning objectives attached to them sit within this epistemological construction as the spaces serve to "try to get the child to understand a pre-existing world" (ibid) through the provision of these standardised spaces. This does not reflect the participatory agenda which is also promoted through the framework. The next section considers using Froebelian approaches to space as a way of supporting a more participatory and democratic understanding of children's learning within their current classrooms.

3.3.2 Froebel

Froebel is considered the most significant of the early childhood pioneers, and one of the greatest influences on early childhood education (Bruce, 2016) and within the Foundation Phase has been equally positioned to have

had, "the most far reaching influence on early childhood education" (WG, 2008, p.28). Whilst this can be seen to explicitly recognise Froebel's legacy within the Foundation Phase, it should be noted this accolade sits within the "[e]ducational theorists and psychologists" section (WAG, 2008, p.28) where a short and limited overview of his principles and practices are stated,

Central to his theory was the development of the whole child through play and active learning. He was the first person to formulate a theory of pre-school education with a carefully planned curriculum based on key learning experiences, offering structured teacher directed activities within which children had the opportunity to play. The activities included stories, singing, games, drawing, modelling and playing with sets of objects called 'gifts', such as spheres, cubes and cylinders. The holistic integrated approach promoted four basic ideas: play and language, actions, feelings, and thoughts. The family was recognised as the child's first educator and the community was seen as the link between the family and the school.

Welsh Assembly Government, 2008, p.28

Froebel is presented alongside a number of other early childhood educational theorists and psychologists including Montessori, Steiner, Isaacs, Piaget, Vygotsky, Bruner, Gardener and the McMillian sisters. Missing from these Foundation Phase accolades is any detailed consideration of how Froebel's spatial principles and practices can be explicitly considered and enacted within current Foundation Phase classrooms. A trend, which continues throughout the framework and recent evaluations where spatial principles and practices are not specifically recognised and classroom space is only briefly, discussed as continuous provision which is provided by teachers offering spaces with which children can engage. (Donaldson, 2015; Taylor et al, 2015).

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This lack of theoretical engagement with the connections between early years pedagogy and Froebel's classroom spaces have been recognised more widely by Tovey (2013, p.1) who notes these spaces, although closely linked to Froebel's ideas, are not directly and explicitly connected to his principles or practices. Considering why certain spatial practices have been developed and others excluded in current practice, this thesis argues the current political emphasis on data, outcomes and international results is moving space away from the traditional Froebelian pedagogies which originally underpinned these spaces to the more formal and structured outcome driven constructions which are emerging through the current documentation supporting the Foundation Phase.

More generally, the inclusion of spatial and material understandings in early years research has also been recognised to have remained on the fringes (Vuorisalo et al, 2015), with classroom space relegated to the backdrop, positioned as the container within which learning sits (Fenwick et al, 2011). The current continuous provision constructions of classroom space, and the child's role within them, position classroom space to support an understanding that children live and learn within classroom spaces and spaces are to be provided for them.

Space within this construction continues to be un-theorized and largely invisible within the framework and supporting documents. By continuing to construct classroom space in this way, this thesis argues, reinforces both the notion of classroom space as theoretically neutral and disconnected from learning, and as always needing to be provided for children. Consequently the pedagogical agency given to classroom space within the Foundation Phase is viewed as essentially, and paradoxically, both non-existent and teacher controlled.

3.3.3 Froebel's communal gardens

Pedagogically space is constructed differently within this chapter and Froebel's use of communal gardens is used as its guide. Froebel positioned

children's individual and communal gardens as a necessary part of his approach as, "[t]he kindergarten, the completely formed idea, the clearly demonstrated conception of kindergarten, thus necessarily requires a garden, and in this, necessarily, gardens for the children" (Froebel, 1899, p.218). Just as the gifts and occupations were to be understood as a "mature and carefully elaborated application of his principles" (Froebel, 1912, p.27), the garden was seen as "no mere arrangement; rather, it illustrated in a tangible form Froebel's philosophy of unity between the parts and the whole, individual and community, freedom and responsibility (Liebschner, 1992 in Tovey, 2014, p.17), supporting "reasons of social and citizen collective life" (Froebel, 1899, p.218). Developing spatial practice in this way values children as citizens and supports a collective approach to teaching and learning.

The foregrounding of these communal garden practices is used within this chapter to reflect Froebel's broader principles which are seen to both guide the child and encourage a sense of autonomy (Robson, 2010). As Froebel was seen to embrace the understanding, "people need to be educated to think for themselves, and not rely on the thinking of others to tell them how they should think" (Bruce, 2016, p.20). He "wanted to educate men to be free, to think, to take action for themselves" (Froebel, in Lilley 1967, p.41).

Reflecting on Froebel's spatial pedagogies, Provenzo (2009, p.87) saw Froebelian practice as "concerned with showing the interrelationship between living and inanimate things", as for Froebel inanimate things were seen to contain "the force" (Froebel, 1826), rendering the idea of inanimate objects a misnomer and developing an understanding of all things as agentive. Driven by Froebel's Christian pantheism these spatial practices emphasised the "'unity' and interconnected nature of learning" (Bruce, 2016, p.20), which eventually are seen to connect the child to "the vastness of the universe" (Bruce, 2012, p.1). The relationship between materials, space and children for Froebel are connected through God, his religious belief underpinned the spaces he provided for children. More recently the return to the influence of space and materials within learning, although ontologically

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different to Froebel's christian beliefs, holds resonance with the more general understandings that space and materials can be agentive aspects of the learning process.

3.3.4. Agentive materials and spaces

Recently the possible agentive nature of materials and space have been discussed by Lenz-Taguchi (2010, 2014) and Fenwick (2011, 2015) who both develop an understanding that materials and spaces matter. Clearly resonating with Froebel's spatial understandings, Fenwick et al (2011) use a sociomaterial understanding of learning to challenge the centring of human processes by foregrounding the materiality of learning and Lenz-Taguchi (2010) places inanimate objects as agentive materials and as having an active involvement in a child's learning.

Developing a more agentive understanding of space and materials throughout this chapter reflects Duhn's (2012, p.99) approach which moves beyond the 'taken for granted' understandings and perceptions we currently hold within educational discourse to the possibility of challenging and expanding "understandings of how the self relates to the world, both human and more-than-human" (Duhn, 2012, p.99). Whilst this thesis often discusses space and materials as separate aspects of the classroom (e.g. the materials that are placed within the classroom and the different continuous provision spaces that are created), it must be also acknowledged that the materials can also be considered as the space, as they often 'make up' the space. Therefore, it is recognized that there is not a clear distinction between space and materials and that the relationship between them is complex.

The previous chapters have focused on children's participation in the construction of classroom space as a way of supporting children's everyday participation. Pedagogically this has been considered to support the more sociocultural aspects of the framework (Maynard et al, 2013). This chapter considers the construction of space by using a sociomaterial (Fenwick, 2011) underpinning. However, it has been noted these two approaches have

fundamental differences in their analysis of the material, as a sociocultural understanding when considered under its cultural-historical activity theory umbrella foregrounds a human centric approach and spaces and materials become a secondary factor. Whereas, within a sociomaterial understanding space and materials are foregrounded to be included in the materiality of learning (Fenwick, 2015). Developing an understanding of space within a sociomaterial understanding this chapter will further argue classroom space when given an agentive remit can offer a pedagogical conceptual framework to support children's participation in its design and co-creation.

Fenwick (2014) reinforces the importance of materials by highlighting the political values and interests that are both negotiated and inscribed into the materials themselves. Fenwick (2014) further discusses the current subjugation of materials to humans, where humans are positioned as the ones with intention and as such materials become obsolete within the learning process and are therefore not recognised as performative. She reminds us that although sociomaterialism develops an understanding of agentive materials it is not arguing that objects have agency themselves. She uses the example of how an essay is written,

"an essay does not write itself. But its particular production is an agent assemblage of assignment protocols and literary traditions, books and other content sources … post-it notes and piles of paper and iPads, the particular affordances and directives of word processing software - all working in and through human bodies and consciousness. Any educational practice is a collective sociomaterial enactment, not a question solely of one individual's skill or agency".

(Fenwick, 2014, p.87)

Similarly, Lenz-Taguchi (2010) questions the dead and passive nature of matter by illuminating a material-discursive understanding of learning, and further suggests "humans and non-humans are to be understood as performative agents that have power to act and transform each other and themselves" (Lenz-Taguchi, 2014, p.80) and as such non-human objects and

materials are seen to be able to transform the child's "notions, conceptions and emotions" as much as the child can transform the objects and materials used (ibid).

These more recent understandings of the importance of materials and spaces in learning is not new. Indeed, Fenwick et al (2011, p.1) acknowledge Dewey (1938) as the founder of a sociomaterial understanding as he places "learning [as] emerging through transactions between an inquiring learner and objects of the environment". However, it is argued through this thesis that it is Froebel who should be afforded this accolade. As although Dewey places an importance on the environment as part of children's learning, he also develops the distinction between active children and inanimate, passive spaces as he sees "life [as] a self-renewing process through action upon the environment" (Dewey, 1916, p.5). Dewey (1938) argued individuals learn through experience, through an interaction between an individual learner and the objects and other people in their environment, whereas Froebel's (1898) understanding of materials, spaces and their innerconnection was more aligned to a sociomaterial (Fenwick et al, 2011) understanding through his transcendental beliefs.

Resonating with the spatial and material understandings of Froebel, Lenz Taguchi (2010, p.29) asks if it is possible to 'think of the material in early childhood practices as having agency of its own?' And further questions whether we can 'think of the material as being active in producing our meaning making of the child and learning and of ourselves as teachers? (Lenz Taguchi, 2010, p.29). Similarly, but drawing on a background of particle physics, Lenz Taguchi also reflects an understanding that all matter, materials, objects are understood as having agency, and proposes ''we are all in a state and relationship of inter-dependence and inter-connection with each other as human or non-human performative agents" (2010, p.15).

Foregrounding the environment in this way and developing an understanding of the agentive qualities of matter and materials through an

intra-active pedagogy "shifts our attention from intra-personal and inter-personal 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" (Dahlberg & Moss, 2010, p.xiv). Developing Froebel's principles through this intra-active relationship allows a reconsideration of the transcendental relationship he placed on the spaces and children within the kindergarten. This relationship foregrounded the importance of spaces provided for children as they developed and underpinned the position children were given. Within the communal garden spaces children were positioned as participants in the social make up of the kindergarten to reflect the idealised notion of what society could be (Froebel, 1889). Developing these practices through a transcendental understanding of space meant that learning emerged through space which is reconsidered within this chapter through Lenz-Taguchi's (2010) intra-active pedagogy.

Creating a gaze which foregrounds the agentive nature of the materials in the classroom can allow and encourage practitioners to think differently, and more specifically view the organisation and practices we create for children as including their resources, materials, objects and tools (Lenz-Taguchi, 2014). These practices then have 'agency in relation to what happens in the material-discursive intra-active processes taking place between the materials, the children and the student' (Lenz Taguchi, 2010, p.35). Thus, learning is situated within the material-discursive pedagogical space and it is not something the child achieves independently (as discussed in constructivist models above) or achieves through language and using passive 'cultural tools' in a social context with others (as discussed in social-constructivist models above). Learning and development through this material gaze evolves and emerges through the intra-actions between people, things, materials and discourse. Within this immanent relationship children, as learners, can be viewed as 'materializing themselves into existence' (Lenz-Taguchi, 2010, p.22). The materials and classroom resources (books, pens, blocks, furniture, architecture) are considered 'materialised ideas of knowledge and learning' (ibid).

Lenz-Taguchi (2010) develops her onto-epistemology based on an ontology of immanence, placing materials, objects, environments and children on a 'levelled out' playing field within which learning occurs. Froebel, it is argued through this thesis, also presents an onto-epistemology, but one which is based on an ontology of transcendence, and although there are hierarchical structures within the ontology of transcendence, Froebel also recognises the interplay between the child and the materials, objects and environments with which they are surrounded. It is this fundamental difference in ontological understanding that distorts the otherwise very similar approach to the child, their environment and their development. Indeed, the editor's preface to Froebel's Education of Man (1826) and Lenz-Taguchi's Intra-active pedagogy (2010) are remarkably similar as both can be seen to foreground the relationships between the child and their environment.

The importance given to the spaces and materials we provide for children are reflected in Froebel's, (1826), Lenz Taguchi's (2010) and Fenwick et al's (2011) work. However, it is pertinent to note here even though all understandings foreground the connections between children, materials and spaces there are differences in the ontological perspectives each demonstrate. Froebel's transcendental understanding requires us to understand the 'essence of the force – in its manifestations as divine power' (Froebel, 1898, p.167) and as Lenz-Taguchi (2010, p.43) reminds us when placing the understanding of the relationships between the social and the material in a onto-epistemology rather than one of transcendence, "the hierarchical aspect of transcendence is thus 'flattened out' – nothing is considered to stand above or take a true or privileged position. There are no fixed or inherent borders between matter, organisms (human or non-human) and things" (Lenz-Taguchi, 2010, p.43).

The differences in these ontological approaches is partly attributed to the vastly different times the theories were conceived. Recognising these inevitable shifts in knowledge and understanding over time, Froebel did not regard his system as a "stationary, completed thing, a stereotyped plan to be

handed from one to another, and to be reproduced with mechanical, unchanging imitation" (Courthope Bowen 1893, p.62). Indeed**, "**to insist that Froebel has said the last word on education is to try and stop that continuous spiritual growth on which he himself was never tired of insisting" (Froebel, 1912, p.28). "Unless the teaching of Froebel … or of any other great thinker on education be thus regarded as suggestive but not final, it can but become a bar to progress and a cause of arrested development" (Froebel, 1912, p.26). This ability to interpret and adapt his pedagogy was initially considered by Froebel himself. Courthope Bowen (1893, p.62) highlights Froebel was working on his system "modifying and improving to the very last month of his life" and reminds us that in Froebel's view, "as long as our knowledge of children increases – as long as all these become clearer, better defined and more accurate – so long must our ideas of education be changed and modified and improved" (Courthope Bowen, 1893, p.62).

Initially, significant emphasis was placed on the gifts and occupations as "the one true and necessary means" by which to apply his principles of education (Froebel, 1912, p.24) and for a time it was argued they could not be omitted from practice because rejection of them would mean the rejection of the principles he regarded as "essential and fundamental" (Froebel, 1912, p.26). However, criticisms emerged and writing in Child Life, Murray (1903) wrote "symmetrical paper-folding and symmetrical work with the gifts are a waste of time for both students and children". She questioned "[w]hat did Froebel himself give us as 'the great purpose of productive activity?' Surely, it is the expressing or embodying an idea in the worker's mind. Can anyone affirm that either symmetrical paper-folding or symmetrical work with the gifts expresses the ideas of a child?". This criticism is levied at the more prescribed and structured adaptions of the gifts and occupations and they can be seen to be removed from the images of the children were described by Tovey (2013) above where children are using the blocks to create things linked to their own experiences.

The prescribed nature of his practices critiqued by Murray (1903) is considered unfair as Froebel's system was to be considered as adaptive and needing to be "absorbed into our present-day life, adapted to our present-day needs [as] (t)o make it a cut-and-dried complete system is inevitably to condemn it to the sterility of mechanism" (Froebel, 1912, p.26). Recognising Froebel's principles and practices were more than a technical approach to teaching and learning, and needed to be considered as principles that were living and breathing and able to be developed. They are principles that are to embrace and take on ongoing knowledge and understanding of early years education and should not be 'permanently maintained in the light of developing thought and experience' (Froebel, 1912, p.29).

The recognition new knowledge and understanding was to be embraced within Froebel's educational legacy is reflected in the approach taken to classroom space within this thesis. Recognising the developments in our understanding of space (in geography, architecture and pedagogy) and how these understandings influence the learning process is celebrated and embraced as ways to reflect on and develop classroom practice.

3.3.5. Design processes

Using design and construction as a pedagogical tool was not confined to Froebel's gardens and these spatial understandings and practices were also reflected in the construction and use of his gifts and occupations. Froebel's architectural training is seen to have influenced these practices, shaping his spatial and material pedagogies (Dudek, 2000; Upitis, 2004).

Supporting these design practices are Froebel's (1898) principles of connectedness, creativity and self-activity. Creativeness, according to Froebelian principles, is the "making of new forms and combinations (rising from the merest imitation of models up to the most original inventions), [the] giving of definite expression to ideas and mental images…. rendering of the inner outer" (Courthope Bowen, 1898). Through his pedagogical

understanding of self-activity, Froebel asserted observation and discovery were not enough and also required activities that enable the child to be active and expressive (Courthope Bowen, 1893, p.53).

Construction with the blocks, Froebel saw "the child ascends from the construction of the simplest wall with or without cement to the more complex and even to the invention of every architectural structure lying within the possibilities of the given material" (Froebel, 1898, p.282), developing the child's relationship with the material world (von Marenholtz-Bulow, 1905).

Although inside the classroom Froebel's principles and practices were given different spatial and material attributes, the spatial nature of his pedagogies were still foregrounded and different aspects of practice were given different types of spaces. The gifts and occupations were often conducted on tables where arrangement and order were stressed (Ronge & Ronge, 1855) and there were also more empty spaces which fostered "musical and gymnastic exercises" (ibid). Coupling these pedagogical constructions of space with Froebel's individual and communal garden spaces enables an understanding of the different spaces Froebel created for different pedagogical practices. This demonstrates a distinct difference to the spatial understandings promoted throughout the Foundation Phase framework which has been recognised to promote a singular, developmental, constructivist and outcome driven view of classroom space.Froebel's architectural understandings are highlighted to reinforce the importance placed on spaces, materials and the relationships they formed with young children. Spatially Democratic Practice is equally placed as a way of reconnecting children, through design and creation, to the spatial and the material aspects of their classroom spaces.

Sorrell & Sorrell (2005) present the design process as a series of stages that include planning, designing and the assisting of construction. Recognising these new developments regarding children's participation in designing their

environments, Wake (2010, p.2) discusses the "integrated learning opportunities (e.g. written and oral communication, teamwork, research, mathematics, science, art, environmental sustainability)" that the design processes can offer, when placing this within a pedagogical remit.

3.3.6 Conclusion

The following section acts as a bridge between this theoretical underpinning and the methodology by presenting the theoretical construction of Spatially Democratic Pedagogy.

Theoretically, Spatially Democratic Pedagogy is positioned to develop Froebel's spatial and material pedagogies. Fostering relationships between the child and classroom space through supporting children's design, development and co-creation of the materials and the space. It is this relationship between the child and the materials and spaces around them and their ability to be involved in the design and creation of the space that theoretically forms the bedrock for the practical application of Spatially Democratic Pedagogy. Developing Froebel's principles and practices through a sociomaterial and intra-active (Fenwick et al, 2011; Lenz-Taguchi, 2010) understanding of classroom space allows this thesis to "revisit and re-vision [Froebel's] essential tenets to enable [his practice to] remain a significant force in the education of young children" (Read, 2011, p.284). In 1940 Wallis recognised Froebelians of the time were, 'still holding [on to] his fundamental principles, [but were] strongly influenced by modern psychology in their interpretation of his pedagogy'. It is the continuation of the development of his principles and practices, in light of 'new' understanding which allows this thesis to continue to give priority to "the dynamic relationship that is necessary between Froebelian principles and Froebelian characteristics of practice" (Bruce, 2016, p. 24).

It is important to note although this way of viewing classroom space is set to challenge the current spatial 'status quo' in Foundation Phase classrooms,

Spatially Democratic Pedagogy is presented as an additional way of thinking about classrooms space not an alternative. Its emphasis is placed on new perspectives on space and its construction. Spatially Democratic Pedagogy is recognised as one of a number of possible constructions of classroom space, becoming a conduit for the "many other stories that could be told about early childhood education" (Moss, 2014, p.75). Developing this argument spatially, this thesis calls for classrooms spaces that support a number of pedagogical constructions and where no single construction can "claim a monopoly of the truth" (ibid), this allows for pedagogical spaces that reflect the different pedagogical approaches considered within the early childhood spectrum.

3.4 SDP: The construction of space within this thesis

Theorising classroom space from the intersection of debates in pedagogy, architectural theory and design, and geography discussed above has served to challenge the current view of using continuous provision as the sole construction of classroom space, by positioning space as political and ideological (Lefebvre, 1991), as the mediator between people and their wider environment (Heynen & Wright, 2012, p.41), and as active within the learning process (Lenz Taguchi, 2010; Fenwick et al, 2011). Pedagogically, these theoretical underpinnings have also positioned Spatially Democratic Pedagogy as an interpretation of Froebel's spaces and spatial practices focusing on his collaborative approach to garden design as a way of supporting an active understanding of space and a way to foster expression and social regeneration. These are equally reflected in the goals of a Spatially Democratic Pedagogy.

Building on these geographical, architectural and pedagogical ideas above, the model of children's participation proposed within this thesis becomes a spatial and relational process (Mannion, 2010). It is positioned as an everyday, lived understanding of democracy. It supports children's democratic involvement in the design and co-creation of their classroom

spaces. It is a model which includes the concepts of rights, responsibility, participation and action, with participation seen to emerge through the construction of physical spaces.

Froebel's construction of communal garden plots has been recognised as the pedagogical blueprint and is important within Spatially Democratic Pedagogy in two ways. Firstly, it is the recognition given to the relationships between the child and the spaces and materials around them and secondly it is supporting a view of collaborative existence within the classroom that underpins a more democratic approach to living and learning. Spatially Democratic Pedagogy is positioned as a way of rethinking Froebel's communal garden spaces within current classroom space to [re]consider the more democratic and participatory practices that have been included in the Framework but not yet fully realised in practice.

Enabling the process of participation to become an everyday informal practice rather than the more formal participatory structures that are concerned with "political and public decision making processes in organisations and systems (Percy-Smith, 2010, p.109), Spatially Democratic Pedagogy supports children's ongoing participation in the design and co-creation of their classroom space, which is seen to support the opportunity for new, everyday spaces to emerge by placing children to "actively create the world in which they live" (Bentley, 2005, p.21). Within this construction children are positioned as social actors, with their own ideas, perspectives and the ability to influence decision making about their classroom space.

Epistemologically framing space with an intra-active (Lenz-Taguchi, 2010) sociomaterial (Fenwick et al, 2011) and democratic (Moss, 2014) frame has allowed the theoretical underpinning to reflect current classroom space as passive and representational and as acting as a container and backdrop for learning. Constructing classroom space through a Spatially Democratic Pedagogy is positioned to support a more agentive understanding of space. It is placed not as the container for learning but as the mediator for wider political, cultural and social ideologies (Lefebvre, 1991).

An active and adaptive understanding of classroom space enables design and co-creation of space to be based on children's interests and designs. This active and adaptive approach to chidren's designs resonates with Biesta and Osberg's (2007, p.34) view of an "emergentist" epistemology. An emergentist approach to and understanding of space allows this thesis to imagine classroom space as active and adaptive. It becomes a space designed and co-created by the children, decentralising the representational view of space currently promoted within the Foundation Phase and replacing it with a pedagogical approach which positions children as participants, rather than users of their classroom spaces.

Spatially Democratic Pedagogy is also positioned to resonate with Moss' (2014, p.137), "democratic pedagogy of listening [and] experimental pedagogy of innovation" (Moss, 2014, p.137). It is the process of developing children's ideas into lived classroom spaces that allows children's voices and ideas to be heard and acted upon. The accompanying design process is viewed as supporting a "respectful environment" (Lansdown, 2005, p.19) within which the design and co-creation of classroom space is "rooted in respect for children and their abilities" (Lansdown, 2005, p.23).

Spatially Democratic Pedagogy brings together the theoretical understandings of space discussed above and uses the construction of space as a driver for pedagogical practice, supporting a more collaborative and democratic view of space. Architecturally, this chapter positions the design and co-construction of classroom space as having the ability to redefine how the social and architectural aspects of classroom spaces are defined and related to each other (Crysler et al, 2012).

Spatially Democratic Pedagogy embraces Moss' (2014) call for transformative change within early childhood education and draws on his story of democracy, experimentation and potentiality. Moss (2014) argues

for a language to support early childhood education as a practice that encourages "constant movement and creativity" (p.83). He states a need to,

"resist transmitted representations, to let go of expert assurances of guaranteed outcomes and returns; and to turn instead towards the child and the centre as an unknowable potentiality, a not-yet, a becoming … a place of infinite possibilities … a place, too, where 'freedom, democracy and solidarity are practiced"

<div align="right">(Moss 2014, p.82)</div>

Spatially Democratic Pedagogy similarly encourages a view of space that moves away from a representational view of what space should be and what children within these spaces should be doing. Spatially Democratic Pedagogy embraces democracy, experimentation and potentiality as a way of designing and co-creating classroom space. It becomes a space that supports children and teachers in democratic collaboration rather than individual competition. In this way, the communal design process supports an understanding of the relationship between pedagogy and classroom space as, "responsibly negotiated ... [and]… where the new is allowed to appear" (Osberg and Biesta, 2007, p.49).

Pedagogically, Spatially Democratic Practice is created as a new trajectory for the Froebelian principles and practices discussed above. It is the importance Froebel placed on spaces, practices and materials, and the independent and interdependent relationships they formed with young children and their learning, which resonates most strongly within this construction of space. Reconnecting these spatial and material aspects of Froebelian pedagogy, through a sociomaterial (Fenwick et al, 2011) and Intra-active (Lenz Taguchi, 2010) understanding of space allows Spatially Democratic Pedagogy to be positioned as a new trajectory for Froebelian principles and practices within current Foundation Phase classrooms. The following methodology chapter uses Froebel's communal garden to both

pedagogically and methodologically support children as the designers and
co-creators of their classroom space.

Chapter Four: Spatially Democratic Pedagogy - Methodology and Methods

The previous chapter used pedagogy, architecture and geography to theoretically position children's design and co-creation of classroom space as a Spatially Democratic Pedagogy. Using a Design Based Research frame (Reimann, 2011), this chapter initially details the methodology and methods used to enact, document and analyse Spatially Democratic Pedagogy as a teaching tool. The chapter also considers the pilot study and the repeatability, reliability and generalizability of the intervention itself. It further details the ethical implications considered, enacted and reflected on throughout the process.

4.1 Design Based Research

Design Based Research sits within a methodological paradigm which conducts design studies (Reimann, 2011). Interventions are seen to "embody specific theoretical claims about teaching and learning, and help us understand the relationships among educational theory, designed artifact, and practice" (Design-based Research Collective, 2003). It enables this research to support Spatially Democratic Pedagogy as an intervention which theory suggests could be productive but is yet to be understood or practiced (Design-based Research Collective, 2003). Design Based Research is seen to increase the relevance of theory within educational research (Reimann, 2011), through its ability to bridge the gap between research and practice (Anderson & Shattuck, 2012).

Design Based Research is conducted in authentic settings and is often concerned with a substantial change in classroom practice. To this end, there are often elements of teaching involved which require teachers to work with these theoretical and practical ideas to develop the specific intervention in their classrooms (Reimann, 2011, p.40). Consequently, Design Based

Research is also recognised as having a relatively extended duration, extending into weeks or months (Reimann, 2011, p.39). In this research the intervention took place over six months in a reception class in Swansea. This research study seeks depth, not breadth in its understanding, and although one setting can be considered a small sample, Boddy (2016, p.426) argues that in "in-depth qualitative research, a single example can be highly instructive" and further "individual cases can also provide a new, deep and nuanced understanding of previously unexplored phenomena" (Boddy, 2016, p.428).

In a recent review of Design Based Research, Zheng (2015) notes most studies conducted one round of the intervention. This is attributed to findings by Anderson and Shattuck (2012) who argue the time and resources researchers often have only allow for one cycle. Similarly Kennedy-Clark (2013, p.29) recognises a higher degree research student may "lack resources to conduct large-scale research studies". Defending the use of only one cycle by my position as a student this study is realised as a more "manageable and achievable micro-study" (ibid).

I specifically asked Claire, a reception class teacher at a local school, to be involved in the research as I had worked with her previously on a research project based at Swansea University. The research project had considered children's well-being within the Foundation Phase and Claire had been a keen participant. I had been the research assistant and had worked alongside Claire and throughout the project she had shown her interest in research, her ability to work hard and discuss her findings and ideas in a group, and her ability to reflect on practice and engage with theory - all expectations I would be placing on a teacher when enacting Spatially Democratic Pedagogy.

The intervention itself involved a group of seven children. I asked Claire to select a group of children she felt would work well together. (Table 1 details the children, their pseudonyms and their ages at the start of the process).

This grouping drew on Claire's understanding of the children and the different approaches and strategies they employ when working together. Based on practices within the pre-schools of Reggio Emilia which support children's groupings not on ability but on how children "define problems and [how they] search for different ways to resolve them" (Vecchi, 2001, p.195). Claire noted the children had varying academic abilities but were thought to collaborate well.

Table 1: Sample of children

Child	Age
George	5.1
Catrin	4.11
Molly	5.2
Elanor	5.1
Gareth	4.8
Charley	4.11
Carys	4.9

Design Based Research is used because of its pragmatic nature, with its aim to "solve real-world problems through the design, enactment and analysis of an intervention" (Design–Based Research Collective, 2003). Developing its pragmatic nature, the mandate becomes a search, not for truth or reality, but a search to support human problem-solving (Powell, 2001). Reality within this construction becomes the practical effect of these ideas. The emerging discussions (chapter 6) then aim to detail and understand the meaning of the action for the participants performing the intervention (Moses & Knutsen, 2012).

Pedagogically, this context specific and collaborative understanding of the social construction of meaning making has been discussed by Dahlberg, Moss and Pence who argue "[t]he world is always our world, understood or constructed by ourselves, not in isolation but as part of a community of agents, and through our active interaction and participation with other people in that community" (1999, p. 23).

In line with these pragmatic underpinnings, Design Based Research is not positioned as a particular set of collection and analytic methods but is more readily understood as a way of framing the use of other methods and techniques (Reimann, 2011, p.40). In this way it is seen to support the use of a variety of methods and can be interpreted as a series of approaches, allowing for flexibility in the research design (Kennedy–Clark, 2013). This flexibility enables this chapter to methodologically develop through a three stranded research frame, using different methods to enact, document and analyse the intervention.

This methodological frame draws on both Froebel's pedagogical approach and design thinking to support strand one, action research for strand two and constructivist grounded theory for the third. All three strands, although different are underpinned by an iterative process to the collection and analysis of data and support the ongoing back and forth relationships and reflections between myself, Claire, the children and the space. Brown's (1992) seminal article introducing Design Research as a methodological approach for education research recognises these relational foundations and suggests three key features of the process; empirical research in a natural context, a partnership between researchers and practitioners and the development of theory and design principles. These three foundational features are explored through the three research strands detailed below.

4.1.1 The three phases of Design Based Research

The structure of this Design Based Research model is aligned, but not identical to Reimann's (2011) three key phases. According to Reimann (2011) phase one needs to prepare for the intervention and includes the processes of clarifying the instructional goals and detailing the imagined learning trajectory. Within this study these were detailed in a design process model (Cobb & Gravemeijer, 2008), which was introduced at the first meeting with Claire (Table two). This design process model was used to set out the learning trajectory proposed through the seven stages of the design process. It takes Reimann's (2011, p.38) stance that the design should consider the whole learning environment, including the "tasks, materials, tools, notational systems [as well as the means of] sequencing and scaffolding". These elements were discussed during the meeting and included an overview of the aspects needed to realise the design process and research processes that were to support the design and co-creation of the empty space.

There is also an expectation phase one will include the dissemination of the theoretical underpinnings with the research participants (Reimann, 2011). These were also discussed at the beginning of the study and included current constructions of space within the Foundation Phase (WAG, 2008), supporting empty spaces through the architectural concept of uselessness (Jilk, 2005) and collaborative design pedagogies within Froebel's gardens (Froebel, 1912b; Froebel, 1899).

The practicalities of the intervention itself were also discussed and its aim to provide children with the opportunity to design and co-create their own physical classroom spaces over a several month period were discussed in terms of how this might be supported by Claire.

Table 2: The design process model

Session	Design stage	Accompanying overview/instruction
1	Empty the space	Empty the space a week before the first design session
2	Initial designs	Children physically explore the empty space Children discuss and draw initial design ideas
3	Group design	Discuss individual designs created Create/choose a group design for the space
4	Materials needed	Make a list of the resources/materials needed
5	Create materials	Create resources and document activities
6	Create the space	Discuss the resources made and create the space together
7	Use the space	

A detailed theoretical discussion did not occur at this stage about what types of pedagogy the empty space may support and this omission is defended by the broad exploratory nature of the research question. A discussion of specific pedagogical practices to be supported or considered could have created a more focused approach when enacting, reflecting and analysing data for both Claire and myself. It felt important these initial discussions about the process should be conducted, and the aspects of pedagogy which may be reflected on would represent the broad and exploratory sense of the research. This approach also reflects the Theoretical Underpinning is positioned to be useful in "providing guidance to others as they attempt to support similar learning processes" (Reimann, 2011, p.41).

Phase two is the implementation of the intervention, including the collection of data in "cycles of design and analysis" (Reimann, 2011, p.40). Within this study phase two is enacted through research strands one and two (described below). The first strand details the seven stage design process for Spatially Democratic Pedagogy, and the second strand, resonating with an Action Research model allowed for the cyclical construction and analysis of data. Importantly this second strand is seen not only to support the implementation of the intervention, but also charts the learning process of the research team (Riemann, 2011, p.40). Recording this process are the planning and reflection sessions which take place directly before and after the seven stages of the intervention. These discussions became a documented transcription of how decisions, interpretations and actions were made and taken throughout the design process. Making sense of this data and how it was constructed is typically regarded as "highly inferential, interpretive, and cyclical" (Reimann, 2011, p.42). The analytical processes supporting this approach, apparent across the three research strands, are detailed in chapter 4.5 to 4.5.4).

Phase three centers around conducting further analysis. However, this separation between theory building and conducting and collecting data is not strictly separated "rather the two are interwoven in a manner reminiscent, (but not tied to), grounded theory" (Reimann, 2011, p.40). Enacted through the third strand of the methodology, this analysis is developed within a Constructivist Grounded Theory model (Charmaz, 2014).

The three research strands used to enact, document and analyse Spatially Democratic Pedagogy are depicted in Figure 2 and further detailed in sections 4.2, 4.3 and 4.4 below

Research Strand One

| DBR Intervention session 1 Empty the Space |
| DBR Intervention session 2 initial designs |
| DBR Intervention session 3 choose group design |
| DBR Intervention session 4 create materials list |
| DBR Intervention session 5 create materials |
| DBR Intervention session 6 create the space |
| DBR Intervention session 7 use the space |

Research Strand Two (green)

- AR WI Reflective Dialogue 1
- AR WI Reflective Dialogue 1a
- DBR Intervention session 1 Empty the Space
- AR Reflection and Planning Dialogue 2
- DBR Intervention session 2 initial designs
- AR Reflective Dialogue 3
- AR Reflective and planning Dialogue 4
- DBR Intervention session 3 choose group design
- DBR Intervention 4 create materials list
- AR Reflective Dialogue 5
- AR Planning Dialogue 6
- DBR Intervention session 5 create materials
- AR Planning Dialogue 7
- DBR Intervention session 6 create the space
- DBR Intervention session 7 use the space
- AR Reflective Dialogue 8
- AR Reflective Dialogue 8a
- AR Reflective Dialogue 9
- AR Reflective Dialogue 10
- AR Reflective Dialogue 11
- AR Reflective Dialogue 12
- AR Reflective Dialogue 13
- AR Reflective Dialogue 14

Research Strand Three (red)

- CGT Intensive Interview 1
- CGT Walking Interviews 1- 20
- MEMO WRITING
  - AR WI Reflective Dialogue 1
  - AR WI Reflective Dialogue 1a
  - DBR Intervention session 1 Empty the Space
  - AR Reflection and Planning Dialogue 2
  - DBR Intervention session 2 Initial designs
  - AR Reflective Dialogue 3
  - AR Reflective and planning Dialogue 4
  - DBR Intervention session 3 choose group design
  - DBR Intervention session 4 create materials list
  - AR Reflective Dialogue 5
  - AR Planning Dialogue 6
  - DBR Intervention session 5 create materials
  - AR Planning Dialogue 7
  - DBR Intervention session 6 create the space
  - DBR Intervention session 7 use the space
  - AR Reflective Dialogue 8
  - AR Reflective Dialogue 8a
- CGT Intensive Interview 2
  - AR Reflective Dialogue 9
  - AR Reflective Dialogue 10
  - AR Reflective Dialogue 11
  - AR Reflective Dialogue 12
  - AR Reflective Dialogue 13
  - AR Reflective Dialogue 14
- CGT Intensive Interview 3

Figure 2: The three research strands

4.2 Strand One: Intervention as artifact

Design Based Research should develop an artifact which will outlast the research and has the ability to be "adopted, adapted, and used by others" (Kelly, 2004, p.116). The seven stage design process is the artifact produced for this thesis. It is set out in the design process model in Table 2 (p.103) and shown within the three stranded research frame in Figure 2 (p.105). The design process model was purposefully brief to allow Claire and the children a high level of flexibility over the direction of the individual sessions and final design and use of the space, whilst also giving Claire support through its central design tenets and proposed trajectory. Presented as a pedagogical tool and a way of working within the classroom, it has the ability to be considered separately to the research methodology and purely as a teaching tool. The individual design sessions are detailed below.

4.2.1 The individual design sessions

1. **Empty the space**: Empty the space before the first design session.

The space was emptied a week before the design process began. This was to allow time for the children to become accustomed to the space, as an empty space, with no furniture, resources or materials (and no prescribed use).

2. **Initial design**: Children physically explore the empty space.

Children discuss and draw initial design. This session was intended for the children to create their initial designs for the space. Having been aware of the space being empty for a number of days, the children were asked to explore the empty space and to discuss any initial ideas they had. After the initial discussion the children were asked to design their spaces, and to include any materials or resources they might need for the design to be realised.

3. **Group design**: Discuss individual designs created. Create/choose a

group design for the space. This session required the children to present their ideas to the group and then for the group to discuss how they would choose one design to be created in the space.

4. **Materials needed**: Make a list of the resources/materials needed.

This session, once the final design had been chosen, was for all the children to create a list of materials and resources needed for the design.

5. **Create materials**: Claire and children create resources and document activities. This process happened over a number of sessions and required the teacher to fit the required resources and materials into her weekly planning.

6. **Create the space**: Discuss the activities completed, resources made and documentation panels created. Put the space together. This session required the group of children to present the materials they had made for the space before they created the space together.

7. **Use the space**: No instructions were given for this stage as how the space was to be used. This would be negotiated after the design process was complete and would depend on the design chosen.

The instructions for the individual design sessions were kept deliberately brief. This was intentional and to support a pedagogical approach that allows flexibility within the teaching and learning. Spatially Democratic Pedagogy as the artefact can play a purely pedagogical role, and can be developed to support an unlimited range of possible designs, construction ideas and uses of the classroom spaces chosen through its structured and sequential design process. Although it is developed to pedagogically support and allow a high level of flexibility over the direction of the individual sessions, it is structured and supported through its central design tenets and proposed trajectory to enable the process to be "adapted and adopted" for other research or classroom settings (Kelly, 2004, p.116). Chapter 6.1 presents the process and how it was enacted through this research study. It details the seven stages of the design process through photographs, transcriptions and reflections.

4.2.3 Intervention as pedagogy

Froebel's (1898) theoretical and practical constructions of materials and space were used as the pedagogical drivers within the intervention. The intervention equally foregrounds an understanding of materials and the relationships they form with children and the different pedagogical relationships that can be formed through the construction of space. It is the construction of space and materials that becomes the vehicle for learning. Froebel created practical teaching methods and tools to support his theoretical constructions of learning. The gifts and occupations were designed as an essential part of his educational approach and were seen as a "mature and carefully elaborated application of his principles" (Froebel, 1912, p.27). The spatial practices he employed within the kindergarten garden were also seen as "no mere arrangement; rather, [they] illustrated in a tangible form Froebel's philosophy" (Liebschner, 1992 in Tovey, 2014, p.17). The gardens were divided into individual and communal plots with "the little garden-beds of the children ... surrounded by the common garden ... showing [the] relation of the particular to the general, of the part to the whole, and so symbolising the child in the family, the citizen in the community" (Froebel, 1912, p.238) and so supporting "reasons of social and citizen collective life" (Froebel, 1899, p.218). The development of specific pedagogical spaces to enact theoretical constructions of learning is similarly reflected in the construction of Spatially Democratic Pedagogy. This section is positioned as an application of its theoretical principles, a set of teaching tools to enact its particular participatory and democratic theoretical underpinnings (Chapter 3).

Froebel had also begun to create, but never realised, another series of practical occupations. These were to be used as part of his Institute of Popular Education at Helba and included "the making in cardboard of various useful articles, such as boxes, napkin-rings, card baskets, lamp-shades; models of familiar objects, such as boats, windmills, and water-wheels, in wood; chains and baskets in wire; and modelling in clay" (Froebel, 1912, p.27). These were seen as an addition to the kindergarten

occupations and Froebel envisaged them for the later years of boyhood. Predicated on the design and creation of practical real life objects, Spatially Democratic Pedagogy similarly supports the design and co-creation of classroom spaces as a way of developing a real life activity for children. These practices were seen to develop a child's mastery over his materials (Mason, 1953). Similarly, Spatially Democratic Pedagogy promotes a series of design based practical occupations to encourage children's ability to create their classroom space aiming to foster their ability to have mastery over their classroom spaces.

Practically, Spatially Democratic Pedagogy begins with a physically empty space which, for the purposes of this study, sits alongside the other classroom spaces (Figure 6, p.182). Its physical emptiness has been supported by Jilk's (2005) concept of useless space and is understood to convey the unfinished and undetermined nature of the space and of the teaching and learning within it. Its emptiness also develops an understanding of classroom space which has no pre-determined use and must gain its meaning through the design and creative interactions of the learners and the space (Jilk, 2005). This development of space within the learning process is positioned to resonate with Fenwick et al's (2011) sociomaterial understanding of classroom space and of the learning that happens with, rather than in the space. Thus, supporting the recently recognised material turn in our more general understandings of learning and space (Lenz Taguchi, 2010). Decentring the common placed understanding of the human subject as the focus of educational understanding (see chapter 2), enables Spatially Democratic Pedagogy to support practice that develops "ongoing action that brings forth the objects and identities constituting our worlds" (Fenwick & Landri, 2012, p.1).

Reflecting on the Froebelian principles and practices considered in chapter 2, and the design practices mentioned above, it is also pertinent to remember although Froebel set out both theoretical and practical aspects of his educational philosophy, it was also his belief there should not be Froebel schools but instead there should be "schools and settings which strive to

explore Froebelian principles with diversity, depending on the community and cultural context" (Bruce, 2001, p.61). This belief strongly resonates with Spatially Democratic Pedagogy as both its principles and practices require practice to be dependent on the individual designs of the community. It stresses early childhood classroom spaces should not only be driven by a generalised curriculum, but by creating homogenised spaces and classrooms and resulting in spaces that are seen to support all children in all classrooms. It advocates instead for different spaces in different schools depending on the different children, their ideas and their specific communities and cultural contexts.

4.3 Strand Two: Supporting the intervention

The pedagogical intervention in strand one locates Spatially Democratic Pedagogy within the classroom, as an everyday practice. The Action Research model proposed in this second strand aims to support the intervention as a research process through ongoing planning, reflective and analytical dialogue between myself and Claire. Knowledge of the intervention is then gained through a shared understanding and collaboration (Grant et al, 2008), "with and from each other" (McNiff, 2013, p.25). Understanding its ability to see knowledge as emerging through the collective actions of teachers and researchers (Shulha & Wilson, 2003) develops its commitment to connecting inquiry through participation and action (Wicks et al, 2008). Using this Action Research model to develop an understanding of the intervention serves to strengthen the positioning of the classroom and the teacher in this curriculum research (McKernan, 2008), and centralises the notion pedagogy should be researched by teachers themselves (Stenhouse, 1975). Wicks et al (2008, p.15) found Action Researchers place importance on their practical life experiences and these were often seen to precede 'philosophical, political, and intellectual underpinnings' when conducting their approach to research. Similarly my professional experiences as an early years teacher and education researcher are considered a significant contributory factor to the central positioning of Action Research in this study.

"Action Research is not easily categorised into an overall movement with a recognised set of defining principles" (McNiff, 2013, p.54), and this broad understanding enables it to be easily adapted. This emphasises its role not as a methodology but as a position which frames methodological practices (Reason & McArdle, 2004). This understanding of an Action Research model allows it to sit comfortably within the Design Based Research frame. Epistemologically this positions Action Research as working with similar understandings as Design Based Research as knowledge both emerges from and contributes to a "complex and panoramic view of the world in which one lives" (Wicks et al, 2008, p.17). Based on the foundations of the relationships formed, it views knowing and knowledge as a living process within which people "generate their own knowledge from their experiences of living and learning" (McNiff, 2013, p.29). This is seen to change the traditional relationship dynamics of the "researcher researching 'the researched' to the bi-directional sharing of various skills, resources and expertise in the co-construction of knowledge" (Grant et al, 2008, p.593), resonating with the positioning of the researcher and participant in Design Based Research. Within this epistemological stance knowledge is not absolute, it is in a constant state of maturation as additional understandings emerge. Reality and knowing thus become a "process of emergence" (McNiff, 2013, p.29).

4.3.1 Methods within Action Research

Developing knowledge through emergence is supported within this second strand through the continuous cycles of intervention and reflective dialogue. This is understood as encompassing aspects of the Action Research cycle, including planning, acting, observing and reflecting. Created to support and capture the interactions between myself and Claire (and to a lesser extent myself and the children) and our discussions of the process, these dialogues were also seen to include methods that resonate with more formal/structured interviewing. Questions within the dialogues would often be prepared in advance (by both myself and Claire) and would often include questions on the process, on ways of working, on reflections, feelings or ideas. These

dialogues can also be seen to be aligned with Holstein and Gubrium's (1995, p.70) "active interview" as Claire was able to transform the discussions by asking the questions or by changing the focus or topic. Therefore continuing to develop the exploratory nature of the research process, and placing emphasis on Claire's role as researcher as well as researched.

This approach resonates with McKernan's (2007) understanding that school practice will only be improved by teachers researching their own practices and this is recognised as an integral factor within this second strand. However, it is also recognised Claire's role only serves as part of the wider Design Based Research frame. This wider frame crucially enables the pedagogical underpinning to be developed from a theoretical perspective and is why Action Research is not used as the sole approach taken in this curriculum research as its practice driven approach to research often lacks the inclusion of theory generation. As such, Spatially Democratic Pedagogy is theoretically driven and this study more readily sits within Stenhouse's (1975) vision of Action Research, where the teacher is part of the research team but is guided by the researcher who chooses the focus of the study.

Recognising the central role of critical reflection within these dialogues as well as the importance of fostering theory-practice conversations, McAteer (2013, p.11) positions "ongoing and evolving action as part of [the] process". Resonating with the Design Based Research frame the dialogues are viewed as 'living experience[s]' rather than as a 'set of procedures' (McNiff, 2013, p.24) and our collaboration through these dialogues, was seen as "joint meaning – making" (Shulha & Wilson, 2003 p.655).

4.3.2 Improvement assumption in Action Research

Although this research is developing additional constructions of classroom space it is not based on an improvement assumption which is often perceived as a requirement in Action Research (McAteer, 2013). Although there is a strong argument for the inclusion of an improvement assumption within this stand because of the little amount of current research reflecting

on children's design of their classroom space, it is argued at this time there is an initial need for broader, exploratory research. Referring to Butler (1999), McNiff (2013, p.29) emphasises the often disruptive nature of questions asked by action researchers, and uses the example, 'I wonder what would happen if …?'. This research, in asking a similar question "what happens if children design and co-create their classroom space?", aims to disrupt the current ways of underpinning and constructing classroom space. Causing 'epistemological trouble' (ibid) by underpinning classroom space with a sociomaterial epistemology and using a 'what happens if …' research question highlights the purposeful aim of the research to disrupt current constructions of classroom space by offering an opportunity to see them in new, yet to be understood and explored, ways. This research, in using a 'what happens if' question is positioning itself within an exploratory study, is not looking for something specific but is interested in the perspectives of teachers and children as to what happens when they consider space in this way. This research aims to explore an additional construction, not improve current constructions. Any comparative or improvement can be explored and developed in future research.

4.4 Strand Three: Framing the Intervention

The first two research strands are framed by a Constructivist Grounded Theory strand. This third strand is used to explore Claire's existing classroom spaces and the space created through the intervention . This chapter whilst considering how data is constructed, what tools are used, and how analytic methods are applied (Charmaz's, 2014), also reflects on how the Constructivist Grounded Theory methods fit within its Design Based Research frame, working alongside both the intervention and the Action Research strand to develop the analytic approach taken.

4.4.1 Why Constructivist Grounded Theory?

The lack of research to date, exploring what happens when children design and co-construct their classroom spaces as an everyday practice within the

classroom, required this research to generate theory from existing theory and the data constructed. The lack of previous studies does not allow this study to draw from, test, evaluate or compare to other studies, and so required an analytic approach which generates and constructs the theoretical constructs through the data (Charmaz, 2014). The duel nature of Design Based Research required the research to create an intervention to 'try out' the theoretical ideas in the setting and therefore the research also needed to develop an analytic understanding of the intervention itself.

Grounded Theory recognises researchers construct theories which are "grounded in their data" (Charmaz, 2014, p.1). The constructivist underpinnings of Constructivist Grounded Theory develops an epistemological and ontological understanding which assumes the "relativism of multiple social realities, recognises the mutual creation of knowledge by the viewer and viewed, and aims toward an interpretive understanding of subjects' meaning" (Charmaz, 2003, p.250). This approach to grounded theory was chosen as it resonates with the other constructivist approaches of the intervention, the Action Research model and their wider Design Based Research frame.

Glaser (2002, p.1) sees the concept of constructivist grounded theory as 'a misnomer' and 'not constructivist', arguing that grounded theory is "the generation of emergent conceptual categories and their properties [and so] bias data or subjective or objective data or misinterpreted data" are not recognised. Acknowledging different ontological and epistemological approaches will 'affect the modes' of a grounded theory study, Hallberg, (2006, p.141) debates that "varying views of what reality is and how it can be known affect the modes of the grounded theory method". This recognition of 'varying views' of reality readily lends itself to the understanding of Grounded Theory as a 'methodological spiral' (Mills et al, 2006, p.26). In line with the constructivist attributes of the Design Based Research and Action Research strands so far, Charmaz's (2014) Constructivist Grounded Theory is positioned at the end of the spiral and seen to be 'actively repositioning the researcher as the author of a reconstruction of experience and meaning' (Mills et al, 2006, p.26).

4.4.2 CGT within Design Based Research

A fundamental tenet of a grounded theory is the avoidance of pre-conceptions (Hallberg, 2006), targeted pre-reading arising from early reading of the theoretical literature is not a strong component of grounded theory studies (Cohen et al, 2011). Glaser (2004, p.12) highlights how early targeted reading would violate "the basic premise of grounded theory [as] theory emerges from the data not from extant theory" and therefore "as one does not know what one will find, one cannot be sure what one should read" (Cohen et al, 2011, p.599). The lack of research to date detailing children's involvement in the design and co-creation of their classroom spaces allowed this research to remain faithful to this tenet. There is no reading available which considers children's design and creation of space as a pedagogical tool. However, targeted pre-reading was undertaken to construct the theoretical underpinning for the intervention itself. The theoretical constructions of classroom space, architectural theory and design, and pedagogy were needed to allow the research to develop different epistemological and ontological understandings of classroom space. This pre-reading and theoretical frame is not viewed as contradicting the lack of preconceptions required within a Constructivist Grounded Theory study. The literature considered in the theoretical underpinning is supporting the creation of the intervention, and is not exploring previous enactments of children designing and co-creating their classroom spaces.

4.4.3 Methods in Constructivist Grounded Theory

Acknowledging Constructivist Grounded Theory as beginning with inductive data, the methods invoked are accordingly of an iterative nature to keep interaction and involvement with the data and its emerging analysis (Charmaz, 2014, p.1). Glaser (2004, p.11) highlights, "[m]ost hypotheses and concepts not only come from the data, but are systematically worked out in relation to the data during the course of the research". This iterative process is central to the grounded theorising in this research which sees theory being developed out of the ongoing data collection and data analysis

by myself, Claire and the children. The subsequent data collection is then guided strategically by this emergent theory. Hammersley and Atkinson (2007) highlighting this iterative process, discuss how data collection and data analysis proceed in tandem, continuously referring back and forth to each other.

Constructivist Grounded Theory develops a methodological principle (which that) considers data construction methods to "flow from the research question" (Charmaz, 2014, p.26). This constructivist element of the Grounded Theory approach is seen to encourage a methodological eclecticism countering "scholars who have treated it as a method for interview studies only" (ibid). Although this Constructivist Grounded Theory frame does position interviews as its overriding method, it also includes the creation of a classroom map, walking interviews with the children as well as focus groups conducted with the children. These data construction tools are used within this Constructivist Grounded Theory strand to support the iterative nature of theory construction during the intervention. This following section details the methods, intensive interviews, map making, walking interviews, focus groups and memo writing and explores how they help support and shape the developing theory within this Constructivist Grounded Theory strand and also their role within the Design Based Research study as a whole.

4.4.3.1 Map Making

Claire was asked to bring a map of her classroom to the first interview. Explicitly constructing the interview around Claire's map was to encourage her ownership over the initial ways the spaces were both framed and discussed. The opening interview question, "What current classroom spaces do you have? Can you talk me through your map?" (CGTII1-1.1) was purposefully set as an open ended, exploratory question to elicit Claire's personal and professional perceptions of her classroom spaces. Aimed at positioning her as an activated subject within the interview, transforming her from a "passive vessel of answers [to someone who] not only holds facts and details of experience, but, in the very process of offering them up for

response, constructively adds to, takes away from, and transforms [them]"
(Charmaz, 2014, p.70c). The use of visual props such as maps is seen to be
useful when supporting interview talk (Rose, 2007; Woolner, 2012), and the
map was also an opportunity for Claire to discuss her current classroom
spaces from the 'vantage point of [her] own experiences' (Charmaz,
2014:71).

Claire's ability to choose how the discussion around her classroom spaces
unfolded was an important aspect of the interview process and research
frame. Used to position Claire as research partner and to reinforce her role
within our partnership as the one with the working knowledge of her spaces
(Bradley & Reinking, 2011). This also reinforced my role within the
interview to 'listen actively' and encourage Claire to talk (Charmaz, 2006),
creating an interview space that was intended to both make explicit
strengthen and our research partnership.

4.4.3.2 Intensive Interviews

Intensive interviews were used as part of the third strand to frame strands
one and two. Conducting the first interview before the intervention began
was intended to gain an understanding of Claire's existing classroom spaces.
Explicitly framing this first interview, using a map Claire had created of her
classroom, was intended to encourage and reinforce the knowledge she had
over the spaces, and the ability she had to develop the way in which the
spaces were discussed. Thus, giving her the opportunity to discuss these
spaces from the 'vantage point of [her] own experiences' (Charmaz, 2014,
p.71). Encouraging Claire to take control of the way in which her classroom
space was initially discussed enabled conversations which were grounded in
her perceptions and practices as a professional. This positioned Claire as an
'activated subject', that is, transforming her from a "passive vessel of
answers" to someone who "not only holds facts and details of experience,
but, in the very process of offering them up for response, constructively
adds to, takes away from, and transforms [them]" (Charmaz, 2014, p.70).
Claire's initial description of her map and the spaces within it allowed her to
control the "what, when and how" as the spaces were discussed.

Charmaz (2014) sets out three sections of the intensive interview; initial open-ended questions; the intermediate questions; and ending questions. These serve to frame the interview and enable a way of constructing and conducting an open-ended interview. The first interview was developed to foster an exploration of Claire's existing classroom spaces. Following Charmaz's (2014) interview format, the questions were set to gain an understanding of Claire's perspectives of her spaces and specifically what spaces she had, how she felt about these spaces and what she expected children to do in them. The following are example questions taken from each of the three sections:

1. Initial open-ended questions were used to initiate conversation, What current classroom spaces / areas do you have? Can you talk me through your map? What do the children do in these spaces/areas?

2. Intermediate questions were an attempt to elicit Claire's views of her experience and included the questions, What pedagogical approaches/ teaching methods do you currently use in the different classroom spaces?

3. Ending questions aimed to bring the interview back to a more normal conversational level e.g. How do you feel about the project? Methods to be employed? Photographs? Audio? What do you want to get out of the research? This open-ended approach was to encourage unanticipated statements and stories to emerge

(Charmaz, 2014).

Using intensive interviews as part of the Constructivist Grounded Theory data construction and analysis process enabled the interviews to be seen as "open-ended and emergent" (Charmaz, 2004, p.82), developing Claire's ability to adapt and transform the direction of the interview. Resonating with Talmy's (2010, p.25) "research interview as social practice orientation"

rather than the common conceptualisation of the interview, referred to as a "research instrument perspective" (ibid). In this respect, the research interview as social practice orientation aligns itself to Holstein and Gubrium's (1995) 'active interview'. By contrasting it with conventional approaches, they argue the latter privilege the 'whats' of the interview, that is, the interview content whereas active interviews are interested in both the 'whats' and 'hows', or the content and the 'interactional [and] narrative procedures of knowledge production' (ibid). The 'how' of our intensive interviews was an indication and reflection of the role Claire had within the research process as a whole. She was not positioned as the 'researched', Claire was not being observed during her daily practice and routines, analysed against some previous theory or study, but was active in the implementation of the intervention process. She was able to adapt and deliver the pedagogical tool in relation to how she saw her role and her relationship with the children and her classroom space. As such, intensive interview two was used to focus and explore the data and emerging theory generated from the first interview. The third interview drew together the emerging data and theory from both the previous interviews alongside the thematic analysis which was being generated through research strands one and two. Claire's perspectives and understandings of the process were an important part of the analysis and theory construction processes developed throughout the research.

Throughout the intensive interviews Claire was asked to describe and reflect upon her experiences of classroom space in ways which seldom occur in her everyday working life. Using the few broad introductory questions in interview one was sufficient for this interview to develop a lengthy description and reflection of Claire's classroom spaces, followed by a couple of relevant and probing follow-up questions. My role within these interviews was to encourage Claire to talk whilst listening 'actively' so I could ask further questions to clarify any details (Charmaz, 2006). Already having a working and theoretical understanding of the Foundation Phase in my previous role as an early years teacher and researcher enabled me to develop Charmaz's (2014, p.59) requirement for researchers to be "fluent in

pertinent procedural issues and technical questions" and able to "engage the research participant and guide the conversation" (Charmaz, 2014, p.59).

When discussing interview etiquette, Charmaz (2014, p.70) lists her "dos' and 'don'ts" and advocates listening (to interviewees) and an approach of non-interruption. This was considered particularly pertinent during our interviews as I was aware the open ended questioning and Claire's ability to direct the interviews could have quickly become a conversation between the two of us especially because strand two is developed through a series of reflective dialogues which are more conversational in their approach as well the already established professional relationship Claire and I had through working together on a previous research project. From the beginning we felt comfortable chatting to each other and I was aware and further reminded by Charmaz (2014, p.70) that it was more appropriate to take a 'non-interruption' approach when conducting these interviews. This was partially overcome by a field note I shared with Claire before each intensive interview, which highlighted Charmaz's position and clearly stated I needed to let Claire talk.

Another pertinent aspect of Charmaz's (2014, p.70) advice for intensive interviews is the participant should be left 'feeling positive about the interview experience and about self' (Charmaz, 2014, p.70). This is something I was mindful to promote as Claire's place within the research, and her ability to engage and reflect on the process, was an integral aspect of the process. I wanted Claire to feel the interview (and similarly the reflective dialogues in strand two) gave her the opportunity to discuss her classroom spaces, the design process and her feelings and opinions about Spatially Democratic Pedagogy and the research process in a manner supportive and respectful of her position as the class teacher. Charmaz's (2014) also advises researchers should not take an authoritarian stance within the interview. I did not and could not position myself as someone who knew what happened in Claire's existing classroom spaces, or what would happen when the children designed and co-created one of their classroom spaces as there is no published research on constructing

classroom space in this way. Claire was initially, in the first interview, positioned as the expert in her understanding of her current classroom spaces. Developing an understanding there was no 'right' answer to the research was addressed early on in the study when Claire said she wanted the research 'to work for me'. I explained whatever happened during the process, we would document and discuss it and these would be our findings. I tried to impress upon Claire it was the findings themselves which were important, whatever they demonstrated. I reminded Claire as we did not yet know what would happen, and our discussions were to be based on the data.

4.4.3.3 Walking Interviews

Walking interviews (Clark & Emmel, 2010) were used to form part of the Constructivist Grounded Theory frame and were to mirror the first interview undertaken with Claire. Conducting the walking interviews before the intervention began aimed to gain an understanding of both what the children thought of their existing classroom spaces and their views and experiences of their everyday spaces (Clark & Moss, 2001). It specifically explored how they viewed the construction of these spaces.

In two groups (one of three and one of four), the children were given a polaroid camera and asked to take me around their classroom and to show me spaces they liked or did not like within their classroom. Conducting an interview whilst 'on the move' was to enable the spaces themselves and the instant photographs to become the stimuli for the talk. Children were able to show me the spaces, rather than describe them (Clark & Emmel, 2010). Using the spaces themselves as the stimuli enabled the children to talk about their spaces in a way they might not have been able to if they had not been in the spaces themselves. They often pointed out and discussed particular resources which prompted discussions around ways of using the spaces which might not have materialised if the interviews had been conducted through a more sedentary interview or focus group. Being 'on the move' is also recognised as a way of enabling children to take a researcher on a 'tour'

of their spaces which is seen to "demonstrate children's priorities which might otherwise become lost". Clark and Moss (2001, p.28). The discussions were also able to further develop around the instant photographs the children took on route. The photographs were seen as a visual methodology which allowed insight into the children's perspectives of their spaces in "immediate [and] creative ways' (Graham & Kilpatrick, 2010, p.89). The children were able to take the photographs and discuss what they had taken immediately. Talking in this way about the spaces created a more informal dialogue whilst being able to explore the spaces the children were photographing and discussing.

Similarly to the Constructivist Grounded Theory interview, I wanted to explore these existing classroom spaces from the children's perspectives. They chose the areas we visited, took pictures and discussed resources, activities, friends and they also talked about how the spaces interested or related to them. Mirroring the initial interview with Claire, I listened to the children but also then asked the children a number of closed/directed questions as well as a number of more open ones (for example, "What do you do in this space?" "What do you like about this space?" "Who decides what you do in this space?" "Who created this space?"). Asking these specific questions enabled an awareness of the children's understanding of the construction of the spaces and the uses of the individual spaces. As Clark (2010, p.170) suggests, approaching participation in this way allows for an understanding of what, for children, it means to be in this place.

However, on the walking tours the children told me about the expected uses of the space, they framed their responses by only including activities that were sanctioned by Claire and the other adults. None of the children talked about things that they did but were not 'supposed' to do. Although I had tried to distance myself from an authoritarian/teacher role I have to consider the children still considered me in this way. Children can be quick to read researchers intentions; can want to gain approval through the legitimization of their behavior and acts. On reflection, I question if the children during their walking interviews situated themselves within the 'status quo' of

classroom space. Did they only tell me the ways in which they are expected to be in space? At this point in the research I had only met the children a couple of times and our relationships at this point were, on reflection, quite limited which may have contributed to the way in which they discussed their spaces.

4.4.3.4 Focus Groups

Focus group discussions were undertaken with the children at a number of points throughout the intervention process. Focus groups were undertaken, rather than interviews, as they are seen to reduce pressure on individuals to respond to every question (Basch, 1987). Mauthner (1997) also argues they are able to replicate the group work and activities that children will be already engaged with through their daily classroom activities.

When selecting children for focus groups, Roberts- Holmes (2005, p.113) recognizes it is "important to choose the group of children carefully because some children might dominate others and shy children might not talk for fear of reprisal or ridicule". The group dynamics, and particularly how the children worked together had been an integral part of the process when choosing the sample of children (see section 4.1) and Claire's familiarity and understanding of the individual children aided this process.

The first focus group was undertaken directly after the walking interviews and was used to enable the children, in their small groups, to reflect on the photographs they had taken. The second focus groups were undertaken directly after session six of the intervention and were focused around the construction of, and how the children felt about, the space. The third and final focus group was undertaken several weeks after they had created the space (this was to enable the children to have spent time in the space they had created) and was conducted as the final reflection on the space and the process.

Reflecting on this process there are a number of advantages and disadvantages to this method. The sessions felt relaxed and the children often chatted enthusiastically. However, the focus groups were always undertaken in a room situated off the classroom that was usually used for group reading or small group focus tasks. Initially this space was used because it was perceived to offer a quiet space, allowing the children to chat without the distractions of the noisy classroom. However, on reflection the focus groups may have been more successful if they had been held in the space itself as the children were often distracted by resources in the room.

4.5 Analysing Spatially Democratic Pedagogy

These next sections detail how Spatially Democratic Pedagogy is analysed within and across the three research strands and how these are brought together to form the final points of interest considered in the discussion and conclusion chapters. Appendix E details the corpus of data constructed throughout the research from which the analysis is drawn. Appendix F exemplifies how this raw data is catalogued.

4.5.1 Analysis within Design Based Research

WithinDesign Based Research analysis and discussion consider both the contribution the study makes to theory building and to the local contexts (Kennedy–Clark, 2013). The 'quality' of the intervention is discussed through its "usefulness and effectiveness" for the participants who enacted the study (Visscher-Voerman et al, 1999, p.24) and this is identified through any perceived shifts in the children's learning which would not have occurred without the intervention (Reimann, 2011). This analytic frame is seen as unwaveringly local because of the complex contextual relationships that play out between the events and processes of the study (Miles & Huberman, 1994).

Analysing these processes requires an understanding of "which elements in the learning environment are contingent, and which are necessary for the changes in competence to occur" (Reimann, 2011, p.44). My role here, along side Claire, is to highlight shifts in children's learning which appear to be supported by the instructional design, and any perceived shifts in competencies which have been developed through participation in the design experiment itself (Reimann, 2011, p.44). Within Spatailly Democratic Pedagogy, children's learning is concerned with their ability to participate. Demonstrating this through "action causality" (Abell, 2004) requires the discussion chapters to reflect on where this has been observed and develop a narrative structure around it.

In her recent systematic literature review of Design Based Research Zheng (2015) reports the testing and measuring of interventions was mostly dependent on its cognitive outcomes. Measuring Spatially Democratic Pedagogy in this way was outside the remit of this research, as its aims are to consider children's design and co-create their classroom space in a broad, exploratory way, rather than pre-determine any specific cognitive outcome at this stage. In doing so, this study is considered to align itself more towards Cobb & Gravemeijer, (2008, p.73) who argue the objective of Design Based Research is not to develop a detailed account of the processes and learning developed through the intervention but instead "the overriding goal is to produce knowledge that will be useful in providing guidance to others as they attempt to support [similar] learning processes" (Cobb & Gravemeijer, 2008, p.72). These factors are then often used to modify the intervention itself, creating a series of factors for consideration in further explorations of children designing and co-creating their classroom spaces, see chapter 6.2.10 for the points considered for modification. Zheng, (2015, p.399) felt although the majority of studies focused on "designing, developing, and redesigning learning environments through interventions" there was limited detail on how to revise the interventions themselves. In contrast, the revision of Spatially Democratic Pedagogy became an integral part of the process and was discussed throughout the research as part of the regular reflective discussions. Changes that would be made are detailed in chapter 6.2.10, p.233 and include developing a design driven process where

children are grouped depending on their design for the space, rather than the groupings that were driven by the children's abilty to work well together. Including all children in the class and running the process throughout the year were also considered as valuable changes moving forward.

When discussing the envisioned learning trajectory, Cobb & Gravemeijer (2008, p.70) note "the ways in which tasks and tools are enacted in the classroom, and indeed, the learning opportunities that arise for students depend crucially on the proactive role of the teacher". This is equally true of the analytic process and the discussions and reflections on the intervention and the research process are equally created through the collaborative relationships which form between the practitioner and the researcher (Bradley & Reinking, 2011). The collaborative cycles used to construct data, interpret and reflect on it are also seen to be a core requirement of the Design Based Research analysis process.

4.5.2 Collaborative partnerships in Design Based Research

This collaborative partnership between the researcher and the practitioner is considered a requirement for Design Based Research (Anderson & Shattuck, 2012). Indeed "the success of the innovation and the knowledge gained from its study depend in part on being able to sustain the partnership between researchers and teachers" (The Design-Based Research Collective, 2003).

The relationship between Claire and myself was a crucial aspect of the practical application and ongoing analysis of this research. In order to enact Spatially Democratic Pedagogy, the construction of Claire's classroom space needed to be changed. Developing Spatially Democratic Pedagogy as a design activity therefore disrupted the usual construction of Claire's classroom space. As a researcher, carrying out a Design Based Research in a classroom setting, I was aware I needed to rely on Claire's knowledge and expertise as a practitioner working within the curriculum and classroom

environment. She was able, because of her position, to "assist in the identification of factors that can enhance or inhibit an instructional intervention's effectiveness, as well as to assist in developing realistic adaptations" (Bradley & Reinking, 2011, p.309). This position was developed through the relationship we built during the process.

Claire's role was briefly noted in the process model (table two, p104), however a greater understanding of the role Claire needed to play was developed through the planning and reflective dialogues. Constructing research roles in this way resonated with the ideas put forward by Bradley & Reinking (2011), who argue even though a collaborative approach is required, this does not necessarily equate to equal roles and responsibilities. The relationship we formed during the process allowed for both our strengths and professional positions to be recognised and respected. Subsequently, I provided the outline design framework and Claire enacted it in her classroom. Claire was also particularly relied upon in the interviews and planning and reflective dialogues as she was asked to share her knowledge of existing space and to reflect on the intervention process. Claire was further asked to consider how the design was effective or how it could be adapted in future research. Through the process I needed to play a dual role as on the one hand I needed to conceptualise, design, develop and implement an intervention whilst on the other I needed to make "credible and trustworthy assertions" within the analysis stage (Barab & Squire, 2004, p.10). Claire's involvement during the analytic stage meant the assertions being made were discussed and reflected on together, developing a shared understanding of the research process and its findings.

4.5.3 Analysis in Action Research

Thematic analysis is used in this second strand to identify, analyse and report patterns and themes within the data (Braun & Clark, 2006). Analysis initially involved the standard technique of creating verbatim transcriptions of both the individual stages of the design process and the reflective

dialogues and planning sessions used to support its implementation. The transcription process itself is considered to be a part of the analytic process as it enables an immersion in the data early on (Bird, 2005).

Transcribing both the intervention process and the planning and reflective dialogues offered insights into the intervention itself but also into the learning processes supporting this implementation (Shulha & Wilson, 2003). This enabled an insight into some of the practices that were discussed before the sessions and then developed within them. These sessions charted our learning and reflections on the process. In one of our reflection sessions we discussed whether future studies would benefit from changing the children's groups from a pedagogically driven process, where for this study they were grouped according to how well they worked together, to a design driven process with groups based on similarities of their initial designs. Developing an understanding of these wider discussions and processes also grounds the process in an ongoing cycle of action, reflection, and future planning.

Upholding the participatory nature of Action Research and the understanding the evaluation of the intervention is a shared process between researcher and teacher, the process also seeks to include Claire's analytic and reflective understandings of the data. Roberts and Dick (2003) emphasise co-constructed knowledge in Action Research should develop participant's participation in meaning making through involvement in analysis, interpretation, reporting and dissemination. Consequently, the transcriptions were always read by both myself and Claire to develop a familiarity with the data set and to frame future reflections and discussions. Claire was asked to read and then comment or note anything she wanted to question, reflect upon or highlight in throughout the process.

Positioning themes within a thematic approach as emerging from the data is seen to imply a passive process and as such denies the active selection process of the researcher. Demonstrating my understanding of this process as an active approach, I recognize Researcher judgement and the judgments of Claire and consider them an integral aspect of determining the themes within this strand (Braun & Clark, 2006).

Initial analysis of the intervention sessions and the following reflective dialogues I developed eight initial themes (see figure 3). During a later reflective session Claire highlighted a further three themes and we included, children's ability to design spaces, a perceived lack of control over the process and concerns about how learning would be assessed to the thematic frame. Subsequently, our on-going discussions were developed around these initial themes and were discussed as part of a process of merging, removing and re-merging themes and refelctions together (Davies et al, 2014). This practice, resonating with Wicks et al's (2008, p.19) "reflection on action" provided the analytical space for discussion between Claire and myself and allowed us to document the process of meaning making within this second strand (Shulha & Wilson 2003).

Figure 3: Initial Action Research Themes
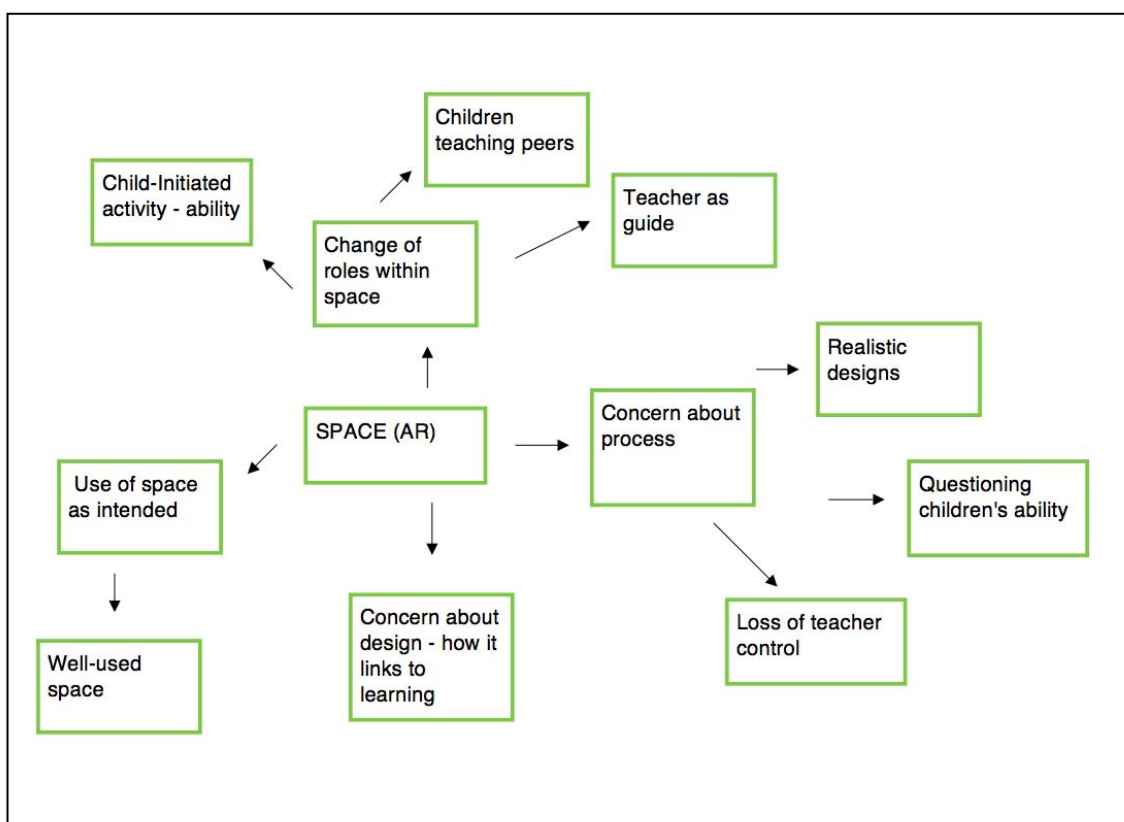
4.5.4 Analysis in Constructivist Grounded Theory

The Constructivist Grounded Theory frame (research strand three) sat outside both the intervention and Action Research model and was interested in Claire's existing classroom spaces from her perspective.

4.5.4.1 Line by line coding

Line by line coding was used as early analysis of the initial interview. Considered to be the 'first analytic turn' in grounded theory (Charmaz, 2014, p.109), line by line coding requires transcription and close reading of the interview (See appendix H for the first interview transcription and line by line coding). Once the line by line coding was completed fifteen sensitizing concepts were developed (see fig 4). I continued to ask analytic questions of the data, focusing on what meaning could be understood and explored and this enabled more focused questioning for interview two (see figure 5).

Figure 4: Intensive Interview 1: Initial sensitising concepts
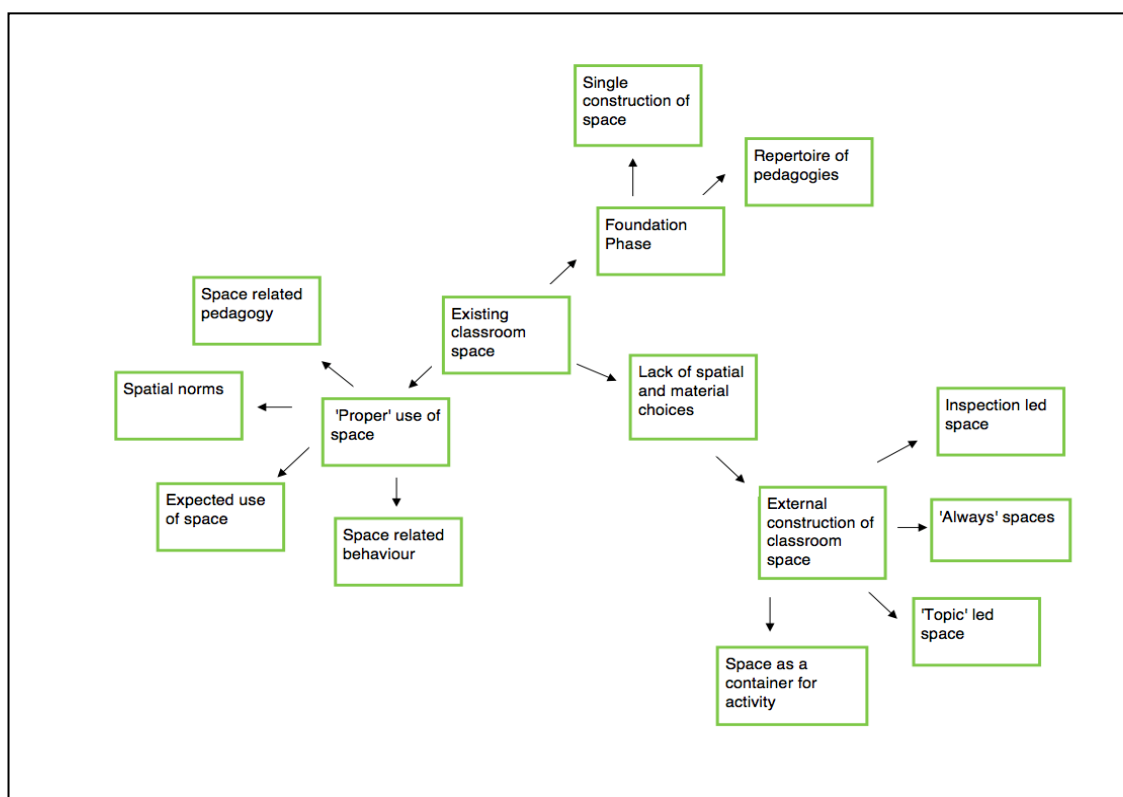
Figure 5: Further analysis of line by line coding

Interview one - question	Answer/transcription	Initial coding	Further questions…..
CGTII1-1.1 What current classroom spaces /areas do you have? Can you talk me through your map?	"The wet area in the middle, that's really used well, used properly. They always paint at the painting easel, the water tray is really well used. We put different equipment in the sand and water every day so it is always something new for them. There's a play-dough table as well, in that area. That is used really well as well. I'd say, probably out of all the areas in the classroom that's the one they use properly.	Spaces being used well, used properly materials/ resources changed daily	What does used well, used properly mean? What are additional resources driven by? Do all spaces in the classroom have a 'proper use'?
CGTII1-1.3 Who designs these current classroom spaces?	"It is topic led. Obviously there are areas that are always going to be the same. You know, the water, sand, painting areas, they are always going to be the same. The reading area is always going to be a reading area, the building area pretty much stays the same. The role play are the two biggies that are to do with topic stuff"	Obvious use of space 'Always' spaces 'topic driven space'	Why obviously? Why do these spaces not change? 'spatial norms' Are there other drivers of space?

4.5.4.2 Developing sensitizing concepts

Through coding researchers "define what is happening in the data and begin to grapple with what it means' (Charmaz, 2014, p.113). Charmaz (2014, p.117) details how Glaser's (1978) early 'rules' for initial coding included not having any 'preconceived concepts' in mind. This was noted when conducting the first line by line analysis of interview one but it was also

recognised this is a pedagogical intervention study about classroom space and as such coding was aligned to this way of thinking about the data constructed. I took Dey's (1999, p.251) approach to explore this concern and recognized "there is a difference between an open mind and an empty head". Developing an understanding of the intervention through this approach, I entered the process with an understanding the Spatially Democratic Pedagogy process was first and foremost a pedagogical approach. However, the coding also stuck close to the data and developed a number of 'sensitising concepts' (Charmaz, 2014, p.117). The sensitising concepts drew attention to the 'action, meaning, process, agency, situation, identity, and self' (ibid). The initial interviews were 'wide and open' and explored Claire's existing classroom spaces and the teaching and pedagogical understandings she had of them. They was underpinned by a pedagogical and spatial remit but how that would materialise and what Claire would discuss was an unknown and therefore to develop an initial understanding of Claire's constructions of her existing spaces line by line coding was required.

Throughout the analytic process these sensitising concepts helped, through their transitional nature, to connect different fragments of data to create a framework which developed analytic abstractions about classroom space, its construction, use and the perceptions given to it by Claire and the children. These emerging ideas, questions and codes were then able to be attached to other segments of data and raise further analytic questions (Charmaz, 2014). These initial concepts were transitional objects, connecting different fragments of ideas and understandings and different points throughout the process.

As a researcher coding within grounded theory analysis, the task is to "take segments of data apart, name them in concise terms, and propose [an] analytic handle to develop abstract ideas for interpreting each segment of data" (Charmaz, 2014, p.113). This is aimed at developing an understanding of what is happening in the data (Ibid). It is also intended to develop a theory grounded in data "systematically gathered and analysed" (Strauss and

Corbin 1994, p.273). This process was on-going throughout the process and would often take the form of post-it notes with quotes, questions and ideas being developed as part of on-going reflection. This systematic gathering and analysis drives forward theory generation from a 'solid core of data analysis and theory construction' (Bryant & Charmaz, 2007, p.33). It is, according to Strauss and Corbin (1998, p.12), a 'theory that was derived from data, systematically gathered and analyzed through the research process. In this method, data collection, analysis, and eventual theory stand in close relationship with one another".

These early codes are to show Claire's actions and reflections based on her understanding of classroom space and are to include direct quotations of her speech. Grounded theorists refer to codes of participants' special terms as in vivo codes and this is seen to enable the participants' views, meanings or actions to be preserved within the coding process itself. 'Using spaces properly', the first (and positioned as the most important) in vivo code highlights Clare's initial separation of space into spaces which were or were not used properly. This code is understood as a symbolic marker of Claire's speech and meaning. This process allowed the development of these nascent, analytic ideas including this perception of using spaces 'properly', which is drawn from the predetermined expectations Claire held for certain spaces e.g. reading comics in the reading area or playing with the dinosaurs placed in the sand.

The sensing concepts were further used to develop and guide the subsequent intensive interview frames by shaping an early analytic frame around the emerging sensitising concepts (Charmaz, 2014). Studying early data allows the researcher to 'separate, sort and synthesize' it with the use of coding and offers the opportunity to 'attach labels to segments of data [and] … raise analytic questions about our data from the very beginning of data collection' (Charmaz, 2014, p.4). Within this the processes of data collection, analysis and theory generation proceed together, continuously referring back and forth to each other. Thus, the process of data collection is 'controlled by the emerging theory' (Bryman, 2008, p.415).

Specific questions were raised in the second interview for Claire to reflect further on the constructions of her existing classroom spaces, the planned and actual uses of these classroom spaces and how teacher and children's involvement in the design and creation of the classroom spaces was realised throughout the year. It is pertinent to note at this stage the ability these emerging concepts have to develop the subsequent data collection questions is confined to the Constructivist Grounded Theory analytical frame and all other aspects of the methodological stages were fixed and did not change.

4.5.4.3 Memo writing

Analytic thinking and writing quickly became a process adopted through all three strands whilst constructing the data. The iterative nature of Action Research and Constructivist Grounded Theory all required and compelled engagement with the data from a very early stage. This analytical writing process, set within the Constructivist Grounded Theory strand, is seen as 'informal analytic notes' (Charmaz, 2014) and more commonly referred to as memo writing.

Memo writing is "the pivotal intermediate step in grounded theory between data collection and writing …. memo-writing is a crucial method in grounded theory because it prompts researchers to analyze their data and to develop their codes into categories early in the research process" (Charmaz, 2014, p.343). Detailed memo writing was used for both strands throughout the process and was seen to develop early ideas, associations and theoretical connections. However it must be noted the analytic strands and their corresponding themes, codes and concepts were not brought together until each strand had been analysed in its entirety, at the end of the intervention process.

Set within the third Constructivist Grounded Theory strand, memos are used as a crucial part of the methods employed. These memos were used as a way of engaging with and initially analysing data generated from the first

interview with the teacher and walking interviews with the children. The memos, in accordance with guidelines set out by Charmaz (2014), firstly detailed information about the codes and concepts being generated. It was only through 'successive writing' did they develop into more analytic accounts of the theoretical categories which were emerging from the intensive interviews (Charmaz, 2014, p.162).

Writing in this way, throughout the research process, supported my analytic thinking and the iterative nature of the study. Viewing memo writing as a way of becoming 'actively engaged' early on in the raw data (Charmaz, 2014, p.162), enabled the creation of an interactive space between myself, Claire and the data. Ongoing dialogues were able to be supported and guided by the emerging "data, codes, ideas and hunches" (ibid) and consequently new ideas and discussions would often emerge.

4.5.4 Thematic analysis across all three strands

Finally, a thematic analysis was conducted across research strands two and three. Considered an appropriate model for Design Based Research as it has the ability to be "applied across a range of theoretical and epistemological approaches" (Braun & Clark, 2006, p.78). Using thematic analysis enables each strand to both stand alone (as they do in discussion chapters 5 and 6) and be brought together to develop a reflective understanding of the whole process (see conclusions discussed in chapter 7).

4.6 Criticisms of Design Based Research

Zheng (2015, p.400) when detailing criticisms of Design Based Research states it is "difficult to produce … high research validity in Design Based Research". Pointing to Barab & Squire (2004), Zheng notes they consider the researchers integral relationship with the design, development and implementation of the intervention making it difficult to produce "reliable

and faithful statements" (Zheng, 2015, p.400). This dual role is acknowledged as a challenge as the ability to champion and support the intervention whilst also, at the same time, developing a critical and detached stance to the data constructed throughout the process has been difficult. However, although it is recognised playing a dual role is difficult, this research draws on Anderson & Shattuck's (2012, p.18) understanding researchers need a "certain wisdom … to walk this narrow line between objectivity and bias". This wisdom, for me, comes from my many years as an early years teacher and my more recent role as an early years researcher.

Acknowledging its dual role of theory building and improving practice, Anderson & Shattuck (2012, p.16) also add the need for principles which "guide, inform and improve" design research in education contexts. This reinforces an understanding the methodological foundations of Design Based Research are 'an ongoing task'" (Reimann, 2011, p.46). This acknowledgment to improve Design Based Research principles themselves can be attributed to its position as a "relatively new approach to education research" (Bradley & Reinking, 2011, p.305). Further acknowledging the relative infancy of Design Based Research as a methodology, it has been recognised "at this point in the evolution of design-based research, the contribution of research to practice much outweighs the contribution of practice to theory development" (Walker, 2011, p. 53).

Whilst recognising this intervention as firmly rooted in, and therefore arguably more readily and easily able to influence, the practice within which it is situated, the broader research goal of the intervention is equally to inform both practical and theoretical understandings of classroom space when underpinned by a Spatially Democratic Pedagogy. As such this research, and more specifically the intervention, more readily aligns itself to Easterday et al's (2014, no page) definition of Design Based Research as "a process that integrates design and scientific methods to generate useful products and effective theory for solving individual and collective problems of education".

4.7 How did they initially know me?

When deciding how to introduce myself and the research to the teacher and children I considered Charmaz's (2014, p.29) understanding that what I am able to do and ask within my research will depend on how Claire and the children identify me as this will influence what they tell me.

When introducing myself to the children I used a pictorial Participant Information Sheet (PIS) that included photographs, pictures, illustrations and a small amount of text to describe the research (Appendix C). I discussed my role as a pupil at my university and introduced my professor (at the time) as my teacher who had given me some homework to do. This PIS, which was sent home to accompany the more detailed text based PIS sheet and consent/assent forms, was intended to position myself as someone who also went to school and as someone who had been given homework. Swain, (2004, p.209) discusses how being a teacher helped him build a relationship with both staff and children, but how he adopted a "series of multiple positioning towards the children" in order not to reveal he was a teacher. Presenting myself as the student with homework resonates with Swain's (2004) approach as I wanted to distance myself from the role of teacher, fearing this would further position me as someone who was looking for a right answer rather than someone who was trying to ascertain what they really think about their current classroom spaces and the space they create in their classroom.

My relationship with Claire was also based on my role as a student and a researcher. Claire and I knew each other professionally through working together on another classroom based research project. It was a council funded project based at Swansea University. I had been the researcher and, along with two colleagues, had supported Claire as one of eight teachers in exploring pedagogy indoor and outdoors in the Foundation Phase. At our first meeting in March 2014 I discussed my doctoral study and presented Claire with the idea of Spatially Democratic Pedagogy. I discussed the overall process of the research and the empirical nature of the study and the

commitment it required. I aimed to position myself as a student who was trying to develop my research question.

4.8 Voice within the research

This voice section offers an insight into the complexities of constructing voice within Design Based Research. The methodology and accompanying methods constructed through research strands one, two and three are presented as a simple set of process' which enable the collection and construction of data. However, gaining an understanding of the voices within these processes is more complex, as they are much more messy and develop through a number of different roles and relationships created between myself, Claire, the children and the space.

The three research strands although all different all use a broad set of methods which are "bound together by a common concern for actively involving research subjects in the construction of data" (Gallacher, 2008, p.139). Drawing from the literature which supports the significant contributions children and practitioners can make to education research, these different voices are important and seen for the contribution they can make to the generation of theory construction on current and possible understandings of classroom space.

4.8.1 Researcher and practitioner position in Action Research

The position of the researcher and the practitioner when placed within this Action Research remit highlights the complexities and contradictions developed within this approach. It is important to recognise we often develop participatory positions for participants within the research whilst also ruling them out of many integral decisions (e.g. the research design and final reporting) (McNiff, 2013).

Moving away from the researcher–participant divide is seen as key to addressing the professional disparities and differing roles within the process. This Action Research strand is developed through an iterative cycle of planning, action and reflection and positions myself and Claire within a sustained dialogue regarding both the procedural nature of the intervention and the themes emerging from the data.

Positioning myself as an 'outsider in collaboration with an insider' acknowledges the intervention was initiated outside of the setting but strives for a collaborative approach with the 'insider' (Herr & Anderson, 2005). Resonating with a "second-person" model of Action Research and supporting "mutual enquiry" this model of research promotes face-to-face inquiry within small groups to develop both understanding and practice (Reason & Bradbury, 2008, p.6). It is usually seen to include a matter of mutual concern. However, this research was introduced to Claire. Classroom spaces were not a current concern for Claire, but in our first meeting she noted the spaces she had created were not always being used as intended. She expressed an interest in seeing if the space the children created would be used differently, so it was interest, not concern which initially drove Claire's involvement in the research. Developing this relationship based on mutual inquiry and interest is also seen to have supported the research by questioning how we learn "with and from each other?" (McNiff, 2013, p.31).

4.8.2 Children's voice (and participation)

Children's voice (and participation) in this methodology chapter specifically explores children's voice in the research process. Children's voice and participation in the intervention is discussed separately within the introduction to the thesis (Chapter 2.3). There is a need to make this difference explicit as children's participation is framed, supported and enacted differently in the pedagogical and research aspects of the thesis.

Involving children in research requires the ethical framework to consider and comply with articles 3 and 12 of the UNCRC (BERA, 2011, p.6) which stipulate all actions and requests are to uphold the best interests of the child as a primary consideration (Article 3) and that children are to be granted the right to express their views freely in all matters affecting them (Article 12). These requests are considered within the ethical/methodological framework. The research activities are designed to be engaging, interesting and enjoyable with a focus on listening to the children, giving them opportunities to share their views, ideas, designs, and reflections on their existing spaces and the spaces they create through the research process. These key methodological processes are designed to support the research to develop, realise, document and reflect on what happens when children design and co-create classroom space.

The growing commitment to 'listen to children' is well established (Brooker, 2011) and is respected within this research. However, it is applied with caution and is mindful of Gallacher & Gallagher's (2008) warning that to understand research with children rather than on children as free of adult influence is an illusion, as the research has been given purpose, value and has been invented by adults. Equally, children's participation within this Design Based Research frame is recognised to sit within a framework which has been created for them, acknowledging this delicate balance between enabling children's democratic involvement in the research whilst understanding how this is also framed within the already embedded beliefs and norms of the institution and relationships within it. Subsequently, this understanding views the process of listening to children's voices and the democratic implications this has for their involvement in the research process as preliminary and within the already established relationships with the adults around them. Therefore, this research draws on literature which suggests the need to reframe the field of children's participation to focus on child–adult relations (Mannion, 2007), since it is these child–adult relations that are central in deciding which children's voices get heard, what they can speak about, and what difference it makes (Harcourt & Einarsdottir, 2011).

However, within these established spaces and relationships the research also seeks to explore children's experiences and reflections of their existing spaces and the space within the intervention. Involving children in the initial walking interviews aims to search for what the children think about and reflect on their existing spaces. These interviews aim to find out what the children consider important or noteworthy about the spaces around them (Clark, 2010). This positions children as able to offer unique insights into their lives, and positions them as "members of communities rather than consumers or users of a product" (Clark & Moss, 2001, p.8). This promotes an understanding of children as agents, able to play an active part in the research process. This carries with it the responsibility of accepting children, as agents, may also use their agency in ways which exclude themselves or others from the production of space (Gallagher, 2008). On times throughout the process the children exercised their agency to involve and exclude themselves, this is discussed as an ethical issue below.

4.9 Ethical Considerations

This section highlights the ethical considerations which arose out of the research design and the ongoing research conducted with Claire and the children. Ethical considerations were integral to the initial project design and ethical approval was sought and granted from the School of Education Ethics Committee at Canterbury Christ Church University (2012). Careful consideration was also given to BERA's ethical guidelines (BERA, 2011, p.4) specifically, the "ethic of respect" required for the research and its participants. This included voluntary informed consent and the balance of harm and effect on the children, with specific attention given to their ability to have their best interests upheld and their voices and views. Consideration was also given to Early Education's "Code of Ethics" (2011, p.7) and the purpose of the research to "strengthen and broaden the knowledge base of early childhood" with my role as the educational researcher within these ethical frameworks to "extend knowledge and understanding" (BERA, 2011, p.4) through the research process and subsequent dissemination of the

research outcomes. To this end the research was conducted within an "ethic of respect" (BERA, 2011, p.4).

4.9.1 Detriment arising from participation

Two factors were initially considered to be risks within the project when applying for ethical approval. Firstly, exposing teachers to new ways of working which may not be supported once the research ends, and secondly, allowing children greater autonomy over the design of their classroom spaces which may result in their individual designs not being chosen and may also result in the practice not being continued once the research finishes. These were discussed early on in the process with the teacher, parents and children through informal discussions and the participant information sheets.

Teacher

Exposing Claire to new ways of working which may not be supported by the school once the research is completed was discussed before the research commenced. Claire had previously worked on research projects based at Swansea University and was aware the research might highlight ways of working which would not continue to be supported. She was able to reflect on her previous involvement in research and felt she had sufficient autonomy within her classroom practice to ensure rather she could choose to continue with aspects of the research if she wished.

Children

Offering children the opportunity to design and create their classroom spaces in groups is underpinned by democratic/ethical practices of 'having a say'. However, the possibility some of the children may feel upset if their designs were not chosen or used moving forward in the process was discussed. Presenting the process to the children as 'group work' was aimed at mitigating this possibility and was also aimed to reflect 'normal' classroom practice, where group work is often used, and some individual ideas are chosen over others. The activities (designing, planning and

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creating the space) are deemed to be child friendly, suitable and of a similar nature to group activities the children had already experienced. Therefore it was not deemed to be emotionally distressing or to create any real disruption for the children as they often experience different levels of autonomy within the current curriculum e.g. time for free play, structured play, focused activities. It was however an initial concern I detailed in my ethics application, and an initial concern I shared with Claire before the process began.

4.9.2 Voluntary Informed Consent

The research foregrounds the importance of allowing participants to make decisions for themselves as a principal requirement and aims to provide all participants with detailed information (presented differently for teachers, head-teachers, parents and children) with time given to make an informed decision on whether to 'opt in' to the research (Alderson and Morrow, 2004).

Voluntary Informed Consent was sought on a number of levels. Firstly after an 'exploratory' phone call with the practitioner, a meeting was arranged to discuss the research in more detail and to set out the proposed trajectory of the research. A letter was then sent to the head teacher which included a participant information sheet and the practitioner discussed the possibility of being involved in the research. This was followed up a week later with a meeting with the class teacher to discuss any questions or further information needed. To foster an 'opt in' rather than an 'opt out' process for children all participant information sheets and consent/assent forms were sent home so children and their parents/carers had time to discuss being involved in the research before deciding whether or not to participate.

However, it was recognised the children's initial informed consent was based on a process they had not been involved in previously and so not have necessarily have understood the full and ongoing contribution they were expected to make. It was considered necessary consent would be an ongoing process throughout the research. Developing consent as an ongoing process

is discussed by Flewitt (2005, p.556) who frames children's initial informed consent as "provisional" as children and researchers cannot fully predict all events which will unfold during the research process. This accords with the view that children have the right to withdraw from the research at any given time (Alderson, 2004, 2005). On a few occasions children declined to comment when being asked a question about the research or the space. Claire took a similar approach when Charley declined to offer an initial design as she had not been there for the design session and was asked in the following session and said she did not want to offer any design (extract 2). These views were respected and the children were not questioned further (Alderson, 1995).

Extract 2: Children not offering an initial design

Claire: Now Charley, putting you on the spot now, you've heard everybody else's ideas. Have you got an ideas of your own that you would like?

[Charley shakes her head].

Claire: No, that's ok because sometimes people ask me what I like and I say, I don't know and that's fine.

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However, a more problematic occurrence happened in design session three when Gareth asked to go and play and Claire said no. At the time the children and Claire were sitting on the carpet and were about to decide which design they would choose to create in the empty space. Claire introduced the process by saying, "Now, we've got a difficult job to do...".

At that point Gareth asked "[c]an we go and play now?" and Claire said "[i]n a minute". At this point I was sitting on the edge of the carpet and I started to question the ethical implications of his request and how I should respond. It made me feel instantly uncomfortable. As I was considering whether I should interrupt the session Gareth re-engaged with the process

and continued to offer suggestions and ideas for the rest of the session getting excited by the final design chosen and adapting his original design to fit.

Offering ongoing consent and letting children know they could stop the research at any time was an important factor within the research and my poisoning of children as agents with the ability to consent. Gareth's request to stop the process had been denied. However, being made to stay on task appeared to be, very quickly for Gareth, a positive experience as he quickly re-engaged in the process. Discussing my concerns with Claire at the end of the session she felt her professional knowledge and understanding of the way in which Gareth worked allowed her to judge that situation and react appropriately. Claire felt it was the idea the process was going to be 'difficult' which prompted Gareth to ask to play and when he realised he could still contribute she was confident he would continue to enjoy and be an active member of the process. On reflection Claire's relationship with Gareth and knowledge of how he worked allowed Gareth to continue in the process.

4.9.3 Privacy

Initially when applying for ethical approval, there was an intention all participants' personal information would be kept confidential and anonymous within the records kept. All reporting of the data was to keep participants personal details anonymous with no identifying data being made public. In the initial ethics request form I stated "all participants identifying data will be coded and kept anonymous. Details of the codes used will be kept separate from the data collated. This will mitigate any opportunities for data to be traced to individual participants". This approach to the handling of participants' data is "considered the norm for the conduct of research" (BERA, 2011, p.7). However, towards the end of the process Claire made it known that she wanted to keep her name in all documents and consequently as the researcher I needed to also recognise Claire's right to be "identified

with any publication of their original works or other inputs, if they so wish" (BERA, 2011, p.7).

4.9.4 Incentives

Using incentives for research BERA (2011, p.7) warns can be 'problematic' as it has the "potential to create bias in sampling or participant responses" and reminds us any incentives given should be "commensurate with good sense and must avoid choices which in themselves have undesirable effects (e.g. the health aspects of offering cigarettes to young offenders or sweets to school children). Careful consideration was given to this and, although no incentives were offered to children other than the opportunity to design and co-create their classroom space, Claire was offered the opportunity to write an academic paper, reflecting on some aspect of the research she/we found interesting or illuminating. This was considered to be an important aspect of the research when considering the benefits for all participants. Claire was expected, within the research framework, to work hard and invest a considerable amount of her time in the research. It was deemed fair for her to be able to 'gain' professionally from it and not just consider her involvement and any subsequent understanding she reached to be the incentive. As the researcher I was working towards a PhD and wanted to offer Claire the opportunity to share aspects of the more formal 'academic success'. As at the time of contacting Claire she had recently written to the Welsh Education Minister to ask with help for funding towards a Masters Degree. Writing an academic paper together seemed a fitting 'incentive' as it reinforced Claire's positioning as 'expert' in her role within the thesis, whilst also reinforcing the unknown nature of the outcomes of the study. It was not seen as an incentive which would have the potential to "create bias" in Claire's responses, as the requirement of writing the paper would similarly reflect the ethical implications required of the study, to reflect on what happened.

4.9.5 Repeatability, reliability and generalisability in DBR

The basis for repeatability and reliability within a Design Based Research study rests, for Brown (1992), on the theoretical basis of the study itself. She notes the theoretical descriptions for Spatially Democratic Pedagogy should "delineate why they work, and thus render them reliable and repeatable" (ibid). Theoretically this study locates children as the designers and co-creators of their classroom space through the wider theoretical triad of pedagogy, architectural theory, and geography. Creating a Spatially Democratic Pedagogy, and enacting it within the classroom, is seen to "produce knowledge that will be useful in providing guidance to others as they attempt to support similar learning processes" (Reimann, 2011, p.41). Spatially Democratic Pedagogy is then recognised as a pedagogical intervention which can outlast this thesis and be "adopted, adapted, and used by others" (Kelly, 2004).

Zheng (2015, p.400) comments "it is impossible to replicate an intervention in other settings because Design Based Research is contextually dependent". Acknowledging both the intervention and the Design Based Research study as contextually dependent, Spatially Democratic Pedagogy is epistemologically underpinned and dependent on this very thinking e.g. that classroom spaces should be contextually dependent. However, the development of children's designs are based on individual ideas and interests which in turn are supported by individual teachers and their ways of working within their classrooms and their communities. And so it is argued Spatially Democratic Pedagogy could be replicated in different settings - albeit the process, designs and culminating spaces would be different depending on the individual children, teachers, designs, spaces, classrooms, schools and communities.

4.10 Pilot study

The pilot study tested and considered the methods that were to be used to support and document the intervention. Aligning with the context of the final study, the pilot was conducted in a Foundation Phase classroom. However, there was a small difference in age with some children as it was a reception/year one split class, rather than solely a reception class.

The pilot focused on map-making with both the teacher and the children, the intensive interview format and questions, the walking interviews and questions posed to the children in the focus groups. It also considered the use of the technical equipment, the polaroid camera used to take pictures of the classroom spaces and the Iphone used to record the interviews and focus groups. This process was extremely valuable in that it allowed a refining of the methods used to support and document the intervention.

Map making was to be used as a data construction method with both Claire and the children. In the pilot study the teacher brought a map of her classroom and its spaces to the interview and this was trialed as a stimuli for the initial interview about the existing spaces. The map worked well, prompting lively conversations about each of the spaces in the classroom (see appendix I for an example of the opening question transcription). However, we conducted the interview in the staff room (as the children were in the classroom and it would have been too noisy) but at times the teacher would have benefitted from being in the classroom as she wanted to point things out and show me particular resources or spaces. As a consequence, in the final study Claire and I sat in the classroom to work through the questions. This was a small but valuable change as Claire did often use the resources and spaces to highlight additional details, and further, discussions might not have come up if not prompted by being in and looking at the space.

The approach to the children's map making and their discussions about their spaces also changed in the final study. Children drew maps of their classroom and annotated it (with or without the help of an adult) and

brought it along to the focus group. Using the maps as stimuli, similarly to the teacher interview, worked well. However, a number of children found including all spaces within the classroom a little difficult when drawing and so tended to pick just a couple of spaces to draw. On reflection and in discussion with Claire, for the actual research we decided the children wouldn't draw maps but would construct a classroom map by taking Polaroid photographs on group walking interview and then in their groups use the pictures as stimuli to create a photographic map and encourage more talk. This worked well in the final study.

The intensive interview and focus group questions were also trialed, and the open questions used at the beginning of the interview worked well in conjunction with the map. The teacher spoke keenly about her spaces and her use and understanding of them. The format of the interviews and the questions were kept for the final study.

The Polaroid camera worked very well and the children were able to take instant photographs of their spaces. This equipment was unchanged for the main study. The Iphone was used to record both the teacher interview and children's focus groups. It felt unobtrusive and all participants commented that they were comfortable with me using it to record them.

Chapter Five: Existing classroom space

This first discussion chapter looks at Claire's existing classroom space. The chapter is built around two main points of interest 'constructions of classroom space' and 'proper use of classroom space'. They are significant because they started for Claire as the most prominent descriptors and markers of her existing classroom spaces. Established after the first Constructivist Grounded Theory interview (CGTII1), they have been revisited across the data including the walking interviews (CGTWI), the planning and reflective dialogues (ARRD), the concluding interviews (CGTII3) and focus groups (CGTFG).

The chapter fulfills two important functions, firstly it introduces the reader to the existing spaces within Claire's classroom and secondly it allows an insight into Claire's 'modus operandi' within these spaces. The chapter concludes placing teachers as 'providers' of space is misleading as the construction of space is externally created, an activity and outcome driven vehicle for politically and economically driven constructions of teaching, learning, children and childhood. These spaces position Claire as a technician, developing her understanding of 'the system', through the planning and assessment of narrowly defined classroom space, rather than supporting her understanding of children and childhood.

5.1. Construction of classroom space

'Construction of classroom space' is not an in vivo code (Charmaz, 2014), Claire did not directly use this term in its entirety. This point of interest is created from two recurring constructions of classroom space discussed by Claire throughout the first interview. The first focuses on the construction of the spaces themselves, for example the construction of the water, blocks and writing spaces. The second centres around the construction of activity within these spaces, for example, setting up 'castle building' in the sand or a junk model castle in the role play.

5.1.1 Existing classroom space: Claire as architect

Chapter 3.2.2 discusses how existing literature positions Claire as the architect of her classroom space. She is given responsibility to provide spaces for children (Donaldson, 2015) through creating rich environments (Welsh Government, 2015). This construction of Claire as the architect of classroom space is clearly stated throughout the documents used to inform practice. Notably within my data, Claire's initial perception of herself is also as architect of her classroom spaces. She views her role as the designer of space, providing spaces for the children before they arrive in the classroom,

Jen: Who decides these current classroom space?

Claire: Me, with the LSA's really.They are brilliant.

<div style="text-align: right">CGTII1-1.3</div>

Jen: When are these spaces created?

Claire: All year round really. Everything is done before September ready for them to come in but then things change constantly, because we think, that's not working, let's change it. So, it's ongoing, it's all of the time.

<div style="text-align: right">CGTII1-1.4</div>

During the walking interviews the children were clear as to who constructed the space, what the spaces were and what they were expected to do in the spaces. Reflecting the wider understanding that "[y]oung children are acutely sensitive to their surroundings and very rapidly acquire understandings of the people, places and routines in their lives" (United Nations Children Fund and the Bernard van Leer Foundation 2006, p. 40), the children easily articulated the tightly framed uses and activities of each space.

Extract 3: Who decides what toys are in the sand pit?

During the walking interview Carys takes me to the sand tray and points at it.

Jen: Can you tell me about the sand?

Carys: You can make things like a castle and a tower

Jen: Ok, so why did you take a picture of the sand?

Carys: It's my favourite

Jen: Ok, why is it your favourite?

Carys: Because we can make castles.

Jen: You can make castles. I've noticed there are a lot of things in the sand....

Carys: Toys

Jen: Toys. Who puts the toys in there?

Carys: Miss M.

Jen: Do you sometimes get to decide what toys are in here?

Carys: No.

CGTWI11

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Extract 4: The writing area

I have been taken to the writing area and Molly has joined Charley in showing me around the space.

Jen: Can you tell me what this area is?

Charley: The writing area.

Jen: Tell me about this area.

Charley: You can write in it.

Jen: Yes.

Molly: We can write in books.

Jen: Ok.

Charley: You can make cards and I really like writing in it.

Jen: What kinds of things do you like to write?

Charley: I like writing happy birthday and writing get well.

Jen: So can you tell me about these? (I pointed to a number of boxes at the back of the space and a labelled picture of a castle that had been stuck on the wall just above the writing area).

Charley: I don't know.

Jen: Do you use those boxes?

Charley: (shakes her head)

Jen: No? ok.

Charley: We use these (pointing to the containers of pens and crayons) and the books.

Jen: Ok, so who puts all of the things here?

Charley: The teachers.

Jen: Ok, Molly, Charley was just telling me that the teachers put the boxes and things in here. Do you ever put things in here?

Molly: No, just the teachers.

CGTWI1

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This perception of teacher created space was overwhelmingly articulated by all the children in their walking interviews (table 3). Data also indicate, to a lesser extent, the teaching assistants were also perceived as constructing spaces. During the interviews the children were asked if they brought materials or resources into these spaces and all children said no. Holding congruence with the stipulations set out in the documentation and the initial perceptions of Claire, the children equally place their teacher as the architect of their classroom spaces. Chapter 2.3.4 positioned this teacher led construction of space as problematic as it does not support the participatory construction of the child which is also required within Foundation Phase documentation. These spaces are seen to position children as users of space, reacting to the spaces provided for them (Hill, 2003).

When reflecting on the walking interview transcriptions Claire noted "what really jumped out at me was every time you said to them who makes this or puts these things in there, everything was me.... and there was no scope for them" (ARRD14). Indeed, each space the children took me to during the walking interviews had specific predefined activities, outcomes and ways of using the space. Claire acknowledges the children will often subvert these spaces, not always using them in the way they were intended but both Claire's and the children's initial presentation of these spaces can be seen to reflect Goouch's (2009) assertion that these spaces overpower children's intentionality.

Table 3: Walking Interviews - Who creates the space?

Walking Interview	Space	Who makes this space and puts toys in here?
CGTWI1	Writing area	Mrs Malcolm
CGTWI2	Computers	Mrs Malcolm
CGTWI3	Castle role play	Miss Sharp
CGTWI4	Sand	Mrs Malcolm
CGTWI5	Box of DVD's	Mrs Malcolm
CGTWI6	Painting Easel	Mrs Malcolm
CGTWI7	Drawing table	Mrs Malcolm
CGTWI8	Whiteboard	Mrs Malcolm
CGTWI9	Ceiling	N/A
CGTWI10	Shop role play	Miss Miller
CGTWI11	Sand	Mrs Malcolm
CGTWI12	Computers	Mrs Malcolm
CGTWI13	Whiteboard	Mrs Malcolm
CGTWI14	Water	Mrs Malcolm
CGTWI15	Castle role-play	Mrs Malcolm
CGTWI16	Colouring table	Mrs Malcolm
CGTWI17	Messy Table	Mrs Malcolm
CGTWI18	Painting Table	Mrs Malcolm
CGTWI19	Dragon puppet	Mrs Malcolm
CGTWI20	Water	Mrs Malcolm

Initial data unequivocally position Claire as the architect of space. However, as the first interview with Claire continued and she reflected further on these spaces, a more nuanced understanding of how these classroom spaces are constructed unfolded.

Data from this first interview indicate Claire was not the sole architect of these spaces. Of the 22 spaces Claire has within her classroom 21 were created through a range of wider historical, political, pedagogical and managerial factors. This more complex construction of space alluded to throughout Claire's initial interview is important because it does not resonate with the current 'teacher as architect' position taken in the documentation and offers a more politicised and centralised understanding of space within the Foundation Phase. The following sections detail these wider contributing factors and discuss them in light of the pedagogical, architectural and spatial constructions discussed in the Theoretical Underpinning.

5.1.2 The 'always' spaces - always there/always the same

The first type of spaces discussed are the spaces which are 'always there'. These spaces do not change. For Claire, they are not spaces she has created, they are spaces which have always been in her classroom and although she plans what will be in these spaces e.g. the activities/resources she has not created or chosen the spaces themselves.

Claire: Obviously there are areas that are always going to be the same.
You know, the water, sand, painting areas, they are always
going to be the same. The reading area is always going to be a
reading area, the building areas pretty much stay the same.

(CGTII1-1.3).

On later reflection, Claire added a number of further spaces to these 'always' spaces, the carpet area, writing table, teacher's table, computer area, small world space, and

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the role play spaces (ARRD9). As a result 13 of the 22 spaces were considered to be 'always' spaces. These spaces were inherited, they were already in situ when Claire became a teacher at the school (although Claire did bring a number of them into the main classroom area as initially the water, sand and painting spaces were in the cloakroom just outside the main classroom (ARRD9)). Claire did not choose or create these spaces and she does not consider or question the possibility the spaces themselves may change.

These 'always' spaces for Claire have become 'taken for granted' (Woolner et al, 2012, p.18), they are so embedded within her practice they have become invisible. They form the backdrop to her practice (Fenwick et al, 2011) and are not reflected on critically for the role they now play. Their 'obvious' inclusion in Claire's initial presentation reinforces the ingrained and unquestioned nature of these spaces. These spaces have been naturalised and neutralised within the classroom, and for Claire it is 'obvious' these spaces will always be a part of the classroom. Recognising this unchallenged acceptance of these spaces is important. Sachs and Logan (1997, p.244) further contend it is essential to develop an understanding of "behind" these taken for granted aspects of practice "in order to develop a more profound understanding of [their] 'every-dayness'". This seems particularly important when the 'every-dayness' of space within the Foundation Phase is becoming increasingly homogenised and focused on an economic and outcome driven view of children and learning, placing them as only users rather than participants.

5.1.3 Topic-led spaces

When asked how she decided on what spaces to have Claire stated it was governed by her class topic. Initially this construction was limited to the role play spaces as these were seen to be the, "two biggies that are to do with topic stuff" (CGTII1-1.3). However, on reflection Claire highlighted 10 of the 22 spaces as being routinely adapted to fit within the class topic (ARRD9).

This construction of space is different to the construction of space discussed above. Claire's "always" spaces do not change, they are fixed spaces within the classroom.

Whereas "topic-led" constructions of space, are spaces constructed within the 'always spaces' and Claire constructs these 'spaces' through adding activities to the existing continuous provision. These activities are driven by the class topic. Class topics are taken from an additional curriculum framework, *Cornerstones* (no date) recently purchased and adopted by the school. Claire explained,

We bought in *Cornerstones* about a year ago and the whole school uses it ... in reception it's different to the rest of the school because from year one up it is very much, you've got to cover this skill and this skill. For nursery and reception it's very much, this is your topic and you could enhance the reading area by doing this, you could enhance the writing area by doing this.

(CGTII1-2.1)

On their website *Cornerstones* present themselves as "the fastest growing primary curriculum ... in the United Kingdom" with recent figures (February, 2017) showing 1296 schools in England and 528 in Wales are using *Cornerstones* (pers. comm., 8 February). Putting this in perspective, in January 2016 there were 1,323 nursery and primary schools in Wales (http://gov.wales/docs/statistics/2016/160727-school-census-results-2016-en.pdf), which equates to around 40% of schools as currently following aspects of this additional curriculum.

At the time of this research the *Cornerstones* topic within the classroom was 'Dragon tales' and the spaces had been 'enhanced' to reflect this. There were pictures of castles on the colouring table, a castle labelling activity in the writing area, a 'junk' castle in the role play, drawing and building castles on the whiteboard, castle toys and blocks in the sand, some dragon eggs and a dragon puppet next to the carpet area, Rapunzel puppets on the maths table, and the children had been making castle biscuits on the messy table. There was also a wall display featuring a large dragon and children's work. This construction is also similar to the "best practice" model presented within the recent Foundation Phase evaluation (Extract 1, p.30).

The construction of space above indicate both Claire and the children are placed as passive users of externally imposed spaces and expectations. The spaces themselves and the topic led activities within them are created externally. They value outcomes and specific activity as drivers of practice and are not seen to fit readily with the more participatory and democratic approaches to learning currently promoted through Welsh Government policies. These spaces offer a picture of space and learning as "replication rather than renewal" (Moss and Urban, 2010). This represents knowledge as something to be passed on to the children, with children expected to complete the activities set within the space. Children's ability to participate is reduced to participation within precreated space with predefined use. Children 'read' (Davies, 2011) these materials and spaces as they would spoken and written words and the data above demonstrate this approach to space develops a clear understanding of space as teacher controlled and promoting specific ways of being and using the spaces for all children in the study.

5.1.4 Inspection-led spaces

The third space contributing to the overall construction of Claire's classroom space are 'inspection-led spaces'. Within this construction of space Claire initially discusses how she was asked by both her Welsh and English subject lead colleagues to create different spaces within her classroom to fulfil a perceived expectation of classroom space for their impending inspection. The library corner, in the lead up to the school's Estyn inspection was deemed too small (even though Claire was happy with the space and how it was being used). Claire was asked to create a larger space. Claire reflected on the original library area, for her it supported good reading behaviours, as she remembered "a cosy space the children used to snuggle up and look at books" (CGTII1-1.1). The new bigger space included a sofa, a chair and a lot more space. This new space had lost its intimacy for Claire and no longer supported the reading behaviours of the other space and she noted the children in this new space, rather than engaging with a book, preferred "to go in and roll all over the floor and hide under the table" (CGTII1-1.1), which for Claire were not good reading behaviours and did not fit with her construction of 'proper use' of this space.

Pre-inspection Claire was also asked to create a Welsh area and on reflection Claire explained how these spaces were not used as intended,

Originally, before the inspection, we got told, you have to have a Welsh area. So we made this beautiful 'cwtch cymraeg area' we called it, we had flick and flack puppets in there and we said, if you go in there you have to speak Welsh …. you know, they'd go in and they'd use the puppets but they certainly didn't speak in Welsh"

(CGTII2-2).

On reflection Claire referred to the 'cwtch cymraeg' space as a tick box exercise,

Who are you making it for. You're making it for the inspectors to tick off …it's ticking boxes I think …. If the inspectors had actually delved properly into the children's interests and whether it was used they would have clearly understood that it wasn't. They weren't interested in that, it was a tick box exercise for them, you've got that area. Well done.

(ARRD1).

These inspection driven spaces can be seen to be born out of an 'effective' discourse (Siraj-Blatchford & Sylva 2004) and 'best practice' frameworks (Taylor et al, 2015). These spatial practices are seen to encourage particular pedagogic behaviours, as when these spaces are actively "modelled, demonstrated, explained or otherwise identified in the children's experiences and actions, and encouraged'' (Siraj-Blatchford and Sylva 2004, p.727), they will be 'effective' in supporting learning. Claire's understanding of her spaces when following these spatial practices is different. These spaces for Claire are often a site of tension between the specific activities they set out to achieve and the actual practice which happens within them.

Inspection led construction of space has played an explicit role in the creation of both the library and the 'cwtch cymraeg'. However, Claire implies they also play a

more implicit role across all spaces commenting "the powers that be" require all spaces to be directed (CGTII1). During our third interview (CGTII3) Claire reflected "the powers that be" who required all spaces to be directed were the Inspectorate.

This inspection led construction of space has put Claire under a spatial surveillance; with her spaces directed and monitored by 'the powers that be'. Jilk's (2005) construction of classroom space reflects the way in which spaces are created for teachers to survey classroom spaces and how they are often created to cause a barrier to those "actions which are not predetermined". However, Jilk's (2005) discussion sits firmly with the relationships this forms with the individual children in their classrooms. Claire's description of how her classroom spaces are constructed, surveyed and assessed are linked to her relationship with the Inspectorate and describe how her spaces are under surveillance, being 'watched' by the Inspectorate. Drawing parallels with Foucault's hierarchical observation' (1977, p.173), Claire's spatial practices are being framed by an authoritative gaze, and it is the spaces themselves which have become the 'mechanisms of discipline' (ibid) and are used to persuade particular practice through a feeling of constant observation.

The 'normalisation' of space is constructed through a number of training materials, frameworks and recent evaluations, which stipulate the space, activity and outcome for each space. These 'normal' spaces result in practice which is more easily governed by the 'powers that be'. This construction of surveillance places Claire in a spatial panopticon, where her spaces could be observed at any given time and so she creates spaces and upholds the required spatial practices as if she is under constant scrutiny. Claire is complicit in supporting these spaces and architecturally her spaces are "upholding established hierarchies" (Crysler et al, 2012, p.23) as she has conformed to the "regulatory gaze (Osgood, 2006, p.5). Claire's observation and reflection on her classroom spaces reinforces Foucault's notion that "a relation of surveillance… is inscribed at the heart of the practice of teaching" (1977, p176).

5.1.5 Claire's participation in existing classroom space

Claire's participation in classroom space is concerned with activity within space, rather than the spaces themselves. When asked how she plans for these spaces Claire referenced a number of external documents referring to her planning as 'a bit of a mix' (extract 5). She acknowledges within these constructions she has the ability to 'go off on a bit of a tangent' where she will make mind maps with the children but she also reinforces she has to follow the framework and the Literacy and Numeracy strategy, developing a picture of tightly stipulated and specific constructions and understandings of space. She also uses a document produced by a school in a neighbouring authority which has taken the Foundation Phase outcomes and produced what she feels is a more manageable document with which to work.

Claire's role within the construction of space is technical, she is administering and managing the spaces according to the numerous activities and outcomes her spaces are to include. Claire's technical role seems to be a result of the increasingly structured spatial outcomes presented through documentation. Spatially there is little room for any autonomous practice. Reflecting much earlier warnings within the Hadow reports (1933, p.105) Claire's inability to act in an autonomous way is resulting in "mechanical routine". These spaces position Claire as a technician, developing her understanding of 'the system', through the planning and assessment of narrowly defined classroom space, rather than supporting her understanding of children and childhood.

Extract 5: Claire's planning for classroom space.

Jen: How do you plan for these spaces?

Claire: A bit of a mix. We use *Cornerstones ...* We bought in Cornerstones about
a year ago and the whole school uses it ….for nursery and reception it's
very much, this is your topic and you could enhance the reading area by
doing this, you could enhance the writing area by doing this. So, it doesn't
tell you exactly. If I'm honest I go off on a bit of a tangent and will do a
mind map and lets do this and lets do that. We have got to take things from
the Literacy and Numeracy Framework now and make sure those things
are covered. That is a very heavily pushed, so, I make sure those are being
covered. Plus, the Foundation Phase document. And I also, a school in
Caerphilly produced a fantastic document, they basically took the
Foundation Phase …. they basically broke down everything into outcomes
and they've said that the Foundation Phase says that you've got to be able
to do this but what are all the steps that come before it. I've got that and I
use that too.

(CGTII1-2.1)

5.1.6 Children's participation in classroom space

Within these structured spaces the documentation also requires "child-initiated" and
"child-led" practice (WAG, 2008a; Welsh Government, 2015). However, Claire's and
the children's reflections on the spaces and the activities within them are considered
far more structured and outcome driven. Pedagogically, data indicate Claire's spaces
do little to express the values of these more progressive understandings of learning
and participatory role for the children. Indeed, these spaces promote a fixed view of
space which 'tell' the children what to do, emulating a 'form follows function'

(Sullivan 1896) approach to the space. Thus resulting in practice which constrains purpose (Scheeren, 2015) and limits the ability of space to adapt and change (Davies, 2011).

The children's formal participation in the construction of their classroom spaces reflects the anecdotal understanding I observed throughout my time as a teacher and researcher, children's participation in space had often been reduced to, for example, the children being asked what restaurant they would like in the role play for their topic on food. Claire's description of the children's participation in the construction of their role-play corner resonates with this earlier observation:

Jen: Are there any areas in your classroom that lend themselves to more
        participatory/democratic ways of working?

Claire: There are, but if I'm honest, that side of things has slipped. In the past we'd
        say to the children, our topic is castles, what can we make in the role play for
        example that's to do with castles. They would make everything and we
        would do everything together. They would make everything, all the props for
        the role-play but that has really slipped because we are under so much
        pressure for the literacy and numeracy.

(CGTII1-1.2)

This construction reflects an understanding of "tokenistic" participation (Welsh Government, 2010), where children's participation becomes an "isolated pocket" (Deuchar, 2009) where children are directed and driven by the class topic and an adult agenda (Taylor et al 2015; Bae, 2010). During the children's walking tours a similar construction of the junk model castle in their role play corner was described. The children talked about their participation in painting the castle grey and drawing pictures in the castle windows (extract 7). Within this construction children's participation is restricted and predefined. The outcome for the participation has already been decided. This construction of children's participation does not involve children in initiating or directing their own learning (Taylor et al, 2015), or as active participants in decision-making (Maynard et al, 2010).

Children clearly articulated their lack of participation in the construction of the materials and spaces in their existing continuous provision. When on a walking interview with George and Carys they explained children's construction of these formal spaces was not an accepted practice (extract 6). Indeed, moving or adapting these spaces was perceived to be "naughty". So while the documentation positions children as able to participate within these spaces, data describing existing spaces is indicative of a more tightly framed construction of space.

Extract 6: Children's construction of classroom space.

Carys: The water.

Jen: you want to take a picture of the water. OK. So why the water?

George: we can splash, catch things.

Jen: I notice that there are lots of bubbles in there. Who decides if there'll be bubbles in the water?

George: Mrs Malcolm

Jen: Are you allowed to take things into the water?

Carys: No, because that would be naughty.

CGTWI20

Extract 7: Children's participation in the junk model castle

Charley and Molly come straight into the role play area and start using the cardboard castle that dominates the space. Molly pulls a section of cardboard down from the main castle structure and it is painted as a moat.

Molly: So, we had to put down.

Charley: And that's the drawbridge, I want to go in.

Jen: In you go, so Molly, can you tell me what this is and what you do here?

Molly: It's a castle and we play in it.

Jen: You play in it, what kinds of things do you play in it?

Molly: Monsters and dragons and princesses and knights and princes.

Jen: Ok Charley, Molly just said that you play monsters and dragons and princesses in here, can you tell me who made this castle?

Molly: I did, and Charley did and George and Rio.

Jen: Ok, and can you tell me who choose to have a castle here?

Charley: Miss Sharp.

Jen: So miss Sharp said you were going to build this castle?

Molly: Yes, and we painted it with grey.

Jen: So can you tell me why you chose to take a picture of the castle?

Molly: Because I like dragons and the windows.

Jen: Why do you like the windows?

Molly: Because they've got pictures on them. I drew Rapunzel on there (points to a window) and I drew Sophia on it.

CGTWI15

5.1.7 Children's participation in 'other classroom spaces'

Children's participation in the 'formal' construction of classroom spaces appears limited. However, Claire also creates a picture of 'other' spaces, which are flexible

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and accommodate child-initiated activities and play. These spaces work alongside the existing spaces and activities. She describes children adapting and manipulating the spaces created for them, for example she describes the children creating a school on the carpet as they are "always, always playing on the carpet"(ARRPD2). These 'other' spaces are subversive. Both Claire and the children construct these spaces alongside the existing tightly structured and framed spaces. I recognize these 'other spaces' are important. I acknowledge that they are what differentiates practice within space (Robson, 2009) and are created through the "pedagogic sub-cultures" of the classroom (Payler, 2007, p.238). Pedagogic sub-cultures include, "staff beliefs, staff training, wider reference groups of staff, externally imposed government restraints or requirements, and the specific history, ethos and circumstances of the settings including its resources" (Payler, 2007, p.239). Whilst I do not want to minimize their importance within pedagogical practice, I have made a conscious decision to look solely at the construction of the physical spaces within this thesis as this construction of space is often ignored (Horne-Martin, 2006) but yet is also enormously significant (Lefebvre, 1991).

5.1.8 Summary

This point of interest has focused on the construction of Claire's existing classroom spaces. Data indicate Claire's perception of classroom space is of space which is predominantly fixed and unchangeable. Space is not questioned and has become so ingrained in practice it is not considered within Claire's planning. It is only activity within space which is considered.

Claire does not question or challenge these spaces. She is not supported to reflect or consider these spaces as they are presented as 'best practice' (Taylor et al, 2015) and are becoming increasingly detailed and prescribed throughout the documents she uses to support teaching and learning. These documents (WG, 2015; Cornerstones, (no date) WAG, 2008a) construct space as an absolute. The specific spaces and accompanying activities are presented as "best practice" and there is no discussion of constructing classroom space in any other way. These spaces are positioned as "natural, neutral and necessary" (Moss, 2014, p.4), they have become the spatial 'universal truth' (ibid) within Claire's classroom.

This centralised construction of classroom space and the activities within it can be problematised in two ways. Firstly, it positions all space as a vehicle for specific curriculum outcomes, generated through a generic class topic. This is at odds with a curriculum which should "focus more on children's interests ..... rather than the curriculum and predetermined outcomes" (2008, p.38). Secondly, it limits children's participation to choice. This construction of space reduces children's relationships with their spaces to "consumers or users of a product" (Clark & Moss, 2001, p.8), as they are positioned to react to and "act upon" the spaces provided (BERA, EY SIG, 2003, p.7). Resonating with findings from Gallagher (2006, p.162) who notes "children are often excluded from and marginalised within the production of social spaces"

5.2 Use of space

This section discusses the second point of interest created within the initial Constructivist Grounded Theory interview (CGTII1). It considers the in vivo code 'using spaces properly'. This code was created early in the analytic process and was a recurring point of interest throughout interview one and was revisited across other data sets. It considers 'proper use' within Claire's classroom and within the wider curriculum and inspection frameworks within which she is working. Finally, this point of interest places this understanding within the wider theoretical constructions of space from architectural, pedagogical and geographical perspectives.

5.2.1 Using spaces properly

During the line by line coding 'proper use of space' was notably the most frequently used descriptor of Claire's existing classroom spaces (extract 8). Created as an in vivo code, proper use of space is positioned as a symbolic marker of Claire's speech and meaning (Charmaz, 2014). Through early coding this construction of classroom space and its 'proper use' was deemed significant because of both the frequency with which it is used and for the certainty Claire displays when discussing how each space should be used and what its 'proper use' should be.

Extract 8: 'Proper use' within classroom space

> When discussing her existing classroom spaces in the first interview, Claire works her way systematically around her classroom map and describes spaces as either being used properly or not.
>
> The wet area in the middle, that's really used well, used properly. They always paint at the painting easel, they always use it properly, the water tray is really well used.
>
> Over the other end of the classroom then, we've got a role play shop. Again, even though the play has been modeled they don't use it properly.
>
> There's a play dough table as well, in that area. That is used really well as well I'd say. Probably out of all the areas in the classroom that the one they use properly.
>
> (CGTII1)

5.2.2 'Proper use' of space in the Foundation Phase

'Proper use' of space within the Foundation Phase is constructed through continuous provision (WAG, 2008a; WG, 2015). As noted above Claire uses a number of documents to construct activities which stipulate what 'proper use' of space is to look like, demonstrating how the use of space has already become the driver for continuous provision (Rhys et al, 2014).

With calls for even greater structure to include "exemplar materials" created to support teachers in "how best to utilise these learning zones" (Taylor et al, 2015, p.7), this will seemingly only create further centralised 'uses' of space and move practice further away from the participatory and democratic models they aim to support.

5.2.3 Claire's understanding of 'proper use'

Analysis of Claire's initial transcripts indicate predefined use is an accepted part of the construction of her classroom spaces. Spaces are understood to have predetermined uses, activities and ways of working and as such require children to use them in a 'proper' way. Claire's construction of 'proper use' is created through the documentation and is indicative of a technical rational approach, concerned with targets and outcomes (Moss, 2007).

Using *Cornerstones* (no date) to support the construction of activity further strengthens the 'proper use' of space. They advertise their framework as being "mapped to the Welsh national curriculum programmes of study and the Literacy and Numeracy Framework" (https://cornerstoneseducation.co.uk/products/cornerstones-curriculum-wales/) and offer activities supported by '88 themed projects' specifically created for schools within Wales. These themed projects are connected to fourteen classroom spaces, and activities with accompanying resources and materials planned to reinforce Foundation Phase outcomes.

These spaces increasingly reflect an understanding of space and learning as a replication of 'best practice' (Taylor et al, 2015), within which children's 'proper use' of space can be reflected in and assessed against the pre-existing uses and activities. However, best practices Lenz-Taguchi (2010, p.24) remind us, "are defined in terms of standardised criteria related to developmental learning theories" reflecting a story of "quality and high returns" (Moss, 2014). Moss (2014, p.5) argues this story rejects "curiosity, imagination and originality" and favours "programmes ...   quality..... outcomes..[and]....assessment scales". Claire's role within these current structures becomes that of a technician and she is not encouraged to question these spaces. There is no development of professional autonomy within this model and teachers do not need to apply any professional knowledge to the spaces. They are all provided. Classroom space within the Foundation Phase becomes a homogenous space, equally applicable to all teachers, children and schools. Continuing to

foreground this single, homogenous approach to the construction of space is set to increase the technical approach needed to implement and enact practice within them.

Architecturally, Claire's role within this construction of space supports the "form follows function" approach (Davies, 2011), within which the construction of the spaces is based on external decisions about how the final space will be used. Claire's construction of these spaces results in practice where there are no decisions to be made (Jilk, 2005). The spaces have already been decided on before they are constructed, staged and managed within the classroom.

5.2.4 Children's understanding of 'proper use'

During their walking interviews the children presented their classroom spaces as each having a 'proper use'. They clearly articulated how their spaces direct them what to do. Similar to Clark's (2010) findings which saw children describe the spatial practices of their classroom, including the carpet as somewhere they fold their arms and cross their legs, the children in the walking interviews detail the explicit ways they are to use the water, writing, role play and other spaces. The examples used above (extracts 3 and 4) demonstrate the children's ability to 'read' their spaces and the spatial practices of their classrooms. The spaces the children describe are staged to direct their actions and the children appear aware of this staging. Their understanding of the materials and objects within these spaces reflects Lenz-Taguchi's understanding that material objects and artefacts can be understood as being part of a performative production of power and change in an intertwined relationship of intra-activity with other matter or humans. She argues,

How chairs, dots and floors feel and sound matters in our intra-actions with them. They have force and power to transform our thinking and being in a particular space or in the world at large

<div align="right">Lenz-Taguchi 2010, p.4</div>

When the children reflect on these classrooms spaces and their ability to adapt, they recognise their participation is the construction of space is not supported as part of the spatial practices, as one child describes, this would be "naughty" (extract 6). This notion of 'naughty' highlights the lack of opportunity children feel to adapt and create their own spaces. Overall, data from the walking interviews suggest children are aware these spaces are created for them to do specific activities, they are aware of them having a 'proper use'. Within this construction of space the children become passive users of space unable to transform its use or meaning (Hill, 2003).

5.2.5 Intentionality within 'proper use'

These spatial practices can be seen to hold congruence with Goouch's (2009) assertion these spaces will overpower the intentionality of children and as these data indicate children are not decision makers in regard to their classroom spaces. They are given no voice or choice when deciding on their spaces. They have no recognised intentionality in the construction or use as these spaces are provided for them and they are expected to use them accordingly. My data also suggest Claire, as the classroom teacher, is disconnected from the construction of her classroom space. A number of external influences and variables were considered as contributory factors. The spaces themselves did not change. Although the materials in the space may have changed (generally to accommodate an externally imposed curriculum), the spaces themselves, and what the children should do in them, did not. Through analysis of the data, I theorise the theoretical and practical construction of space has been neutralised within Claire's classroom. Space is unquestioned and normalised. Furthermore, through analysis of the data I theorise not only do current Foundation Phase classroom spaces overpower the intentionality of the child (Goouch, 2009), but they also serve to overpower the intentionality of the teacher.

5.2.6 Tension in 'proper use' of space

Data demonstrate a significant tension for Claire within current constructions of space as there is a limit placed on what learning can emerge from these spaces. As Osberg and Biesta (2008, p.315) note, these confines on learning through specific

educational outcomes provide practice where "only 'legitimate' meanings emerge in the classroom".

Claire's construction of 'proper use' has been traced through her use of the Foundation Phase framework and a number of supporting documents, with the emphasis on 'proper use' found to be most important factor in any learning zone (Rhys et al, 2014). My data indicate proper use is reduced further through the addition of the cornerstones framework, to specific activity and skills within Claire's spaces. Claire considers this creation of space, based on specific outcomes and uses, as an unrealistic view of space for young children, as it is too static. Within this construction Claire notes the tension between spaces which are used properly or not,

I'll say to the children, in the sand today you have got x, y or z. Or, on the play dough table what I would like you to do today is make this many flags for the castle … but … unless I am there or somebody is there they might start doing what I've asked them to do for 30 seconds, but it's the nature of little children isn't it, they change it, most of them change what I've asked them to do into their own play.

(CGTII1-1.2)

The children's response to these predetermined spaces were also seen to occur in year one and two,

Year one do things very differently, they put challenges in each area but again, they would say that unless there is somebody there, even in year two, they will change it

(CGTII1-1.2).

Claire's understanding of the how the children use these spaces demonstrates a more complex relationship between the structured spaces than 'proper use' allows. Claire considers the children's use of space as more autonomous than the documentation implies, as the children will not always follow the activities provided for them.

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Well, it's interesting because, no matter what I put really they'll always put a spin on it, for example, in the building area, no matter what is out in the building area, the boys will always make swords and guns, it doesn't matter what it is, they will always do that. In the sand, no matter again, what goes in there, they are obsessed with moving all of the sand from one end to the other to build a high wall. So much so, they build it up and up and then the sand all tips out. It doesn't matter what's in there, they will do that. Every single day. So, in some ways it doesn't matter what I put out because they will do what they want to do in that area.

(ARRD14)

Woolner (2010) has previously reflected creating specific spaces might be satisfactory to one particular group of users but these same spaces may be disappointing to another group. Tensions can then be seen to arise when the different users have different expectations and perceptions of space (Higgens et al, 2005). These different spatial perceptions and expectations can be seen to play out within Claire's classroom, with different children wanting to use spaces in different (and not always 'proper') ways. Tensions between these 'proper' activity based constructions of space and the more play based approach the children often take unsettle Claire. She discusses how she is trying to mediate her teaching and learning through these conflicting ideas about spaces and reflects on the resulting practice as making her role as 'provider' almost obsolete,

 In some ways I'm thinking, well actually, why do I bother putting anything out
 because they will just do whatever they like

(ARRD14)

The children's use of these spaces causes tension for Claire as she recognises there is often a difference between the expected and actual use of the spaces she provides. She reflects on this spatial tension as relating to differing approaches to children's learning and their ability to participate in it,

the powers that be would say everything needs to be directed but my head would say, well no, I want the children to be thinking for themselves and making up their own play

<div align="right">(CGTII1-1.2)</div>

Positioning how the children change the activity as "their own play" appears to suggest this is how children's agency is realised within spaces, that they have choice within these spaces to follow their own play. However, children are still positioned as reacting to space, they are not able to create the spaces for themselves so their intentionality is always going to be hampered and confined by the spaces provided for them. The children within this construction are placed as 'reactive' users of space and although they are able to modify the spaces there are only a limited number of possibilities defined by the existing space, they are still dependent on existing spaces. Consequently even when children are considered to have "changed" the activity into "their own play" (CGTII1-1.2), they are only making these decisions within pre-set spaces and therefore these spatial practices will always be "distorted, limited and silenced" by the spaces which have been created for them as these spaces are "not of their choosing" (Mac Naughton, 2005:46).

These tensions, between Claire's intentionality and her resulting spaces, were discussed when reflecting on the construction of 'using spaces properly'. In the initial interview, Claire had firmly positioned herself as the one who changed the space, resonating with Claire's positioning within the documentation. However, when reflecting on the 'proper use of space' she discussed how the need for all space to have an activity and direct the children is linked to the Inspectorate as they are seen as the "powers that be" (CGTII1-1.2).

5.2.7 Value in 'proper use'

The spatial practices can also be seen to reflect the values upheld within the spaces. I noted earlier in the theoretical underpinning (chapter 3) classroom space represents what is validated and valued within the classroom. These underlying values are also

supported by political and pedagogical views about teachers and children and their place within the structures of the classroom.

My argument here is that, although rhetoric in the documentation values children as participants and teachers as creators of space, the spaces themselves do little to support either. Data indicate spaces are only explicitly valuing and recognising the content, outcome driven approach to teaching and learning. Although the children and Claire are able to adapt and subvert these specific activities and ways of being within the spaces their participation in the construction of these spaces is not explicitly supported, valued or considered within the documentation.

Reflecting on the possible values and ideologies promoted through Claire's spaces, rather than just their organisational and pedagogical aspects, allows us to consider the view of the child within the construction of space promoted in the classroom. The child is directed to either follow the spatial instructions or find a way to be subversive. Children, within this construction of space are not participants. They are not supported in following their own ideas, they are directed to follow predefined activities within established spaces.

Considering this organisation of space as holding and giving value to the classroom (Rinaldi, 2005), rather than the organisation of space just being an end in itself, Claire's construction of 'proper' use for all classroom space can be seen to give value to the more representational view of knowledge, where the role of classroom space is to transfer a static, passive view of knowledge (Biesta & Osberg, 2007). This view of space is increasingly tied to a more neo-liberal, market and outcome driven approach to space where children are learning within these preexisting spaces with predetermined outcomes.

5.2.8 Reflecting on 'proper use'

In a subsequent interview (CGTII2), I asked Claire to reflect on her previous discussions around 'proper use of space',

Jennie: Ok, let's change tack a little here. Now I've got some notes here on the process and I just want to throw a few things out.

Claire: Ok, go on then…

Jennie: is an area that is used properly, used well?

Claire: Right, properly … used properly would be as I, as an adult, would want it used. But actually why does that have to be the proper way to do it, really…. In terms of used properly, that's not really right is it because that is only on my terms…"

(CGTII2-2)

Enabling Claire to reflect on her constructions of space has enabled her to (re)see her classroom spaces, see "behind" the "everydayness" of her spaces (Sachs & Logan, 1997, p.244). "Spatializing" (Low, 2014) her classroom spaces in this way has enabled Claire to reflect on the exclusionary nature of her spaces. Earlier observations by Horne-Martin (2006) note teachers do not feel empowered to change their classroom spaces and so she urges professional development to develop educators' awareness of the learning environment (Horne-Martin, 2006). Claire's ability to question these spaces, I argue, is as a result of Claire's ability to have space and time to discuss, consider and reflect on her spaces throughout this research. Similarly, Edwards (2007) has suggested for teachers to consider new theoretical frameworks and new ways of working they will need to critique and analyse their existing practices.

5.2.9 Deconstructing 'proper use'

It is also possible here to make connections to some of Foucault's (1977) thinking, as he argued power and control within modern institutions becomes silent and pervasive through the production of "officially sanctioned truths about how those working within them should think, act and feel towards children, parents and colleagues" (Mac Naughton, 2005, p.35). Claire's spaces she reflects are predominantly controlled by "the powers that be" through 'officially sanctioned' curriculum frameworks and inspection targets. Thinking about Claire's spatial practices it is argued their overtly

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structured driven constructions of space are linked to a way of thinking about teaching and learning which is increasingly technical and based on academic outcomes. These ways of thinking and being in the classroom are not controlled by Claire but are supported through the increasingly centralised spatial relationships which are neither challenged nor questioned. Resonating with Foucault's claims that power is not owned or used by individuals but diffused throughout society, through the Power within his construction becomes silent and pervasive (Foucault, 1977). Mac Naughton (2005, p.32) further highlights when an institution sanctions particular kinds of knowledge it can produce such "an authoritative consensus about how to 'be' that it is difficult to imagine how to think, act and feel in any other way" (Mac Naughton, 2005, p.32).

Proper use of space is mediated through the construction of space within the classroom. Architecturally, spaces are recognised in chapter 3.2 as mediating between people and the wider environment (Heynen & Wright, 2012). This architectural construction allows us to consider classroom space as playing an active role in supporting the political and pedagogical ideologies promoted within the Foundation Phase and wider Welsh Government policy rhetoric. My data suggest current classroom spaces are highly structured and teachers and children's participation within them are limited and confined by the spaces themselves.

Current spaces are constructed through activity and outcome and support specific (and 'proper') use of space. This sole construction of space, my data suggest, may go some way to answering recent research which highlights a lack of children's participation within the classrooms (Croke & Williams, 2015). It may also offer insight as to why Estyn (2014) has recently found a number of schools are returning to increasingly formal styles of teaching with Foundation Phase aged children. It is argued continuing to structure space in this way, always placing it as the container for learning, with space and activity always constructed around 'proper use', will continue to support more formal ways of working. Within this construction teacher's and children's participation will always be technical, and framed by externally motivated outcomes, fostering little participatory values and practices as all teaching and learning is filtered through tightly designed spaces.

5.3 Existing space conclusion

The data above indicate a general neutralisation of space within Claire's classroom, with only activity within space considered. Furthermore it suggests current constructions of classroom space are overwhelmingly centralised, supporting predetermined and topic driven activities, detailing specific spatial expectations on use and outcome of classroom space. Within these spatial structures both Claire and the children are finding themselves having to achieve externally imposed expectations and outcomes through externally constructed spaces. This resonates with the construction of space within the framework and supporting documents where classroom space is also reduced to activity.

Classroom space within these policy and theoretical discourses are always provided for the children by the teacher. However, the findings indicate the majority of spaces are not constructed by Claire but are predominantly influenced by politically driven centralised notions of teaching, learning and assessment. These directives are increasingly developing within outcome and neo-liberal/economic constructions of teaching and learning and creating spaces which are actively supporting such ideologies. My argument at the end of this chapter is if space is only to be considered as an activity which teachers provide for children it denies its role as "a dynamic, humanly constructed means of control and hence of domination, of power" (Lefebvre, 1991, p.24). It also negates its fundamental role in shaping how we view teaching, learning, children and childhood and woefully undermines the spatial influences which are restricting children's participation and teachers' individual professionalism

Chapter Six: Spatially Democratic Pedagogy

Chapter 5 considered Claire's existing classroom spaces and argued that current constructions of classroom space within the Foundation Phase are becoming increasingly structured around topic, activity and outcome. It argued these spaces are overpowering the intentionality of both children and teachers. Viewing classroom space in this way, it becomes a reflection of how children and learning are politically positioned and valued within space. The chapter concluded that this construction of space is privileging a technical approach to space and learning, which for both Claire and the children is prescriptive and not participatory.

This chapter moves on to evaluate and analyse the intervention. Spatially Democratic Pedagogy was created as an intervention with the ability to stand-alone and outlast the research. The first part of this chapter presents an overview of what happened when Claire and the children enacted the intervention. It uses the seven stages of the design process model (table 2, p.103) as a frame to chart the process.

The chapter uses drawings, photographs taken by the children, and transcriptions to provide a 'sense of the process' by highlighting aspects of what happened. The second part of the chapter reflects on the process, evaluating and analysing what happened when the children participated in the construction of their classroom space.

6.1 Enacting SDP: The seven stages of design

Stage 1: Empty the space

Design process model: Empty the space before the next

Session

Claire chose to empty the library area. (This was a newly constructed space as it had recently been moved from another part of the classroom but Claire did not feel the space was working as the children were not using the space 'properly'. The space was emptied a week before the design process began (picture 1). This was to allow time

for the children to become accustomed to the space, as an empty space, with no furniture, resources or materials and no prescribed use.

Picture 1: The empty space

The empty space sat between the carpet area (separated by a cupboard) and the painting, sand, water and play dough area (separated by a drying rack and a set of art trays which held paper and other craft materials) (see figure 6).
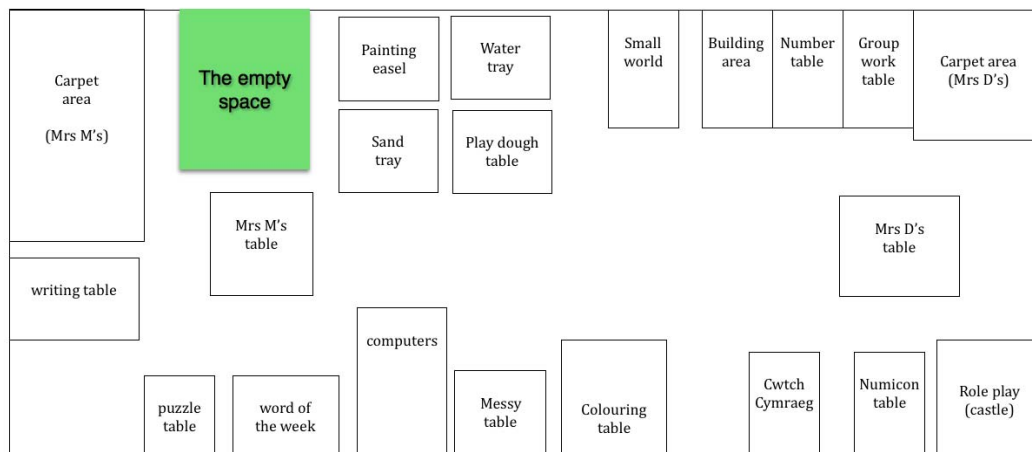
Figure 6: The position of the empty space in the classroom

Stage 2: Initial design

Design process model: Children physically explore TES.

Children discuss and draw initial design.

In session two the children were split into two groups and each group explored the empty space separately with either Claire or the teaching assistant (DBRI2; DBRI2a). They sat in the space and discussed their initial ideas and what they might like to create in these spaces. The children then moved to sit around a table (picture 2) and drew their initial designs (table 4). Both sessions saw the children eagerly engage with the process and they chatted enthusiastically about their ideas and designs. They keenly discussed and presented their ideas and listened to the ideas of others. Both sessions were lively and full of conversation.

Picture 2: Children drawing initial designs

Table 4: The initial designs

Participant	Design	Materials/Resources/Activities
Gareth	Dinosaur Park	A dragon, a real dinosaur, drill dinosaur, triceratops, mother duck, an egg.
George	Petrol Station	Cars, fake fuel, sweets, spaghetti bolognaise (and other ready meals), till, cash machine.
Molly	School Party Room	Pictures, drawings, paper. Junk food, glitter ball, flower decorations.
Charley	Absent	Absent.
Catrin	School Party Room	Chairs, pens, books, whiteboard, tables. Dancing, food and juice, junk food, stage
Carys	Vets	Toys, dolls, feeding animals, needles, scanner, a vet.
Elanor	Vets	Pussy cats, dogs, sheep, horses.

The following section provides an insight into three of the initial design ideas and how they were discussed during this second session. Using the transcriptions, pictures and photographs offers a snapshot of the different conversations and ideas the children were having whilst discussing and creating their designs for the empty space. Both sessions happenend in the afternoon on consecutive weeks. The other children in the class were using the different continuous provision spaces.

The party room

The party room (figure 7) was Catrin's second design idea (and was also the design that was chosen to be created in the final space). Catrin's first design had been a school and she had discussed how she would need chairs, tables, pens, books and a whiteboard to enable her to 'teach' in the space. During the group discussion in the empty space she put forward the party room as her second design idea (extract 9), which Molly also decided to develop as her design (extract 10).

Figure 7: The party room

Extract 9: The party room idea

The session began with Claire sitting in the empty space with Molly, Catrin, Gareth and George. Claire started the conversation by asking the children if they had any design ideas for the space. They had been talking for a while and Catrin came up with a second idea

Catrin: Party.

Claire: What? Party?

Catrin: Yes, party.

Claire: Have you had another idea?

Catrin: Yes, a school and a party....party

Claire: What do you mean by a party Catrin?

Catrin: Dance.

Claire: Dance. What would you need in here for it to be a party room?

Catrin: Food and juice.

Claire: Food and juice? Anything else?

Molly: Junk food.

Claire: Oh my goodness. Junk food, I don't know about that. What else might you have in a party room?

Catrin: A stage to dance on.

Claire: Have you ever been to a party where you dress up?

Catrin & Molly: Yes.

Claire: So, might you need some dressing up clothes?

Molly: I've got loads of princess outfits.....

<div align="right">DBRI2</div>

Extract 10: The party room design

Claire is sitting at the table with the four children and they are committing their design ideas to paper. They have been at the table for about five minutes chatting amongst themselves about their ideas and designs when Claire asks Molly about her design.

Claire (to Molly): How many people are in your party room?

Molly: 1,2,3,4,5,6.

Claire: Oh, I think I know what that is called. Is it a glitter ball?

Molly: Yes.

Claire: I wonder if we could hang it from our ceiling because it is very high isn't it? What else is in your party room then? You've got all the people for your party.

Molly: Decorations….

Claire: So, in your party room you've got all the children, you've got a glitter ball and all of the children. What are you going to play the music on? You haven't got anything to play the music on. That's going to be a boring party.

Catrin: That's a music radio (pointing to a square shape on her picture).
Claire: Ah…a music radio.

Catrin: Yes

Claire: Ok

DBRI2

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The Vets

Carys introduced the idea of having animals in the empty space which evolved into a vets during her discussion with the Teaching Assistant. Elanor joined in the conversation and also decided to draw the vets (figure 8 and extract 11).

Figure 8: The vets

Extract 11: The vets

Carys: I said dogs.

TA: Ok. So, what would you do with them?

Carys: Play with them.

Elanor: Feed them.

TA: What else?

Carys: Take them for a walk.

Elanor: Take them to Dr.

Carys: The vets. I took a dog to the vets.

TA: oh, what did the vet do to the dog?

Carys: Needles.

TA: They had needles, anything else?

Carys: Scanned the dogs.

TA: They scanned the dogs. What did they look for when they were scanning the dog?

Carys: A tag.

TA: Oh, a tag, to see if they've got an owner is it?

Carys: Yes at the vets.

TA: So, what are you going to do?

Carys: Put a needle in the cat's leg.

TA: Put a needle in the cat's leg. Brilliant, so we'd need a needle, a cat, anything else? Would you like to draw what we'd need?

Carys: Yes, a dog, a vet...

Carys: A girl vet.

TA: A girl vet.

Carys: Yes.

TA: What's this?

Carys: A boy vet.

TA: ok.

Carys: Another girl, lots of girls.

TA: What's that girl going to do?

Carys: Use the needle, and then the boy.

TA: ok, anything else.

Carys: (shakes head).

Elanor: At the vets I scan them to see who they are.

<div align="right">DBRI2</div>

The dinosaur park

Gareth designed a dinosaur park (figure 9, extract 12). He spoke enthusiastically about it through a number of conversations and across the different design stages (Gareth's 'design journey' is detailed in see p.220).

Figure 9: The dinosaur park

Extract 12: The dinosaur park

Claire: Ok, so what would you like this to be Gareth?

Gareth: A dinosaur park.

Claire: A dinosaur park. What would be in it if it was a dinosaur park?

Gareth: A dragon fighting a real dinosaur.

Claire: Wow, A dragon fighting a real dinosaur.

Gareth: Yes.

Claire: What else would you have in here?

Gareth: A dinosaur eating a dragon's head off.

Claire: Oh, would that be a bit frightening?

Gareth: No.

Claire: It might be frightening for me.

Gareth: It wouldn't be for me

DBRI2

During these initial design sessions the children talked excitedly about their ideas. Their designs appeared to be based on their interests and experiences and linked to things they did outside of their school day. Both Claire and the teaching assistant responded to the children's designs with interest. They asked questions and offered their own ideas and opinions. The sessions were informal, chatty and created an opportunity for the children to share their ideas and have them valued within the group.

Stage 3: Group design

Design process model: Discuss last week's session and the individual

designs created.

Create a group design for the space

This session initially required the children to present their ideas to the group. Claire and the children sat on the carpet area and Claire led the session, asking the children individually to tell the others about their designs (extracts 13 and 14). The second part of the session required the children to choose one of the designs to be realised within the empty space (extract 15).

Extract 13: Presenting the vet design

Claire: Carys, tell everyone, what was your idea.

Carys: I was making a room with lots of animals, a vets. This is me.

Claire: That's you. Are you being the vet or are you the owner of an animal?

Carys: Owner

Claire: Oh, so you're taking your poorly animal to the vets?

Carys: yes, that's my cat.

Calire: What's the matter with your cat?

Carys: He's got a cut on his ear and his nose.

Extract 14: Presenting the party room

Claire: Catrin, what was your idea for the empty space.

Catrin: Party room.

Claire: You had two ideas didn't you.

Catrin: Party room and school.

Claire: So, that's your party room. Tell everyone what you want in your party room.

Catrin: A glitter ball.

Claire: A glitter ball

Catrin: and dance.

DBRI3

Extract 15: Choosing the group design

Claire: ....So, we can only make our space into one of those fantastic ideas. How are we going to choose Molly? What can we do?

George: Look around the classroom to see what we like.

Catrin: Party room.

Claire: We've already done that haven't we. We've looked round the classroom.

Catrin: We took pictures.

Claire: Yes, we took pictures, you told Jennie what you liked and what you didn't like.

Catrin: They're up there.

Claire: Yes, they're up there for us to see but we need to sort out how we are going to choose just one idea. What can we do Cerys?

Catrin: We could put a vets in there.

Claire: Well, we could but you wants a vets, Molly wants a school or a party room,

Claire: George wants a petrol station, Gareth wants a dinosaur park. We've got to decide on one idea.

George: I know, we could make another empty space.

Claire: We could and we might do that George but just for now we've only got one empty space. So, we all need to agree and say yes we think we'll do that. We need to agree on one idea.

Molly: A party.

Claire: Well, you want a party room but someone else might say that they don't want a party room.

Gareth: Dinosaurs

Claire: Well, we could sit here all afternoon and we could argue because I could say I really want it to be a supermarket. Jennie might say I want a flower shop. We've got to decide, we've got all of these ideas and we can't do all of them so we have to think of a fair way to choose just one idea that we can all work together on. Anybody got any ideas?

Catrin: Party.

Claire: I know you want a party room but I want to know how we can all just choose one idea.

Catrin: I don't know.

Claire: Well, I have got one idea that might be fair. How do I decide who takes the story sack home?

George: You.

Claire: How do I choose though? I don't just think, ummm who's sitting nicely on the carpet.

George: Bag.

Claire: And what's in the bag?

Group of voices: Names.

Claire: Names. Do I peep at the names?

Group of voices: No.

Claire: So, is that fair?

Group of voices: No.

Claire: It's not fair? Why isn't it fair.

Catrin: Because you can see it.

Claire: No, I don't peep do I? My hand goes in and I find one piece of paper and out it comes. So, is that fair?

Charley: Yes.

George: It is fair.

Claire: You think it's fair. It is fair because, are everybody's names in that bag?

Group of voices: Yes.

Claire: So, everybody's name in time will come out of that bag.

George: And everyone will have a go.

Claire: Could we decide on our one idea by doing that? Could we put all of your ideas, all of your drawings into a bag and someone closes their eyes and picks one out? Would that be fair? Yes?

Group of voices: Yes.

Claire: Shall we do that?

Group of voices: yes.

George: I'll get a bag. Can I get a bag?

Claire: I'll tell you what we'll have to do, go and get that red bin from over there Molly. Can I have the bin then. Let's check it is empty first. Ok, who is going to choose?

George: Mrs G (TA).

Claire: George, put in your design. Molly, what are you putting in? The school?

Molly: No, the party.

Claire: Oh, sorry, the party room. So, Molly, let's put your party room in. I'll help you sweetheart. Gareth, come and put your dinosaur park in. Elanor, oh, just one of those, is that the school? Yes. The restaurant has gone in, and your vets.

George: Mrs G are you ready?

Mrs G: I'm ready. Come on then Gareth, come and sit down. Mrs M is, what is it going to be? What is going to be in our empty space?

Catrin: The party room, yeah.

Group of voices: A party room, a party room, yeah, a party room [lots of excited chatter].

Gareth: A party room with dinosaurs in it.

Claire: So, we're having a party room. It was fair wasn't it. Yes.

Group of voices: Yes.

Claire: So, we're all agreed that was a fair way to do it.

DBRI3

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Picture 3: Choosing the party room design

When reflecting on this part of the design process Claire felt this was the "hardest part" (ARRD14), she described feeling "lost" because she didn't feel the children were able to argue, negotiate or put their ideas forward. She acknowledged George did offer a solution to the problem but felt it was not feasible at the time to create five empty spaces within the classroom.

When the party room design was chosen the group erupted (picture 3). The children were excited. They cheered, shouted, jumped up and down and danced about on the carpet. This excitement lasted for a while and after a few minutes spoke over the noise that they had another 'job' to do. The children settled back onto the carpet to listen to Claire.

Stage 4: Materials needed

Design Process Model: Make a list of the resources/materials needed

Session four happened straight after the final design had been chosen, and the children were chatting excitedly on the carpet about the party room design. Claire told the children their next job was to make a list of all the materials/activities they would need in their party room. Twenty-seven design ideas were added to the list (table 5).

Table 5: Design ideas for the party room

Child	Design ideas for the party room	
George	costumes party rings (biscuits) musical bumps	musical bumps 'Gangnam style' dancing
Gareth	pin the tail on the dinosaur black and white pop	dragon costume
Catrin	juice dancing music bouncy castle	pretend juice party bags invitations
Charley	Piñata	
Molly	pass the parcel glitter ball	flower decorations pop (fizzy drinks)
Carys	light up dance floor	
Elanor	princess costume disco camera	decorations cake party bags

Stage 5: Create the materials

Design Process Model: Create resources and document activities

This design stage happened over a two week period as Claire was asked to 'fit' the design ideas into her weekly planning activities. The children spent the next two weeks making the resources, learning the games and practicing the dances (pictures 4, 5, 6 & 7).

Picture 4: Painting dance floor

Picture 5: Creating the party room sign

Picture 6: 'Gangnam style'

Picture 7: Pin the tail on the dinosaur

All of these activities took place within the existing continuous provision spaces and the main hall. They were developed as whole class activities and all of the children within the reception class were offered the opportunity to create the materials, join in with the dancing and learn the party games. One of the resources was made at home.

Molly had the idea for the glitter ball and made it at home. She brought it into school to add to the final space (picture 8).

Picture 8: The disco ball

Stage 6: Create the space

Design Process Model: Discuss the resources made.

Put the space together

This session required the children to initially discuss the materials they had made and then create the final space together. This session lasted for just over an hour and was very loud and the children were very busy. They chatted enthusiastically to each other throughout the process, commenting on the materials they had made and how the space looked. The first addition to the empty space was the dance floor. Carys had offered this idea and during the session took a number of photographs as the floor was created (pictures 9, 10, 11 & 12). During the session she reflected that this was her "favourite" part of the party room. Once the floor was down George commented it was so good he was "going to faint".

The first photograph was of Claire and the children putting tape on the back of the individual 'floor tiles'. The second was the first floor tile to be stuck onto the floor. The third photograph Carys asked Claire to take of her and the others on the finished floor and the fourth was also taken by Claire of Carys proudly standing on 'her' floor.

Picture 9: Getting it ready

Picture 10: The first tile

Picture 11: Trying out the floor

Picture 12: The finished floor

The children added the other materials during this session and asked Claire to help putting up the signs and party room banner. They added the 'pin the tail' games onto the wall, the pass the parcel, decorations, costumes, invitations, full length mirror and the glitter ball. Claire added the party food a few days later and took a picture of the final space (picture 13).
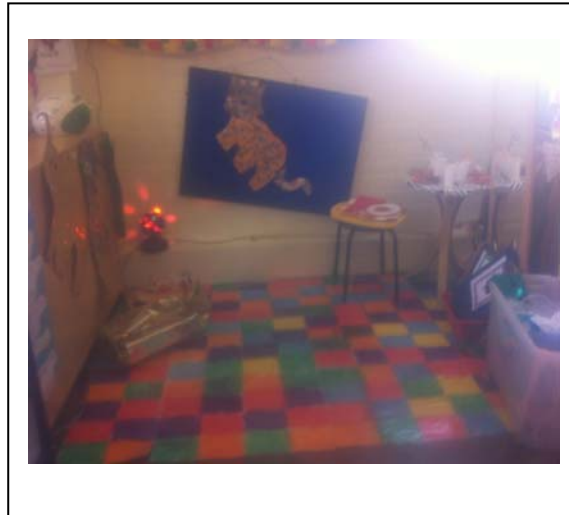
Picture 13: The final space

Stage 7: Use the space

Design Process model: No instructions were given for this stage.

Picture 14: The party room in full swing

6.2: Enacting Spatially Democratic Pedagogy: What happened?

Spatially Democratic Pedagogy has been created as a pedagogical tool to support children's participation in the design and co-creation of their classroom spaces. This section moves on to consider what happened when the intervention was enacted and analysed as a teaching tool. As well as the design session detailed above the research process involved planning and reflection sessions, which took place directly before and after the seven stages of the intervention. These discussions became a documented transcription of how decisions, interpretations and actions were made and taken throughout the design process. The discussions included Claire's thoughts, feelings and reflections about the intervention. Making sense of this data and how it was constructed is typically regarded as "highly inferential, interpretive, and cyclical" (Reimann, 2011, p.42). A central tenet of evaluation within this Design Based Research is for it to be developed around the perceptions of the "actors performing it" (Moses & Knutsen, 2012). Recognising Claire's position as the classroom teacher the chapter/evaluation is structured around the three main concerns Claire discussed prior to the research. These are tracked through the process and presented as a series of explorations and reflections. First, Claire's foregrounding of her perceived lack of control over the process is discussed, then her uncertainty surrounding the children's ability to participate in the design process, and finally her concerns over how she will support the process are considered. The chapter further considers the influence children's design ideas had in the final space and how the children used the space when the final design was completed. Finally, the chapter reflects upon aspects of the intervention that would be changed.

6.2.1 Initial concerns

Claire's initial feelings towards the intervention included both excitement and trepidation. She was excited to see what design the children would come up with and how they would use the designed space. However, she also showed concern for her perceived loss of control over the process and questioned the children's ability to participate in the design process itself. Claire's apprehension about this 'new' construction of space is a response to the repositioning of roles for both her and the children, and the pedagogical shift towards a more communal approach required to

enact the intervention. This response was not unexpected and, as Alexander (2008) reminds us, Claire's current transmission models of teaching and learning sit uncomfortably with more democratic understandings of pedagogy. Previous research with Foundation Phase teachers has also acknowledged moving towards a more child-led practice is, "complex and challenging" (Maynard and Chicken, 2010, p.38).

Claire's initial concern focused on how she felt her role within the intervention no longer positioned her in control,

Claire: I'm probably a typical teacher I'm so used to controlling everything ... the nature of teaching is I plan everything to the 'nth' degree. Yes, as an early years teacher I'm used to being flexible but I'm flexible with the things I know about. You know … I'll drop that and do this instead but it's still things I control. Whereas this, I've got no control.

(ARRPD2)

Claire's construction of control is linked to her current role and her position in knowing how each space and activity should unfold and how and what the children are to learn. In chapter 5.1 data indicate Claire's spaces and their accompanying activities are constructed externally. Claire's control in these spaces is realised by her ability to know in advance what the spaces and the activities will be, rather than any power over what they could be. However, Claire recognises her role within this current practice is tightly framed, whereas within a Spatially Democratic Pedagogy Claire perceives the control is being transferred to the children. This unsettled Claire because in addition to her perceived loss of control, Claire was also concerned the children may not have any design ideas or that any resulting designs would not be achievable,

Claire: I don't know what they are going to come up with. If they will come up with ideas, I really don't know because they are given no leeway in school really to think for themselves in lots of ways. Are they going to be able to think of ideas or will they have lost this ability? Will they be way off the scale or will they be achievable? I

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really don't know what they are going to do …. [as they are] so used to being in school and everything being done for them.

<div align="right">(ARRD1)</div>

Claire indicates her concern over the children's ability to think of design ideas. This concern is linked to the lack of pedagogical support for children to routinely work in this way. Claire reflects on the lack of participatory practices within her classroom which allow children to 'think for themselves', and reasons this may have caused the children to 'lose this ability'. In this way Claire's position does not reflect recent findings by Lyle (2014, p.220), who noted education leaders in Wales made "frequent references" to children's immaturity, incompetence and lack of knowledge. As Claire states it is a lack of pedagogical support which is the mitigating factor, rather than the children's ability. She reinforces this position at the end of the process and talks about the children repeating the process, stating they would get better at it (see p.247). However, although Claire's perception of the children's ability stems from a lack of support and practice, rather than ability, it still frames how children are able to participate in their learning. It dictates Claire's practice and what she offers to and expects from the children and does not position the children as competent, able to participate in their learning. This is problematic because foregrounding children's participation within school requires children to be, 'conceptualised as competent interactional beings, able to participate in decisions that affect them' (Theobald et al, 2011, p.20).

In the second design session (DBRI2) the children were asked to explore the empty space with Claire and to discuss any design ideas they had for the empty space. After their discussion the children were asked to draw their designs and to include any materials or resources they might need for the design to be realised. The children enthusiastically discussed their initial ideas for the space with each other and with Claire, demonstrating their ability to articulate their designs. The children's ideas for the space appeared to be linked to their interests and experiences, with designs including a dinosaur park, vets, party room, and a school (table 4). These designs reflected research by Sutton and Kemp (2006) where children offer new ideas for

classroom space, ideas about which adults may not think. Indeed all the designs created by the children had not been spaces in the classroom before and Claire admitted the final design (the party room) was something she would not have created or provided for the children, "I wouldn't have made a party room, it wouldn't have entered my thoughts" (ARPD7). Resonating with earlier research which regards the inclusion of children in the design as having the possibility to overcome "the conservatism of many adults" (Rivlin & Woolfe in Higgens et al, 2005, p.13).

When reflecting on the designs Claire acknowledged her initial scepticism in the children's ability and noted their resulting grounded nature,

Claire: If I'm honest, I was expecting them to say we'll have a swimming pool or we'll have a cinema. I was, I was expecting things to be really off the wall and completely, oh my god it's not manageable ... so I was surprised that they were so grounded.

(ARRPD2)

However, out of the five designs Claire felt only three were viable, and stated the school, vets and petrol station were the only "realistic options" (ARRPD2). When the party room design was chosen, straight after the session Claire was anxious and walked over to me laughing and said with her hands in her hands, "the party room aggghhh! (ARRPD4). Claire's concern with this specific design was centred around what learning she thought the children would get out of it.

6.2.2 Children's participation as an individual process.

The current framing of participation running throughout the Foundation Phase is one of individual choice (Taylor et al, 2015), where children "choose which activity to engage with" (p.139), and "direct their learning in a variety of learning zones with the addition of enhanced challenges in various parts of the classroom, e.g. following a challenge on creating a nest in the creative area" (p.143). Claire's pedagogical construction of children's participation is also tied to the individual and across the

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data she discusses her provision and how it supports children's individual choice for activities in space, their individual relationships with space and her individual assessment of them within these spaces (ARRD14; CGTII1). When discussing children's participation in initiating their own learning Claire notes "child-initiated learning, ideally it would be wonderful to go with each child but it's impossible isn't it" (ARRD14). Claire's perception of children initiating their learning as an individual process resonates with earlier findings by Stephen et al (2010, p.326) who found framing child-driven learning as an individual approach is a "considerable challenge in the educational culture typically encountered in primary classrooms". Bentley (2005) reasons it is this preoccupation with positioning participation as making individual choices which is undermining our ability to make collective ones.

6.2.3 Participation as a collective process

Children's participation in the design and co-creation of their classroom space is positioned as an everyday democracy, supporting both individual and collective approaches to participation. During the study (session three) the children were asked to decide which design they would choose to work on together and create in the final space. After a lengthy discussion the individual designs were put into a 'bin' and the party room design pulled out. When the design was drawn the children cheered and talked excitedly about the design, they adapted their individual designs to work within the party room, eagerly gave ideas to further develop the design, and appreciated the design ideas of others. They did not appear upset that their individual designs had not been chosen. In a memo recorded after the session I noted Claire's initial response,

Directly after the session Claire said she was surprised that the children didn't appear disappointed that their designs hadn't been chosen. She talked about the children's excitement to be creating the party room and how they quickly started coming up with ideas for the space even though, for a number of them, it wasn't their original design.

Claire's response to the children's actions mirror concerns raised in my ethical clearance form for the research. Collective participation was similarly highlighted as a "potential risk for participants", and I questioned if at this point in the process the

children would feel upset if their individual designs were not chosen. My concern is also underpinned by an individual construction of children's participation and is another example of how we underestimate children as it positions children as only investing individually in their designs. When considering the transcriptions as part of a reflective session, Claire again highlighted her surprise at the children's response and her deepening interest in the children's lack of disappointment,

That would be something to ask them Jennie, how did they feel when their idea wasn't picked out …because it'll be interesting to know why they weren't disappointed ….I would have definitely said they wouldn't be happy if their idea did not come out.

<div align="right">(ARRD14)</div>

In subsequent focus groups the children talked about how they liked the design which was chosen and appeared happy to accept the design idea even if it wasn't their individual idea (extract 16).

Extract 16: Children's reflection on the chosen design

Jen: Mrs M and I were talking and we wondered if you felt
     disappointed that your idea hadn't been chosen?

Charley: No.

Catrin & Elanor: No.

Jen: Didn't you? Why weren't you disappointed? How did you feel?

Elanor: Coz I wanted that one.

Charley: Yes, I wanted a party room or a restaurant.

Gareth: I wanted a dinosaur party room

<div align="right">(CGTFG1)</div>

Jen: So how did you feel when the party room was pulled out?

George: Fun.

Molly: Wonderful.

George: ummmm, funny. Funny.

Jen: Mrs M and I thought you might have been a bit disappointed, the petrol station didn't come out and the vets didn't come out. Were you disappointed?

George: Mmmm, mmmm [shaking head]

Molly: We liked it.

(CGTFG1a)

Reflecting on the transcriptions of the children's responses Claire discussed their approach as being more collaborative than had been first anticipated. She begins to create a framing for children's participation which can include both individual and collective experiences. She questions why the children may have been so comfortable working in this way and wonders if it was because the process was child, rather than adult led (extract 17).

Extract 17: Children's participation as a collective process

> Claire: Within this group it was only really, Catrin's idea, really, that Molly then went along with ....they all did take it on board as their own, didn't they. Even the likes of George, who, you know, in actual fact, is one of the ones that uses the space the most. …It's strange, because it was only one persons idea that got pulled out and the others had nothing to do with it but they did go with it. Surprisingly, actually. So is it because its come from another child, that makes it different to coming form us? There was no quibbling, was there, when I pulled it out there were no, 'uggghhhhh it's not mine, there wasn't any of that, was there....Was it that they could see it was completely fair? I don't know, because even if something is fair you'll have children going, it's not fair because its not mine. Or was it because all of the ideas in there were theirs?
>
> ARRD14

It was during this design session that the children's participation had been explicitly positioned as a collaborative process for the first time. However, framing children's pedagogical participation as an everyday democracy through the seven stage design process, the intervention was also created to offer ongoing opportunities for collective participation. Previous research has reflected on the opportunities for "problem solving, team working, communication, negotiation and citizenship" when involved in design processes (The Sorrell Foundation, 2004). Within the Foundation Phase framework (Welsh Government, 2015), there is a requirement for children to "develop their thinking across the curriculum through the processes of planning, developing and reflecting" (p.6), as well as be involved "activities that allow them to to be creative and imaginative …… communicate their ideas……..solve problems and discuss outcomes ……. value the learning, success and achievements of themselves and other people … form relationships and feel confident to play and work cooperatively" (p.10). Analysis across the design stages made visible a number

of opportunities where children engaged in similar approaches (extracts 18, 19, 20 and 21).

Extract 18: Working together

When putting the space together the children were on the pin the tail on the dinosaur game,

Claire: Ok, Chloe, you go and put the dinosaur where you think it should be on the wall in our party room.

George: Ok, whose jumper are we going to use?

Molly: You can use my jumper, I'm not wearing it.

<div align="right">DBRI6</div>

Extract 19: Discussing and discounting design ideas

Claire and the children were sitting on the carpet deciding on the materials and activities they would need in the party room

Claire: So, what else do we need? We've got costumes, music, lights,
Molly: A glitter ball.
Catrin: A bouncy castle.
Charley: It's too big.
George: Because we might hit our heads on the roof, if we jump too high.

<div align="right">DBRI4</div>

Data demonstrate the children as social actors. Activities throughout the design process were purposeful, the children were designing, creating, thinking, sharing ideas, appreciating the work of others, teaching others. This construction of participation is framed and driven by the children's design ideas. The new classroom space emerges through their design and co-creation of the party room. The children's roles and relationships are formed and supported through the production of the space (Lefebvre, 1991).

Extract 20: Adapting design ideas

> When the party room was chosen as the final design Gareth was quick to comment that his original design could also feature within the party room, "a party room with dinosaurs in it" (TESS3) and in the following discussions he adapted one of the party games to align with his original idea,
>
> Claire: Who has played a game called pin the tail on the donkey?
> George: I have, yeah, me, I have.
> Claire: So, we could have a pin the tale on the donkey game.
> All: Yeah.
> Claire: It wouldn't need to be a donkey
> Gareth: It could be a dinosaur.
>
> (CGTFG1a)

Throughout the process the children were forming relationships with the space and the people around them, they were "[m]aterialising them into existence" (Lenz-Taguchi, 2010, p.22).

When reflecting on the children's roles and relationships during the process, and discussing the transcripts, Claire noted the children had also been modelling and organising activities and demonstrating games to other children,

They've learnt lots of skills along the way, they've learnt how to play games, they've learnt how to teach others how to play games, they've learnt about group work and how to do this together. You know, the creative skills they've learnt, and the writing, telling everyone what it is.

(ARRD13)

Extract 21: **Appreciating the ideas of others**

Claire: So, is there anything else that we need for this party room?

Carys: A floor.

Claire: What sort of floor?

Carys: A dancing floor

Claire: A dancing floor? What does a dancing floor have on it?

Carys: It lights up.

Claire: Oh, I think I know, different coloured squares, a light up floor, a dancing floor.

George: That's a really good idea.   DBRI4

George: The disco ball looks really cool.

Jen: You'll have to tell Molly

George: I telled her.

                                              DBRI6

Claire described how a number of children's design ideas had repositioned the children's roles within the space "[t]he children … are now beginning to take on the teacher role, teaching other children games such as pin the tail on the dinosaur" (ARRD13). These learning opportunities resonate with the framework's (Welsh Government, 2015, p.10) requirement that children are involved in "activities that allow them to adopt a range of roles, including leadership within a small group, paired learning or working within a team" (p. 10) When I asked the children to reflect on this new role in a subsequent focus group George explained he had been teaching his friends how to play musical statues (extract 22).

Extract 22: George as the 'teacher'

> Jen: Ok, now, the other day Mrs M said that she thought some of you had
> been teaching other people children what to do in the party room.
>
> Carys: He did.
>
> Jen: What did he do?
>
> Carys: Musical statues.
>
> Jen: Who did you teach how to play that?
>
> George: My friends, Giovanni and Josh and
>
> Gareth: George, what about me?
>
> George: Giovanni, Josh, Cameorn and Gareth.
>
> Jen: So, you taught them. What did you do?
>
> George: First I didn't put the music on but I told them that when the music
> stops, when the music is on you dance and then one boy didn't
> listen and guess who that was, Giovanni.
>
> Jen: oh.
>
> George: Because he kept on dancing.
>
> (CGTFG1a)

Reflecting on George's earlier transcriptions he had asked for music, dancing and games. He wanted a space to be physical, to dance and to play games. As the designer and creator of the activity he took on the role of teaching others how to play. George's design ideas had created activities which had a particular ways of working and being in the space as well as particular outcomes. These activities needed to be modelled.

George's approach to the construction of space and activity resonate with the requirements of "effective" classroom spaces currently favoured in the evaluation of early years spaces where "positive outcomes for the activity are either modelled, demonstrated, explained" (Siraj-Blatchford & Sylva 2004, p.727). These were critiqued in theoretical underpinning above as they are seen to overpower the intentionality of the child. However, reflecting on the data above, differentiating how space is constructed offers children the opportunity to take on different roles within this 'effectiveness' model. The children have the opportunity to be the person to

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model, demonstrate and explain their ideas. Usually within these spaces it is the children who have the spaces modelled, demonstrated and explained to them but placing them as designers and co-creators of the spaces and activities enabled the roles to change. Claire noted George, Cerys and Molly all became teachers within the space, teaching others how to play musical statues, pin the tail on the dinosaur and pass the parcel (ARPD6; ARRD13; ARRD14; CGTII3).

This change of role is important. It offers an opportunity for the current construction of 'effective' spaces, through modelling, demonstration and explanation to be supported by children's design ideas, rather than external activity and outcome. Data allow this different construction of classroom space to offer children opportunities to become members of a classroom design community, taking on different roles and developing and creating their own activities. Collective participation in the construction of classroom space enables children to become constructors of space, rather than simply consumers or users of it. This approach to the construction of space is argued to reflect Dewey's (1916) positioning of children's participation as both the means and objective of education. Creating the 'party room' has offered opportunities for the children to "become part of the community and at the same time, participation [has been] the means to bring that about" (Berding, 2016, p.51).

6.2.4 Children's perception of Claire's role within the intervention

After recognising themselves as 'teacher' within the space, some of the children also perceived a change of role for Claire. During the walking interviews all children clearly articulated it was Claire's role to provide all spaces, materials and activities. However, during the design process the children reflected Claire's role was far less involved when they were designing and co-creating the space (extract 23). The spatial practices, roles and relationships were perceived to be different when space was constructed from the children's designs.

Extract 23 demonstrates an important shift in Claire's role. For the children Claire's role has changed from the creator of space and the manager of all the resources and

activities within the space to someone whose role it is to 'help'. Claire now plays an 'attendant's' role, she is helping the children realise their designs. The role of the 'teacher' within this alternative construction of space now appears to be shared between Claire and the children. The decentralisation of the construction of space, activity and outcome as well as the decentralisation of the teacher as producer of space has positioned children as participants, rather than users of their classroom spaces. This is significant when reflecting on the current lack of children's participation within current constructions of space.

Extract 23: Children's reflections on Claire's role within the process

So, my next question is what have you done to make this space? What did you do?

Molly: I think it was my idea.

Jen: Who do you think had the idea of the party room to begin with?

Molly: Me and Catrin.

Jen: Ok, so you had the idea of the party room. Then who decided we needed a floor, we needed a pin the tail, we needed balloons, we needed food, we needed costumes. Who decided all that?

Catrin: I did.

Charley: And I did.

Molly: Me too.

Jen: And you. What did Mrs M do then?

G2: write them on a list.

Charley: help.

CGTFG1a

6.2.5 Claire's perception of her role within the process

Initially, before the process began Claire perceived herself as having 'no control' over the process as the space was to be based on children's ideas. However, on reflection Claire noted a different role had emerged during the process,

Well, very much it was over to the children. Really. You know, it was, what do you want? And as much as possible, I think they've got pretty much what they wanted… I couldn't say go and make a dance floor … it's had to be a very guided process but they've told me what they want. Rather than, most of the time me telling them what it's going to be. So, it's been flipped in that sense.

<div align="right">(ARRD13)</div>

Reflecting on the geographical construction of space used to underpin Spatially Democratic Pedagogy data suggest the party room can be viewed as a product and a producer of its political, social and cultural practices (McGregor, 2003, p.354). The space itself (the party room) is the product of the democratic and collaborative pedagogy which was underpinning the space and the construction of the space also offered opportunities for children to engage in democratic activities. As Claire's comment above suggests, she has been supporting the children's ideas and listening to them, rather than her usual role of telling the children what they can do in each space.

The space created throughout the intervention can be seen to be supporting the children to "refresh [their] formal representative institutions" (Skidmore & Bound, 2008, p.127) by redesigning their existing centralised spaces. Supporting children's participation in the design and co-creation of their classroom spaces, the data above suggest, can foster democratic dispositions in the spaces we provide for children in school. Resonating with the practices Froebel provided in his gardens where he envisioned the construction of the children's plots of land as supporting knowledge as well as "social and citizen collective life" (Froebel, 1899, p.218).

6.2.6 Children's participation as influence

Chapter 2 discusses how children's participation within the United Kingdom is predominantly interpreted as children "having a say in decisions" (Percy-Smith, 2010, p.107), but how this does not automatically require action (Alderson, 2015), or necessarily build democratic communities (Clark, 2010). Lundy (2007) expresses the challenge of ensuring not only are children's views listened to but they are taken seriously and able to influence. She further notes influence is often seen as the missing component of participatory practice within education (ibid). Spatially Democratic Pedagogy aimed to support children's participation as influence through the realisation of their design ideas as physical classroom space. Collectively the children created a party room, it had invitations, a glitter ball, lights, a dance floor, pin the tail on the dinosaur game, dressing up, balloons, music, pass the parcel. The children designed, created and used the space, but in order to more fully consider the children's influence within the design process, this next section explores how individual children participated within the construction of space and how their design ideas were turned into to influence within the final design.

Participation as influence within Spatially Democratic Pedagogy

Once the design had been chosen the children were asked to create a list of further design ideas for the party room, to include any materials, resources and activities they wanted to create for the space. The children put forward twenty eight design ideas for the party room, fifteen of them were realised within the final space (table 6). Turning these design ideas into influence falls into three categories i.e, those which:

1. did not make it onto the list;

2. made it into the room but were not successful; and

3. made it into the room successfully

Table 6: Children's design ideas as influence

	ideas that didn't make it on the list	ideas on the list for the party room	ideas in the party room
George	party ring biscuits	pretend food gangnam style dancing musical bumps costumes	pretend food gangnam style dancing musical statues costumes
Gareth	white pop	dragon costume pin the tail on the dinosaur	costumes pin the tail on the dinosaur
Catrin	juice party bags	dancing music pretend juice invitations bouncy castle	dancing music pretend juice (cups) invitations
Charley		Piñata	
Molly		pass the parcel glitterball flower decorations pop	pass the parcel glitterball decorations
Carys		light up dance floor	dance floor
Elanor		princess costume disco camera decorations cake party bags	princess costume disco camera decorations

Children's ideas that did not make it onto the list.

When creating the list Claire positions herself on the carpet at the front of the group. The children sit in a semicircle in front of her. Claire introduces the activity and directs the discussion, resulting in the children offering her their design ideas. She uses a large A3 piece of paper and a thick marker to create the list. When reflecting on why the children's ideas did not make it onto the list a memo written after the session noted "Claire resumed her traditional role on the carpet and placed herself at the front of the activity. She was the gatekeeper, the one to decide if ideas would make it onto the list" [memo 13th March]. In this way Claire now 'controls' the list and she decides which ideas are written down and which are not. This spatial positioning is an important insight into the already established spatial relationships which exist on the carpet. When discussing the carpet in her first interview, Claire described it as a space to teach the whole class "we've got the carpet area, which obviously I do most of my main teaching points on" (CGTII - 1.1) explaining further "I tend to do whole class teaching on the carpet, with all of them" (CGTII1-2.1). After reading the transcriptions Claire reframed this use of carpet space as she felt she taught her "main teaching points" everywhere, not just on the carpet (CGTII2.1). However, she also reinforced the space supported an approach to teaching which saw her introducing the daily activities to the children, explaining or modelling anything which the children were going to be doing that day (CGTII2.1). During design session four Claire and the children resume these same spatial positions and relationships. Claire introduces and controls the activity, deciding if the children's design ideas are written on the list or not (extract 24). Using Low's (2014) spatial lens to consider why the children's design ideas did not make it onto the list uncovers the usual spatial relationships and practices which serve to exclude the children from making the decisions in that space. The space has been constructed for Claire to 'teach' from the front to large groups of children and requires Claire to transmit knowledge, rather than construct it with the children.

Molly: party bags.

Claire: Again, in party bags there is usually food. So, we'll say no party bags

Geogre: Party rings.

Claire: Party rings, what are party rings?

George: food.

Claire: Are we going to have food? If we had party food in our party room there would be some children that would go straight in there and eat it all up straight away so, I think we need to make a rule, no food. Ok? Ok, So, what do we need to go into the party room?

Catrin: Juice

T: No food, no drink. Ok. So, what are we going to do then, in this party room? Let's think about that.

DBRI4

Designs that made it but were unsuccessful

Pin the tail on the dinosaur

Gareth's initial idea for the empty space had been a dinosaur park. He had talked enthusiastically about it in the first design session, giving a detailed description of what he would need and do in the space. Claire has commented that this design was born out of his keen love of dinosaurs. Gareth was an eager participant at this stage and clearly articulated his ideas for his dinosaur park. He talked excitedly to Claire about his initial idea (extract 26) and when committing his design to paper initiated talk with others about his design (extract 25). When the party room was chosen as the final design Gareth was quick to comment that his original design could also feature within the party room "a party room with dinosaurs in it" (DBRI3) and in the following discussions he adapted one of the party games to develop his original idea,

T: Who has played a game called pin the tail on the donkey?

GE1: I have, yeah, me, I have.

T: So, we could have a pin the tale on the donkey game.

All: Yeah.

T: It wouldn't need to be a donkey.

GA1: It could be a dinosaur.

<div align="right">(DBRI4)</div>

Gareth was a keen participant throughout the design process demonstrating many of the design attributes discussed. He was able to share his design ideas, adapt and negotiate them and take others ideas on board. However, when reflecting on the finished space Claire spoke of how he 'never' used the final party room space "even though we put the dinosaur in it" (ARRD14).

Extract 25: Talking about designs

Gareth: Yeah. They're dinosaurs, they're dinosaurs Molly. I did this one it's a bird…..they're fish eaters. Some dinosaurs to their heads in the water.

Claire: Do they? Do you know what one of the flying dinosaurs is called?

Gareth: A teradactile. And one of the swim dinosaurs is this big [out stretches his arms].

Gareth: Catrin, look at this one. They haven't got any eyes.

Catrin: [Laughs].   DBRI2

Claire: And what's this?

Gareth: That's its teeth and that's its tail. One herbivore had a big long neck and some dinosaurs have horns so the meat eaters cant eat them.

Claire: Well you are really clever about dinosaurs. What's that one?

Gareth: It's a triceratops.

Claire: That's a very hard word to say. How many horns does a triceratops have?

Gareth: Three.

Claire: What is in your favorite dinosaur park?

Gareth: A triceratops, a mother duck, a drill dinosaur.

Claire A drill dinosaur? What does a drill dinosaur do?

Gareth: it has big jaws and it snaps.

Claire: Will the boys and girls not be frightened?

Gareth: No

The pin the tail on the dinosaur game (picture 15) seemed incongruent with the dinosaurs Gareth had talked about throughout the process, and his initial images of a "dinosaur eating a dragon's head off" (DBRI1), and the 'drill dinosaur' that had 'big jaws' and 'snaps' (DBRI2) created a different image of a dinosaur than the one in the final party room. When reflecting on Gareth's use of space I offered this as a reason as to why Gareth might not be using the space,

Jen: I wonder, because I was looking at the dinosaur and thinking, I wonder

if that is Gareth's picture of a dinosaur…

Claire: I was just about to say the very same thing, I think that if instead of

getting the children to make the dinosaur, if I had printed off a real, I

say real, an image of a dinosaur, it might have been different, it's not

DBRI2

a real enough image to engage him.

Picture 15: The 'pin the tail on the dinosaur' in the party room

The construction of the pin the tail on the dinosaur game demonstrates Claire's ability within the process to listen to the children's designs but adapt them when they did not fit her image for the party room. Claire had initially commented that she felt the other children might be frightened by the design Gareth was creating and the final dinosaur game in the party room reflects the dinosaur Claire felt comfortable with, rather than the dinosaur Gareth wanted. This meant for Gareth the resulting dinosaur game was not the image of the dinosaurs he had described and wanted to create in the space and led him to play in other areas of the classroom and not in the final party room space.

Designs that made it in (adapted) and successful

Invitations and disco

A number of the children's design ideas were more easily translated within the space. Catrin had the idea for the party room, shouting "party" in the initial design session. She said she wanted to "dance" have "food and juice" play music on a "music radio" and needed "a stage to dance on" (DBRI2). When creating the final list for the space Catrin offered seven design ideas and activities for the party room, dancing, juice, party bags, invitations, music, pretend juice and a bouncy castle (DBRI4). Of those, five made it onto the list, and four designs made it into the party room - dancing, music, pretend juice and party invitations.

Musical bumps and Gangnam style dancing

George's original design was a petrol station (DBRI2). However, he quickly invested in the final design and involved himself in a number of conversations surrounding the party room. His design ideas for the party room focused on dancing and playing musical games, and he suggested playing musical bumps and dancing to Gangnam style. (Musical bumps were adapted to musical statues as Claire was concerned the space was too small for musical bumps and someone might hurt themselves (extract 27)). These design ideas transferred easily to the space and Claire reflected that George spent a lot of time in the space engaged in these activities,

He [George] loves going in there and dressing up and looking at himself in the mirror. He's in there a lot … in actual fact, is one of the ones that uses the space the most … when George is in there, he's usually with some other boys all they do is dress up and dance…"

(ARRD14).

Extract 27: Musical bumps to Musical statues

Claire: It could be a dragon, that's what I was thinking. Pin the tale on the dragon. What other games are there?

George: Musical bumps.

Claire: I don't know about musical bumps in there George because there's not much space and you could easily bang your heads on the cupboards.

George: Musical statues

DBRI4

Pass the parcel and the disco (glitter) ball

The pass the parcel game and the glitter ball were both design ideas offered by Molly. In the initial design session Molly did not come up with any designs of her own but

was happy to take on both the school and the party room which were designs offered by Catrin. When the party room was chosen as the final design Molly offered four ideas for the space, pass the parcel, a disco (glitter) ball, decorations and pop (fizzy drink). The disco ball, pass the parcel and decorations made it into the final space.

Pass the Parcel

In session four Molly's pass the parcel idea was prompted by Claire's suggestion of having party games,

Claire: Oh, I've got an idea, what do you do in parties; well this is what happens in the parties my little boys have, we play games.

Molly: Yes, like pass the parcel.

Claire: Do we need a pass the parcel then?

Molly: And if there is no more someone gets the surprise

(DBRI4).

Molly's brief description of the game demonstrates her understanding of how the game works, that you need to unwrap the parcel until there are no wrappers left and then that person will have the surprise. However, in the final party room the children were unable to unwrap the parcel and they had to pretend to play the game. When asked about this alteration to the game Claire talked about the difficulties in supporting this activity,

Initially we made it as a parcel that could be unwrapped but that lasted about a second before it was all unwrapped and all the paper in the bin and then they couldn't wrap it by themselves, it had to be one of us doing it. At the time we didn't have the time to be stopping what we were doing, to wrap up a new present, which is why it ended up as we're just going to pretend to play pass the parcel. It was just the feasibility of it.

(ARRD14)

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Claire felt many of the children "didn't mind at all" as she had observed the game and they "just pretended and they sit quite happily in a little circle, passing it round, 'oh it's your turn' and they pretend, they put the music back on and they start it again" (ARRD14). Within this version of pass the parcel the children can keep passing the parcel around, there is no end and there is no winner. In Molly's initial description of the game she understood there is always a winner as they "get the surprise" (DBRI4). In response to this pass the parcel which could not be unwrapped, Molly created an alternative game by adapting the process. Molly's adapted game followed her original envisioned format and had an end and a winner who got a prize. Molly brought this adaption to my attention when I arrived at school to do a reflective interview and focus group with Claire and the children. As I walked into the classroom Molly and Catrin came up to me and started telling me about their pass the parcel game (extract 28).

I asked Molly if she could show me the game. Observing this game it initially follows the classic pass the parcel format, the music plays and the children pass the parcel around the circle. When the music stops, rather than pretend to open the parcel Molly (or whoever has the clipboard) writes a number down next to the name of the person playing. At the end of the game (it was difficult to assess how the end of the game was decided) all of the numbers would be added up and the child with the most numbers would win the prize - and this would be the chance to have the clipboard and become the scribe for the next game. It appears, despite Claire's imposed rules on the 'pretend' nature of the game, Molly maintained her agency over the process.

Extract 28: Pass the parcel adaption

> Molly: Shall we show Jen?
>
> Catrin: Yeah.
>
> Molly: (to me) We play pass the parcel and whoever got the one pretend sweet, they get that many numbers and I did it for Catrin.... (holding up a clipboard with a sheet of paper with several lines of numbers and simple addition equations on it)
>
> Jen: Ok, so tell me about these numbers again Molly? What are these
>
> numbers?
>
> Molly: One, two and three.
>
> Jen: Ok, and what do they mean? What happens?
>
> Molly: When we get them, I'm going to give them this piece of paper so they can write the numbers down ….. whoever had one present [whoever had the parcel when the music stopped] I had to write one add two equals three and whoever had the most they could do it.
>
> Jen: They could do what?
>
> Molly: Have the board and use the pencil.
>
> ARRD10

Reflecting on this adaption Claire noted when she saw them playing the game it was usually Molly who had the clipboard and was the one organising and 'teaching' the others,

Yeah, [Molly] obviously knows in her head what she wanted and she had organised that group of children so they knew what they were doing as well

(ARRD14)

Claire's initial adaption to 'let's pretend' to play/open the parcel had required Molly to suspend reality, something which children are masterful at within play. However, Claire's 'let's pretend' was adult led and inadequate. Molly's further adaption

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subverted Claire's version and enabled her to create a game which fulfilled her initial design idea, that the game would have a winner and the winner would have a prize.

The glitter ball

Molly drew a glitter ball in her first party room design and made it at home. In session six when presenting her disco ball to the group Molly said, "I made it with my nanny and my brother ...... [I said] can I do a disco ball and they said yes and I can take it to school" (DBRI6). Later on in the session Charley talked about the glitter ball, noting Molly had used "a pipe-cleaner, foil and pieces of paper" and that she thought it was "really cool" (DBRI6).

Influence conclusion

Developing children's design ideas as influence was complex. Their participation was spatial and relational (Mannion, 2010) and different for all children and all design ideas. This resulted in different children and different designs having different influences in the final space. Collectively Claire and the children created a popular party room space. The initial design requirements of a space where you could have a party, dance, play games, play music and dress up were realised in the space. However individually the children had different experiences of participation and different experiences of how their design ideas finally influenced the party room space.

Developing an understanding of the children's influence within the process is fundamental because it is often considered the missing component, as Lundy (2007) notes "it is easy for adults to comply with the various outward signs of consultation and ultimately ignore children's views" (Lundy, 2007). This is apparent during the process and Claire did, on times, appear to listen to the children's designs but nevertheless override their ideas or adapt them to fit her own view of the activity and space. For example when creating the pin the tail on the dinosaur game and when creating the pass the parcel which could not be unwrapped. Both of these games

although purportedly created from the children's ideas, within the space, were far removed from their original designs.

In recent research looking at children's influence on planning Bitou (2010, p.180) found "no matter whether the curriculum is child directed or not, the adults ignore the children's requests and exercise power over the children's interests and intentions to shape and change the planning". The children's ability to influence was different within this research and the empty space did culminate in a 'party room', a space designed by the children which enabled them to dance, play party games, write invitations and dress up. Their design ideas and activities were realised within the final space. However, within this process Claire also exercises her power over the children's design ideas to shape aspects of the final space. She is seen omitting design ideas from the list (pop, party rings), adapting ideas for 'health and safety reasons' (musical bumps), adapting ideas for ease (pass the parcel). A number of times throughout the process Claire exercises control and adapts the children's ideas but data suggest the process also offers opportunities to support children's design ideas as influence.

Jordan (2009, p.51) notes that "[i]f children are to be empowered as equal contributors to learning situations, they need to be in an environment in which they learn that they have the power to make decisions about the direction of their learning". Although all children were not contributors all of the time and not all design ideas influenced the final space, the design process did support children's ideas and they were able to create the party room. Reflecting on the process a number of them saw themselves as the designers and creators of the space with Claire the 'helper', they demonstrated feelings of being authors of their own scripts (Skidmore & Bound, 2008).

6.2.7 Use of space

'Proper use' of space was a dominating factor for both Claire and the children in their descriptions of existing classroom spaces, with all space having a 'proper use'. Proper use was created by someone else, for the children it was Claire or the other adults in

the classroom, and for Claire it was the external frameworks and inspection expectations she worked with. Both the children and Claire's constructions of space resonate with the curriculum documentation where continuous provision is increasingly structured around a predetermined topic, activity and outcome (WG, 2015; Taylor et al, 2015; Cornerstones, no date). This construction of space is increasingly valuing targets and outcomes, positioning children, teachers and classroom space within a "technical rationality" (Moss, 2007). The theoretical underpinning (chapter 3) acknowledges these spaces become barriers to actions which have not been planned or permitted (Jilk, 2005) and serve to overpower the intentionality of children (Goouch, 2009). Claire's existing spaces reflect this and all space has a predefined way of teaching, learning and being. Roles are pre-defined for both the children (as users/consumers) and teachers (as managers/technicians). However, Claire describes how children do not always use the space as it is intended, and how the planned activity can be quickly abandoned with the children's actual use of these spaces becoming unrelated to the activity. This following section looks at the children's use of space in the empty space, the party room and their existing continuous provision spaces when creating the space for themselves.

Use of empty space

Claire's focus on the use of space continued into the intervention and once the space had been empty for a week Claire reflected the children had been taking things into the space and building in there but that she had "sent them away and said no because we haven't decided what the area is going to be" (ARRD1). Claire's response to the children's interaction with the space continues to be focused on use and outcome. This spatial understanding appears ingrained in Claire's view of space with all spaces needing a predetermined use.

6.2.8 SDP: A different theoretical construction of space

The design process model (table two) gives no instruction for how to use the final space. The final use of space is to be negotiated and created through the design

process, and is dependent on the final design and activities chosen by the children. When Claire reflected on the children's use of the party room she noted that although used differently by different children, it was always used as a party room (extract 29). This, for Claire means the space is used 'properly' as its use is linked to the activity created for the space. Claire describes a space which allows them to play, to dance, to dress up, to play games, to write invitations. She reflects the children have created a party room for themselves and use it as they intended and are able to be silly, dress up, dance, and play games with their friends.

Claire reflected this 'proper use' could be a result of their participation in the design and co-creation of the space itself,

Claire: They don't do anything in there that I would say is inappropriate or anything, they use it well, which is quite interesting really because all of the things that are in there came from them, didn't they. Which is probably why they use it properly. Because it is things they wanted.

(CGTII2-5)

Claire's reflections resonate with Woolner (2010) who also positions children's participation and involvement in design as a reason for children's satisfaction in the final design.

Extract 29: Children's use of the party room

Claire: So Molly and her gang play her game and do a lot of writing in there. George and his friends use it as a silly space I suppose, and they dress up and they lark about in front of the mirror and dance. They use it as a party room.. I never said, this is what you do, I never modelled it. Yes, I did teach them pin the tail on the donkey, but other than that, the things were just put in there and I haven't spoken to them or done anything with it. Yet, in terms of proper use, yes they do.

(CGTII2-5)

Claire: If Molly is in there with Catrin and some of the girls they don't dress up, ever. Which I thought, again I thought it would be the girls, no when the girls are in there they are either playing pass the parcel or pin the tail on the donkey, that happens a lot, or it's sitting with the invitations and writing, but they hardly ever dress up and I never thought it would be that.

ARRD14

6.2.9: Use of continuous provision during the intervention

Creating the resources for the party room took place over two weeks. Claire was asked to make time for these activities in her normal planning and existing spaces. Subsequently the children's design ideas were created in the painting area (decorations, signs), the maths area (the dancing floor, paper chains), the main hall (dancing and party games), art area (pin the tail on the dinosaur), writing area (instructions, invitations).

Data demonstrate that using existing continuous provision spaces to support the children's design and co-creation of the party room changes how activities, children and learning are supported through these existing spaces. The value placed on children's design ideas within the design process is also developed through continuous provision. Spaces and activities become driven by the children's design ideas, rather than the usual externally imposed activities based on curriculum frameworks and whole class topics. Continuous provision is now joined together by the children's collaborative design for the empty space. The spaces are driven by the collective ideas of the children.

6.2.10 Changes to the intervention

In accordance with its Design Based Research remit, this next section considers what we would change in any future research to the intervention. Developing the pragmatic nature of the research, these considerations are to offer insights into how others could proceed when supporting children as designers and co-creators of classroom space through the design process. This short section then aims to highlight the specific aspects of the process that would change in an attempt to support further research using the intervention (Cobb & Gravemeijer, 2008, p.72).

Design (rather than group) driven process

Based on approaches in the pre-schools of Reggio Emilia (Piazza & Barozzi, 2001), Claire was asked to choose children to work on the research who she felt could work well together, have similar approaches to the way they work and enjoy creating the space together. However, early on in the process Claire and I both reflected this grouping may have worked better if the children had been interested in creating the same type of space, rather than just being able to work well together as a group. It was very apparent once the initial designs had been drawn that they were very different. Creating groups which are design driven would give prominence to the designs ideas rather than the group dynamics. Early on in the process it was noted the designs from the children were very different. We discussed whether, if the groups had consisted of children who had all initially designed similar spaces, this would have been

different and enabled all children in the group to realise spaces they had created. Developing groups from design ideas also resonated with another suggestion from Claire, as she felt the next time all children should have the opportunity to be involved,

I think that they really felt empowered by it all, they were the chosen ones and in hindsight it's a shame that we couldn't have done it with the whole class, because they were the chosen ones, they were the special ones that made the decisions and mostly made everything and put it together, they loved, you coming in and spending time with them but it was a shame that we didn't do it with all of them because I think it could have empowered all of them, the whole class

(ARRD14).

Developing this construction of space as a whole class approach is discussed further in chapter 7.6.

6.3 Conclusions

A central aim of this chapter was to evaluate Spatially Democratic Pedagogy and to explore what happened when children designed and co-created their classroom space. Spatially Democratic Pedagogy was created to support children's participation as proactive creators of space, in response to their current position as reactive users of space. Underpinned by democratic and participatory values and approaches to the construction of space, the process used design to pedagogically support children as participants.

Analysis of the intervention suggests there were notable differences in the relationships and roles which formed between the children, the teacher and the space when the children's designs were used to support their participation within the classroom. Data suggest the democratically aligned principles underpinning the construction of the space were also reflected in the relationships which formed during

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the process. Within this framing of space it is the process of design and construction which becomes the mediator for change. In this way, the construction and production of space is considered to support the values of the space and consequently the relationships and spatial practices which form within the space. This framing of space allows the children's design and co-creation of the party room to become the mediating factor between its wider democratic political and social underpinnings and the spatial relationships and practices formed within the space. If we consider the relationships which form within the spaces as resulting material practices (Massey, 2005), it is the co-creation of space which becomes important in supporting children as participants.

Chapter Seven: The final construction of space

There is no doubt whatever about the influence of architecture and structure upon human character and action. We make our buildings and afterwards they make us. They regulate the course of our lives.

Winston Churchill 1924

Churchill's quote above eloquently articulates my feelings towards classroom space at the end of this research. Classroom space is important, it supports the roles and relationships which form within it, modifies pedagogical practices and regulates the course of the lives of children and teachers.

At the beginning of this research I set out to develop a pedagogical tool which could support children's participation in the construction of their classroom space. In creating an empty space I positioned children's design and co-creation of their classroom as a Spatially Democratic Pedagogy, and as a site of everyday democratic practice. The pedagogic intervention and study of the processes lead to interesting insights in the research with regard to links between physical space, power and control, and the participation and positioning of children – as well as the teacher - in learning processes.

Reflecting on both the current constructions of space within the Foundation Phase and the space constructed through the intervention this chapter considers the research question 'What happens when children design and co-create their classroom space?'. Although this conclusion acknowledges the construction of the party room and the resulting participatory practices are unique to the children involved in its design and co-construction; it concludes, supporting children's participation in the construction of their classroom spaces could be widely applicable, and vastly important, within early years classrooms.

7.1 Classroom space - Whose space is it anyway?

The dominant construction of teacher-led classroom space within the Foundation Phase, discussed in the introductory chapter, permeates training modules, curriculum frameworks, supporting documents and evaluation reports. Within all of these documents teachers are positioned as the architects of classroom space and given the responsibility to provide spaces for children. They are asked to create rich environments (Welsh Government, 2015) for children to engage with (Taylor et al, 2015). Foundation Phase training provided to all teachers on behalf of the Welsh Government, states seventeen continuous provision spaces should be available for children daily (appendix D).

Chapter 5.1.1 highlights within the initial interview Claire also positions herself as the architect of classroom space. She discusses how she creates the spaces for the children before they arrive at the start of the school year and then changes them throughout the year with her teaching assistants. During their initial walking interviews the children also positioned Claire as the architect of the classroom spaces and articulated an understanding of the tightly framed uses and activities to happen in each space, describing clearly what they could and could not do in these spaces. The children had been in the reception class for six months when completing the walking interviews and in this time they had developed clear understandings of the spaces, and their accompanying routines which had been provided for them. The children's understanding and articulation of their spaces appears to demonstrate their ability to 'read' space as Davies (2011) suggests they would spoken or written words.

Although Claire and the children's views accord with the position set out in the documentation, as discussed in chapter 5.1.8, these initial perceptions were not a true reflection of the constructions of space within Claire's classroom. All space within Claire's classroom is externally constructed and driven by a variety of factors including 'always' and 'topic-led' spaces and spaces driven by Estyn. As highlighted in chapter 5.1.2 Claire's 'always' spaces dominate the provision (13 out of 22 spaces) and have become part of the "universal truth" of her classroom space (Moss, 2014,

p.4). Claire's "topic-led" spaces are driven by *Cornerstones,* a nationwide initiative, which data suggest positions space as little more than an extension of the curriculum framework as spaces are mapped across Foundation Phase outcomes and the Literacy and Numeracy framework. Data indicate this construction of space reflects the outcome driven expectations of Welsh Government (2008; 2015), but not their wider vision for children as participants (WG, 2000, 2004; WAG, 2000).

Chapter 2.2 positions this construction of space as problematic as it appears to both neutralise and centralize classroom space. The spaces themselves are not considered; it is only activity within space which is discussed. Developing this spatial 'best practice', supporting documents are stating what spaces should be in the classroom, what activities should be in these spaces, and what outcomes these should achieve. Although these activities are highly visible and detailed, the spaces within the classroom are becoming invisible to both comment and critique. The data above suggest it is 'best practice' which is positioning classroom space as unquestionable and unchallengeable within all supporting curriculum documents. The additional layer of instruction through *Cornerstones,* data imply, is creating spaces and activities which are increasingly prescribed and validated by their mapping across the Foundation Phase outcomes. This is only increasing the centralisation and homogenisation of space within the Foundation Phase classroom, resulting in a spatial practice where both children and teachers are having to navigate external expectations and structures.

In summary, this construction of space appears to support an increasingly centralised construction of teaching and learning through a tightly framed understanding of activity, use and outcome within space. The teacher is not the architect of these spaces, as spaces are externally created. This has clear consequences for both teaching and learning and for teacher's and children's roles and relationships within these spaces as it positions them both as users of predefined space, enacting centralised activities, with predefined outcomes. Within these spaces both Claire and the children are responding to and becoming dependent on these existing spaces. Children's (and to a lesser extent teachers) participation within these spaces is limited and controlled by the spaces themselves. Further, within this spatial construction children are making

choices rather than decisions about their learning as these spaces are prescribed and not participatory. This construction of space is problematised because it sits within an approach to education which aims to support children's participation as a right (WG, 2011), as a pedagogical practice (Taylor, 2015) and as a way to enable children to be involved in making decisions about their learning (Maynard, 2013). However, it appears within this study the construction of space promoted through the Foundation Phase is not supporting or enabling the children (or teachers) to participate.

7.2 Can space (as well as teachers) be the vehicle for change?

In chapter 2 I demonstrated education research considers adults as the mediating factor when considering children's ability to participate. Teachers are seen to hold the 'power' through their classroom relationships with children (Jordan, 2009), and it is these relationships which are recognized as the central factor in deciding how children participate (Harcourt & Einarsdottir, 2011). Burke (2007, p.363) has further stated it is school space which places adults in positions of power over children. Chapter 2 demonstrated within the Foundation Phase teachers are similarly given this 'power' as it is their responsibility to 'provide' these spaces. Teachers placed as architects of the space are purportedly given the power to create the space including the resources, activities and outcomes. When reflecting on the lack of children's participation currently within education in Wales, Lyle (2014, p.219) argues it is these "relations of power" which are the key barriers to its implementation. More widely Horgan et al (2015, p.85) have recently suggested children's participation is "wholly dependent on a cultural change in adult's thinking".

Claire's ability to support, hinder, curtail or block children's participation is recognised as a fundamental aspect of how children's participation is supported throughout the intervention. Claire's knowledge, understanding and approach to children's participation are understood as an essential aspect of how it is supported in the classroom. Indeed, findings indicate during the intervention Claire would at times revert back to her existing 'instructional' role, directing and organising the process

(for example, when she positioned herself at the front of the carpet to make the list of activities and resources needed for the space with the children sat around her, directing their ideas to her. Claire played an important role in constructing participation throughout this research. However, Claire's approach within these spaces also give insight into how Claire's current practice is framed by spatial practices. Claire recognized she 'taught the whole class' on the carpet and this practice is driven by the space and she doesn't think about it in any other way. These spaces form part of the 'always' spaces. They are always there and the are unquestioned. These findings reflect earlier conclusions made by Maynard and Chicken (2010) who found teachers would often revert back to traditional teaching practices when engaging in practice which supported child-initiated or child-led practice.

The research of both Lyle (2014) and Horgan et al (2015) above centralises a human centric approach to supporting children's participation, placing the teacher as the central mechanism for change. However, data within my research indicate even though Claire was able to assert control over aspects of the process, often overpowering the children's designs to 'fit' with her expectations of the designs and final space, the children, supported through their involvement in the construction of the space, were still able to become participants, irrespective of Claire's continued want to 'teach' and 'control'.

In chapter 6 the data discussed indicate it is the process of design and co-creation used to construct the classroom space which often supports the spaces for talk, children's design ideas, working together, adaption, negotiation and creation. It was this process which supported the democratic nature of resulting practice.

Democratising the construction of space by developing children's participatory roles within its construction enabled children's participation to be supported through the design and co-creation of space. In chapter 6 I theorised it is the construction of space, based on the children's design ideas which appeared to be strong contributory factors in the children's ability to participate.

Analysis of this data leads me to theorise it is also the construction of the space, in which these relations of power exist, which are integral in shaping and supporting children's participation. The theoretical underpinning used Lefebvre's (1991) construction of space to understand how we should not accept space as a neutralised construct and to question how the spaces are produced and what social and political agendas they promote. Lefebvre (1991, p.24) reasoned power within space is "a dynamic, humanly constructed means of control and hence of domination, of power". This is an important insight into how we should be reflecting on the construction of classroom space. It allows us to think about power within classroom space as being held by the person who controls the construction of space. Further, if children's designs are driving the construction of their classroom space it can be an important contributory factor into how 'participatory power' is lived out within the classroom.

7.3 Froebel: Implications for future practice

In chapters 3 and 4, I positioned Froebel's communal construction of garden spaces as the pedagogical blueprint for Spatially Democratic Pedagogy because it positioned children as competent participants in their learning. Framing these pedagogical principles and practices within current sociomaterial (Fenwick et al, 2011) and democratic (Moss, 2014) approaches to learning and space has demonstrated the relevance Froebel has within these current debates.

His communal approach to the construction of space has enabled this research to illuminate the influence that different approaches to the construction of space can have on children's learning. The thesis has foregrounded Froebel's understanding that it is the construction of space, not just the spaces themselves, that have the ability to support different pedagogical practices and different roles and relationships for children. And further, that children's participation in the construction of space can develop participatory practices that support children in their "collective life" in school (Froebel, 1899, p.218).

In reclaiming and rethinking classroom space through this Froebelian lens, Spatially Democratic Pedagogy has demonstrated that Froebel's pedagogical

legacy is equally relevant when considering children's participation in their learning within the Foundation Phase and as such teachers should be re-engaging with his pedagogical principles and practices to reclaim their classroom spaces.

7.4 Redefining roles and relationships through space.

Within current construction of classroom space roles for both teacher and children are well versed throughout the documentation. Claire is to provide space for children to engage with, whilst children are to engage with the spaces provided for them. However, the construction of space discussed throughout this thesis also supports a view of space which not only creates the stage for learning, but also shapes the teaching and learning within the space. Data above demonstrate Claire's practice is linked to space, how she teaches, not just what she teaches, is directed by the classroom spaces themselves. In this way, teaching and learning is scripted by the spaces themselves.

Data indicate creating an empty space within the classroom modified the structures of participation within the existing space and the roles and relationships between the children, the teacher and the space. When underpinning the construction of space with more participatory and democratic underpinnings, the resulting relationships between Claire and the children appear to support more democratic and participatory roles and relationships. These spatial practices are formed through the spatial processes which emerged through the children's design and co-creation of their space. Both participation and power within the space appears to become more shared and dispersed.

During the intervention the children had taken on the role as architects, teachers, co-constructors, developing and creating their design ideas for the empty space. Claire's role was also modified within the intervention and on reflection the children noted she had been the 'helper'. She had helped to realise their design ideas within the space. The children were clear it was they who had created the dance floor, the games, the

music, they had made it and Claire had helped them achieve their goals for the space. Within this construction the teacher becomes the attendant, attending to the children's ideas, supporting their designs to influence. This attendant role is considerably different to the role Claire fulfills within their existing spaces.

Claire's reflection on the process took a similar view of the children's role and she further felt the children had been empowered by the design processes they had been involved in "I think that they really felt empowered by it all" (ARRD14). In the Theoretical Underpinning I used Woolner's (2010, p.44) architectural understanding that children can be "generally empowered" by having the ability to change their physical settings to support the intervention. Pedagogically this was seen to reflects Jordan's (2009, p.39) description of how, in her research, when "compared to scaffolding, co-constructing understanding (between teacher and the children) [is] seen to give children more empowerment". Reflections on the data above suggest a similar outcome, enabling children to be involved in the co-creation of space, similarly empowers them. It appears the democratisation of the construction of classroom space can result in the democratising of power within space.

Findings across the intervention appear to suggest it is the communal construction of space which acted as the driver for children's ability to participate. This enables a theorisation of children's design and co-creation of space as having the potential to support their participation. In view of the data discussed above I argue it is also the construction of space which should be considered as a vehicle to support children's role as participants within their learning. Underpinning the design process with a democratic and participatory approach to space was to reflect the principles and practices of Froebel's (1899) communal gardens. Within this construction children's participation is supported as an approach to living. Participation becomes the political and ideological value which underpins the construction of space, and results in practice which similarly supports democratic and participatory principles. As with Froebel's understanding the communal construction of space is offered as a site of democratic practice and data suggest it is this different construction of space which supports these different roles and relationships.

I noted in chapter 6 positioning children as designers and co-creators of classroom space enables space to support roles and relationships which are more aligned to democratic pedagogies and the participatory political and cultural values which are noted within the Foundation Phase and the Welsh Government's wider goals for children. Through this participatory spatial gaze Claire's and the children's roles are able to evolve and emerge through the construction of space. I am arguing it is the construction of classroom space which becomes an important factor in determining the pedagogical roles and relationships within space. I further argue, continuing to understand children's participation as happening within existing space, and ignoring the importance of who is constructing these spaces, will continue to underestimate the values and pedagogies which are developing in our early years classrooms through the spaces that are being provided for teachers and children.

Current constructions of classroom space will always construct and constrict children's and teacher's participation as long as it continues to be constructed externally. Further, unless children are able to participate in the construction of classroom spaces, children's participation will always be defined as choice. Within the existing spaces, power and participatory structures already exist within both the spaces themselves and their pre-defined activity and outcome. Analysis of the data appears to confirm Lefebvre's (1991) observation we should be concerned with the construction and production of space, not solely the spaces themselves. This is significant when considering the lack of consideration given to the construction of space currently within the Foundation Phase documentation.

7.5 Children's learning through Spatially Democratic Pedagogy

Learning within Spatially Democratic Pedagogy is concerned with children's ability to participate. In chapter 2 I highlighted children's participation in the framework is framed as both a right and as a pedagogical approach. However, the chapter further noted the apparent tensions between these participatory aspects of the framework and the more formal, traditional approaches to topic and content driven learning. It also noted recent research (Lewis et al, 2017) that highlights the lack of practice currently

supporting children as participants within Foundation Phase classrooms and attributes this to a lack of pedagogical tools for teachers to use in their daily practice.

Drawing from the framework (WG, 2015) children's learning throughout the intervention can also be aligned to a number of the "skills across the curriculum" (WG, 2015, p. 6) as well as the range of experiences required through the "Personal and Social Development, Well-being and Cultural Diversity Area of Learning" (p.10). These include the children's opportunities to "develop their thinking across the curriculum through the processes of planning, developing and reflecting" (p.6) as well as "activities that allow them to be creative and imaginative …… communicate their ideas……..solve problems and discuss outcomes ……. value the learning, success and achievements of themselves and other people … form relationships and feel confident to play and work cooperatively" (p.10).

Claire reflected that the children's learning had reflected these skills-based requirements noting "they've learnt lots of skills along the way, they've learnt how to play games, they've learnt how to teach others how to play games, they've learnt about group work and how to do this together" (ARRD12).

Learning within Spatially Democratic Pedagogy was framed through participation. Learning outcomes and content-based learning is a result of the individual 'party room' design and would not be applicable to other designs. Therefore, this more formal understanding of children's learning within the process is dependent on what the children chose to design/create. And whilst the more academic and outcome driven constructions of learning were not foregrounded in the process, they were acknowledged, as the Children were writing instructions, writing invitations, using symmetry to create the dance floor, using different art applications to create the decorations.

Within the framework (WG, 2015, p.10) children are also required to be involved in "activities that allow them to adopt a range of roles, including leadership within a small group, paired learning or working within a team" (WG, 2010, p. 10). Spatially

Democratic Pedagogy also offered the children collaborative working opportunities with the children able to take on different roles - with Claire reflecting on the children taking on the teaching role "teaching other children games such as pin the tail on the dinosaur" (PARRD13).

This shift in the children's role and in their ability to participate in their learning is deemed indicative of the theoretical construction of space and the subsequent collaborative participatory opportunities offered and supported through the design process. Consequently, it is the process and the opportunity to collaboratively design classroom space that is seen to support children's learning. In this way, the space is seen to "mirror the learning [it is] to support" (Jilk, 2005, p.43).

7.6 Limitations of the research

7.6.1 SDP as an isolated pocket of research

When considering the concerns which could be levied at this thesis consideration has been given to Deuchar's (2009, p.35) claim that pupil voice is reduced to "isolated pockets of pupil consultation rather than school wide democratic practice". If considering this research as an isolated PhD, this concern can be levied at the process in this study as the children were involved in the design and co-creation of one space over a seven-month period and then the research finished. However, in positioning Spatially Democratic Pedagogy as a pedagogical tool, this research set out to question how "such points of debate, challenge and co-construction can be established across the education and design field beyond the confines of individual research studies" (Clark, 2010, p.200). Within this research Spatially Democratic Pedagogy is positioned as a construction of classroom space with aspirations to become an everyday tool within Foundation Phase classrooms. If developed as intended, participation through the design of classroom space becomes a social process of the classroom which is "rooted in [the children's] everyday environments and interactions" (Percy-Smith, 2010). It positions children as members of their classroom community, enabling them to co-create their spaces, rather than be consumers and users of spaces provided for them (Clark & Moss, 2001, p.8). This thesis positions

theoretical engagement with the construction of space and spatial practice as a way of developing communal design as a pedagogy which supports children in "debate, challenge and co-construction" (Clark, 2010, p.200), supporting this way of teaching and learning as an everyday democracy and 'mode of associated living' (Dewey, 1916, p.87). The ability to develop Spatially Democratic Pedagogy as an everyday process was discussed by Claire in one of our last discussions. She envisioned the process as ongoing, running throughout the school year and each term it would become empty again, allowing the children to develop and create a different design. Claire extended this approach to become an ongoing tool, when considering how the children would get better at it. However, it also serves to highlight how Spatially Democratic Pedagogy could be seen to be a different and on-going spatial structure and practice within the classroom. I discuss these ideas of 'getting better' at the process in the next section as I feel it applies to the children but equally applies to myself and Claire.

7.6.2 It was the first time for everyone

Reflecting on the intervention process Claire suggested Spatially Democratic Pedagogy could become an everyday part of the school year, by continually repeating the design process and creating the empty space again and again. She also felt if we were to run the process a number of times the children would become more accustomed to this way of working and would get better at it**,**

Claire: Do you know what, I think, they would get better at it too. If they repeated the process and every term it became the empty space again, that would give them, they'd get the idea then. Throughout the year they would get the sorts of things that would be possible, the ideas, the working together.

<div align="right">ARRD14</div>

Drawing on the idea of 'getting better', I take a similar approach to how I reflect personally on the process. I recognise there is still much to question, discuss and be critical about, and so much at which to get better. This thesis has used a relatively new methodology and enacted a new approach to the construction of space, offering a

'new' construction to space within early years theory and practice and so takes a more hesitant approach to its final ascent to theory building. (Thomas, 2007).

7.6.3 Participation through a structured tool

Within this study Spatially Democratic Pedagogy is created as a pedagogical tool to support children participation in the design and co-creation their classroom space. Practically, it is a seven stage design process which develops sequentially through a number of design processes. This structured seven stage process one could argue dictates the order of the learning and the way of working which could be seen as a restrictive, non-participatory process. Indeed, Gallacher and Gallagher (2006, p.3) would argue the process is not participatory because it puts children "on task" and has a specific outcome (a space is created) and process (through a seven stage design process).

One could argue Spatially Democratic Pedagogy is a process and outcome driven pedagogy developed through a series of specific 'teaching sessions', which dictate certain ways to manipulate space. However, it is argued although Spatially Democratic Pedagogy as a design process has specific processes and goals, it is predicated on the designs of the children and as such cannot stipulate the what, why, and how of the design process and subsequent use of the space.

7.6.4 Democratic space within a structured ideology

In a similar vein to the limitation above, I also recognise concern could be levied at Spatially Democratic Pedagogy as a 'stand alone' democratic space. For the purposes of this research, it is positioned as a democratic space which has the ability to sit within the wider classroom setting. Concerns could be raised as to how a wider classroom space which is predominantly underpinned and manifested as representational pedagogy, constraining children's participation could also support a

space for democratic practice. These tensions could be seen to arise as democratic practice is seen to stand in "conscious antithesis" to a model of transmission (Alexander, 2008, p.80.). However, I argue Spatially Democratic Pedagogy is able to sit within the representational ideologies of current spaces because it is the construction of the space which is seen to reflect the political and social ideologies and support the pedagogical roles and relationships within the space. As such, individual spaces within the classroom have the possibility to support different epistemological and ideological underpinnings when the spaces are constructed based on different understandings of teaching and learning. It is through the different constructions of space we can note the various ways space can become the product and producer of different pedagogical constructions (Lefebvre, 1991; McGregor, 2003). The data above appear to strengthen this understanding that it is the 'how' of the construction of space, which can be considered the deciding factor in which epistemological, and ideological approaches to teaching and learning the space will support. The pedagogical roles, relationships and goals within each space is dependent on the values which underpin the construction. Enabling this thesis to argue different constructions of space can support different constructions of learning which can work alongside each other.

7.7 Future research

7.7.1 Constructing space - education, architecture and geography

At the beginning of this thesis I noted Taylor's (2009) concern that as an early years teacher with a professional background in teaching and research I was using disciplines outside my field of knowledge. Taylor (2009, p.664) warns of the difficulties which could arise when trying to "develop contributory evidence" which spans differing disciplines. I argued at the beginning of this research using aspects of geographical and architectural thinking supported and enriched this pedagogical study and the ideas used would be specific to the pedagogical questions posed. I used Massey's (1995) understanding that crossing these disciplinary boundaries can enable new conversations to take place. Reflecting on the conversation which has taken place I feel validated in

using the disciplines of geography and architecture because they have enabled the research to discuss classroom space as a dynamic force in the construction of teaching and learning. However, I acknowledge further research would benefit from an interdisciplinary team to enable expertise to span all three disciplines.

7.7.2 Using technology to support classroom space design

Since completing the intervention the Welsh Government have published two important documents for education moving forward in Wales. *Successful futures* (Donaldson, 2015) and *Education in Wales: Our National Mission* (Welsh Government, 2017).

A clear message within these two documents is the need for practice to foreground technology. Its importance is now seemingly so great, Wales is putting children's digital competence as having equal status to literacy and numeracy (Donaldson, 2015; Welsh Government, 2017). However, how children's digital competence will be realised within classrooms has yet to be fully decided upon within this initial documentation.

This research did not use technology within the design process as it used drawing as a tool for documenting children's designs. In design session two the children created their designs in groups with pens and paper. However, since completing the empirical nature of this thesis, I argue, Spatially Democratic Pedagogy has huge scope to include technology within its design framework. For example, designing classroom space through the use of design software (much like the software you might use to create drawings of a house, or when you create a new kitchen or bathroom) could enable children's digital competence to be supported through classroom design. The design of the materials and activities for the design could also become a technology based activity.

Looking slightly further ahead in time, the design and co-creation of classroom space could incorporate three dimensional fabrication (3D printing), where children are able

to design and print the artefacts for their classroom spaces. Although this might have seemed impossible only a short time ago and will still feel futuristic to many schools and classrooms, there is growing recognition 3D printing could soon be more widely available to young children in their classrooms (Eisenburg, 2013). Parvin (2013) in his TED talk entitled *Architecture for the people by the people* predicts a future where the "factory is everywhere ...[and]... the design team is everyone". Envisioning everyone as designers and creators allows Parvin (2013) to propose 21st century design as the, "democratisation of production". Eisenberg (2013, p.7) offers similar understandings, and views the growing use of 3D printing as an "early phase of a wide-scale revolution in tangible creation".

Pedagogically, Eisenberg (2013, p.8) has discussed "futuristic scenarios" in which he sees children creating and personalising their "furniture, musical instruments, or sports equipment". Using 3D printing to construct materials for designs within Spatially Democratic Pedagogy could equally decentralise the physical construction of classroom space. 3D printing could also be used to centralise children as the creators of space through digital media. The findings of my research can be used to support Smith et al's (2015, p.20) prediction 3D printing offers the potential for "democratising [the] vehicle for the development of new artefacts".

Supporting children's digital competence through the design of classroom space and the creation of materials through 3D printing is offered as an exciting extension to this current study. Using technology in this way is aligned to the Welsh Government's plan to place children's digital competence alongside literacy and numeracy skills (Donaldson, 2015; Welsh Government, 2017) and could support a participatory and democratic approach to children's use of digital technology.

7.8 Final reflections: space as stage, script and palimpsest

The theoretical underpinning positioned continuous provision as pedagogically staged space (Nordtømme, 2010), as staging for educational practice (Fenwick et al, 2011). Data discussed in c 5 demonstrate Claire's spatial practices are equally providing a stage for children's learning. Spaces are created before the children arrive in

September and are designed and set ready for the children to 'perform' their learning. Within this spatial performance both Claire and the children are assigned scripts, roles which tell them what to do in these spaces.

Developing an insight into the scripts of classroom spaces is important, it illuminates how daily practice is 'written' within space, and how these spatial scripts become drivers for daily practice. The insight and understanding of the agency of space and materials, considered in chapter 2, argues the spatial and material aspects of the classroom should be thought of as agentive forces within teaching and learning (Froebel, 1887; Lenz-Taguchi, 2010; Fenwick et al, 2011), and further how the spaces we provide, purportedly for children, have an active involvement in children's learning. This strengthens my call to think about teaching and learning within the Foundation Phase, not as a social construction but a sociomaterial construction (Fenwick et al, 2011).

Further illuminating these spatial scripts by 'spatialzing' (Low, 2014) classroom space reinforces the argument current constructions of classroom space and their underpinning political values and practices and not supporting children's participation or teachers autonomous professionalism. Theoretical understandings of space and early childhood education are not joined. There is little theoretical understanding of space within the Foundation Phase framework or its supporting pedagogical documents. Space is almost invisible yet is, as this research demonstrates, an integral factor in the construction of teaching and learning, and what roles and relationships are formed and supported within the classroom. This lack of engagement with classroom space simplifies its role within the search for children's participation in school. It is doing children and their ability to participate a disservice and this is creating an urgent need within the Foundation Phase for space and spatial practices to be taken more seriously if children's participation in their classroom settings is to be realised.

Uncovering these spatial "systems of exclusion that are hidden [and] naturalised" (Low, 2014, p.34), forces this research to question why there are no theoretical engagements with space, no understandings of how it is constructed or how this

construction and its resulting spatial practices can frame and become a driver for teaching and learning within the Foundation Phase documentation or more recent documentation provided by the Welsh Government. Considering the 'new approaches' to learning within Wales, this research calls on policy makers to consider these important spatial factors of the new curriculum.

Data have also highlighted how these spatial scripts assign roles for both teachers and children. These spatial relationships reflect how Claire teaches within the space as roles are scripted by the spaces themselves. The data above demonstrate Claire's practice is linked to space, how she teachers, not just what she teaches, is directed by the classroom spaces themselves, for example, whole class 'teaching' on the carpet. Within these spatial relationships children's and teachers' lives, their roles and relationships are becoming scripted by these spaces.

Data demonstrate the scripts of current classroom spaces are framed by 'best practice' (Taylor et al, 2015), which appear to overwhelmingly include developmental and technical approaches to space as they are increasingly mapped across the outcomes of the Foundation Phase. The different 'scripts' also join Claire's personal understandings and together both the personal and professional understandings underpinning Claire's existing spaces offer conflicting narratives of space which are layered and hierarchical. However, these spaces are bound within an overriding 'effectiveness' discourse (Siraj-Blatchford & Sylva, 2004, p.727), creating classroom spaces which are tightly scripted with activity and outcome. As data in chapter 5 demonstrate the children can clearly 'read' these spaces, articulately describing what the spaces are and what they should be doing in them. Children's participation within these scripts is controlled and curtailed as each space has its story already written. This is significant because to date, within the documentation, only teachers are recognised to 'provide' spaces for children; when data enables us to see the stories of these spaces are set before they are 'created' by teachers or used by children. .

Data in chapter 6 suggest Spatially Democratic Pedagogy allows a different script to emerge, as the script itself is not written in the empty space. The children need to create the story of the space through their ideas, how the space (and learning)

develops emerges through the children's designs. The scripts of the empty space appear more aligned to the analogy I used by Skidmore and Bound (2008) which sees participation within democratic practice compared to being an author of one's own script. I argue the data above allow a similar analogy of classroom space, within the empty space as the design process enables the children to become authors of their own script.

Goouch (2010, p.19) uses Bryan's (2004, p.142) analogy of teachers as "'palimpsests', tablets on which successive scripts are written", to question whether the teachers she worked with had "escaped such government inscription". This analogy is also helpful when considering the scripts of classroom space. As data suggest in chapter 5 current spaces have not escaped government inscription as they are inscribed with increasingly centralised notions of activity and outcome.

Whilst Spatially Democratic Pedagogy is also another script, adding another layer of inscription to the space, it appears, within this script, children have the opportunity to write their own adventure.

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Appendix I: Pilot study - Interview transcription example

Appendix A: Participant Information Sheet – Parents

<u>Please take this sheet home and give it to your parent or guardian</u>

Project (working) title: The Empty Space

Your child is being invited to take part in a research project. Before you and your child decide it is important you understand why the research is being carried out and what it involves for you. Please read the following information.

What is the research project about?

Supporting children's ideas and developing learning around their interests is a key aspect of the Foundation Phase. This research will seek to explore what happens when children's ideas and interests are supported through children designing classroom spaces. The research is linked to many outcomes within the Foundation Phase documents and will be used as a formal approach to learning. Mrs Malcolm will be clearing a space within her classroom and the children, in groups, will be designing, planning and creating their designs in this space. The project is interested in finding out about what happens when children are involved in this process and what the children and teachers think about how it works as a way of teaching and learning.

Who is carrying out the research?

The project is being carried out by Jennie Clement from Canterbury Christ Church University. Jennie trained as an early years teacher and worked in schools in the uk and Italy for eight years. More recently, Jennie worked as a researcher and academic tutor at Swansea University. Jennie is being supervised by Professor Trisha Maynard who is the Director of the Research Centre for Children, Families and Communities at Canterbury Christ Church University. This study has been looked at and approved by a group of people at the University who agree that it is okay for Jennie to ask you to take part.

Where will the research take place?

The research will take place in your child's classroom and other suitable areas within the school (e.g. a quite area to conduct the focus group) it will take place approximately once a week for four months.

Why am I being invited to take part?

Your child's school and classroom teacher are interested in exploring this research and as your child is in reception they are being invited to take part in this study.

Do I have to take part?

No, it is up to you and your child to decide whether they wish to take part. If your child does decide to take part in the study they can stop taking part at any time during the study, they do not have to give a reason about why they want to stop and nobody will mind if they do want to stop.

Do I have to decide now?

If you would like to take part, please return the **assent from and parental consent** form below by Monday 10ᵗʰ March to Mrs Malcolm.

What will happen to my child if they decide to take part?

If you and your child agree to take part in the study your child will be involved in a series of classroom based activities which, over the space of four months, will see them involved in the designing, planning and creation of an empty classroom space. This process will be observed, photographed and notes will be taken for analysis purposes and your child will also be asked to take part in group discussions about what they think about the process and the spaces they have helped to develop.

What are the possible disadvantages in taking part?

This research project does not involve any risk to your child. All research will be conducted within the classroom or other suitable spaces within the school (e.g. a quieter space for group discussions). The only upset might come from your child not having all of their ideas realized in the empty space as the children will be working in groups and will need to develop their ideas with others. This is not considered to be a

risk as your child often takes part in group activities where ideas have to be negotiated and adapted.

What are the advantages in taking part?

Your child will be able to voice their opinions and be involved in designing a space within their classroom. The activities are designed to be engaging, interesting and enjoyable.

What will be done to make sure that the information is confidential?

You and your child will be asked to complete the consent and assent forms below

to say you are happy with the use of the information gathered for the purpose of the study and any subsequent academic papers. All the information gathered from your child during the activities and group or individual discussions will be kept strictly confidential (and will not be able to be seen by anyone other than the researcher and her supervisors). The transcripts (a written copy of everything that is said in the group discussions or activities) of the discussions will have all identifiable information removed, including any details that could potentially identify your child. Any quotes from the group that may be used in the writing up of a report or any academic papers or presentations will be anonymous; you will not be able to identify who the quotes are from.

If I want to take part, what will happen next?

Please can you and your child complete the consent and assent forms below and return them to Mrs Malcolm. Your child will then be asked if they still would like to be involved in the activities when the process begins in the classroom.

If you wish to discuss any aspects of this project please chat to Claire or contact Jennie Clement - Email: JC662@Canterbury.ac.uk

Parent Consent Form

(To be completed by parent or guardian)

Project [working] Title: The Empty Space

Name of Researcher: Jennie Clement

Please initial

Each Box

1. I confirm that I have read and understand the information sheets for the above study. I have had the opportunity to consider the information, ask questions and have these answered satisfactorily. ☐

2. I understand that my child's participation is voluntary and that he/she is free to withdraw at any time without giving a reason. ☐

3. I understand that the group will be video recorded and I consent to any anonomysed quotes and sections of video from the group may be used in the writing up and dissemination of the project. ☐

4. I understand that all data relating to my child obtained for the purpose of the study will be handled in confidence. ☐

5. I agree that my child can take part in the above named study. ☐

Full name: …………………………………………………………..

Signature: ………………………………………………………………….

Child's Full name: ………………………………………………………….

Date: …………………………………………………………………………

Appendix C: Participant Information Sheet – Children

Participant Information Sheet - Please read this with your child

Hi, my name is Jennie.

I go to school at Canterbury Christ Church University.

This is my teacher Mrs. Maynard.

I have some homework to do for school.

I am trying to find out what happens when children design some of their classroom spaces

Please read this with your child

Child Assent Form

(To be completed with a parent or guardian once the child's participation information sheet has been read and discussed)

Project [working] Title: The Empty Space

Name of Researcher: Jennie Clement

Participant to **circle** as appropriate

1. Have you read and talked about the information sheet?   **YES / NO**

2. Do you understand what this project is about? **YES / NO**

3. Do you have any questions? **YES/NO**

5. Have your questions been answered **YES / NO / NA**

6. Do you understand that it's okay for you to stop taking part at any time? **YES / NO**

If you are <u>happy</u> to take part in this project please write your name and and ask your parents or guardian to write their name below

Name ………………………………………….

Parent/guardian name ………………………………………………….

Appendix D: Continuous Provision recommendations Welsh Government

'Areas in your Setting'
Ideally the areas shown below should be available every day for the children to play, with or without adult support. All of these areas can be placed inside or outside.

Sand

Oracy
Speaking and Listening

Book Nook

Let's Investigate

Writing Station

Water

Small World Imaginative Play

Malleable

Construction
e.g. blocks

Music

Mathematics

Tabletop Games

Paint

Word Detective
(Letters, words, grammar, phonics)

Movement

Design and Make Workshop

Role Play Imaginative Play

Appendix E: Data Corpus

Research strand	Research Methodology	Research Method	Classroom space	Number	Activity	Date	Time	Participant	code
Three	Constructivist Grounded Theory	Intensive Interview	na	one	na	19 03 14	27:45	Claire	CGTII1
Three	Constructivist Grounded Theory	Walking Interview	writing area	one	na	19 03 14	na	Charley	CGTWI1
Three	Constructivist Grounded Theory	Walking Interview	computer table	two	na	19 03 14	na	Molly	CGTWI2
Three	Constructivist Grounded Theory	Walking Interview	castle role-play	three	na	19 03 14	na	Molly	CGTWI3
Three	Constructivist Grounded Theory	Walking Interview	sand	four	na	19 03 14	na	Gareth	CGTWI4
Three	Constructivist Grounded Theory	Walking Interview	DVD's	five	na	19 03 14	na	Gareth	CGTWI5
Three	Constructivist Grounded Theory	Walking Interview	painting area	six	na	19 03 14	na	Catrin	CGTWI6
Three	Constructivist Grounded Theory	Walking Interview	drawing area	seven	na	19 03 14	na	Catrin	CGTWI7
Three	Constructivist Grounded Theory	Walking Interview	whiteboard	eight	na	19 03 14	na	Charley	CGTWI8

Three	Constructivist Grounded Theory	Walking Interview	ceiling	nine	na	19 03 14	na	Gareth	CGTWI9
Three	Constructivist Grounded Theory	Walking Interview	shop role-play	ten	na	19 03 14	na	Charley	CGTWI10
Three	Constructivist Grounded Theory	Walking Interview	sand	eleven	na	19 03 14	na	Carys	CGTWI11
Three	Constructivist Grounded Theory	Walking Interview	computer table	twelve	na	19 03 14	na	Carys	CGTWI12
Three	Constructivist Grounded Theory	Walking Interview	whiteboard	thirteen	na	19 03 14	na	Carys	CGTWI13
Three	Constructivist Grounded Theory	Walking Interview	water area	fourteen	na	19 03 14	na	Carys	CGTWI14
Three	Constructivist Grounded Theory	Walking Interview	castle role-play	fifteen	na	19 03 14	na	Elanor	CGTWI15
Three	Constructivist Grounded Theory	Walking Interview	colouring table	sixteen	na	19 03 14	na	Carys	CGTWI16
Three	Constructivist Grounded Theory	Walking Interview	messy table	seventeen	na	19 03 14	na	George	CGTWI17
Three	Constructivist Grounded Theory	Walking Interview	painting	eighteen	na	19 03 14	na	Carys	CGTWI18

Three	Constructivist Grounded Theory	Walking Interview	Daisy the dragon	nineteen	na	19 03 14	na	Elanor	CGTWI19
Three	Constructivist Grounded Theory	Walking Interview	water area	twenty	na	19 03 14	na	Carys	CGTWI20
Two	Action Research	WI Reflective Dialogue	na	one	na	02 04 14	18:06	Claire	ARRD1
Two	Action Research	WI Reflective Dialogue	na	one a	na	02 04 14	5:04	All	ARRD1a
One	Design Based Research	Intervention	library area	one	create empty space	26 03 14	na	Claire	DBRI1
Two	Action Research	Reflective Planning Dialogue	na	two	na	02 04 14	15:27	Claire	ARRPD2
One	Design Based Research	Intervention	na	two	document initial designs	02 04 14	32:30	All	DBRI2
Two	Action Research	Reflective Dialogue	na	three	na	02 04 14	13:33	Claire	ARRD3
Two	Action Research	Reflective planning Dialogue	na	four	na	09 04 14	17:40	Claire	ARRPD4
One	Design Based Research	Intervention	na	three	choosing group design	09 04 14	29:36	All	DBRI3
One	Design Based Research	Intervention	na	four	creating materials list	09 04 14	45:29	All	DBRI4

Two	Action Research	Reflective Dialogue	na	five	na	09 04 14	5:51	Claire	ARRD5
Two	Action Research	Planning Dialogue	na	six	na	16 04 14	36:48	Claire	ARPD6
One	Design Based Research	Intervention	na	five	create materials	23 04 14 - 21 05 14	na	All	DBRI5
Two	Action Research	Planning Dialogue	na	seven	na	22 05 14	18:47	Claire	ARPD7
One	Design Based Research	Intervention	na	six	create the space	22 05 14	31:26	All	DBRI6
One	Design Based Research	Intervention	na	seven	use the space	22 05 14 onward	na	All	DBRI7
Two	Action Research	Reflective Dialogue	na	eight	na	22 05 14	4:47	Claire	ARRD8
Two	Action Research	Reflective Dialogue	na	eight a	na	22 05 14	4:55	Children	ARRD8a
Three	Constructivist Grounded Theory	Intensive Interview	na	two	na	24 05 14	1:08:04	Claire	CGTII2
Two	Action Research	Reflective Dialogue	na	nine	na	24 05 14	17:22	Claire	ARRD9
Two	Action Research	Reflective Dialogue	na	ten	na	11 06 14	20:39	Molly	ARRD10
Two	Action Research	Final Reflections	na	eleven	na	11 06 14	16:29	Children	ARRD11
Two	Action Research	Final Reflections	na	twelve	na	11 06 14	21:20	Children	ARRD12
Two	Action Research	Final Reflections	na	thirteen	na	11 06 14	15:46	Claire	ARRD13

| Two | Action Research | Final Reflections | na | fourteen | na | 11 07 14 | 1:08:25 | Claire | ARRD14 |
| Three | Constructivist Grounded Theory | Intensive Interview | na | three | na | 11 08 14 | 1:14:25 | Claire | CGTII3 |

Appendix F: Exemplification of coding

The codes used to identify the raw data are made up of three attributes. The first letters detail the methodological frame - Design Based Research (DBR), Action Research (AR), or Constructivist Grounded Theory (CGT). The next detail the method used - Intervention (I), Reflective/Planning dialogue (R/PD), Walking Interview (WI), Intensive Interview (II), or Focus Group (FG). Finally, the third denote their respective numbers.

For example, the third design session in the intervention DBRI3 is

DBR	I	3
↑	↑	↑
Design Based Research	Intervention	Number 3
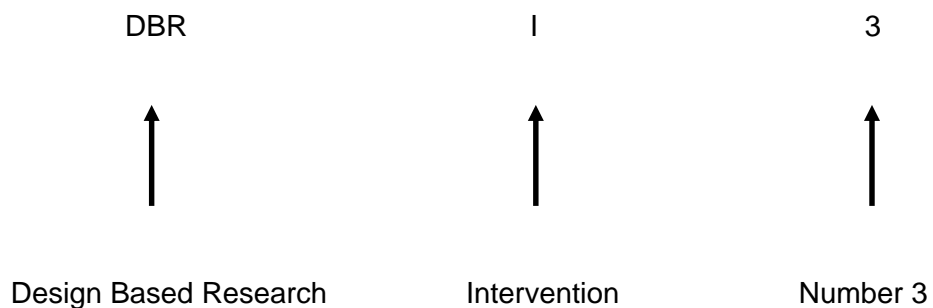
The Intensive Interviews include an additional set of attributes as they also detail the interview question.

For example: CGTII1-1.3 is
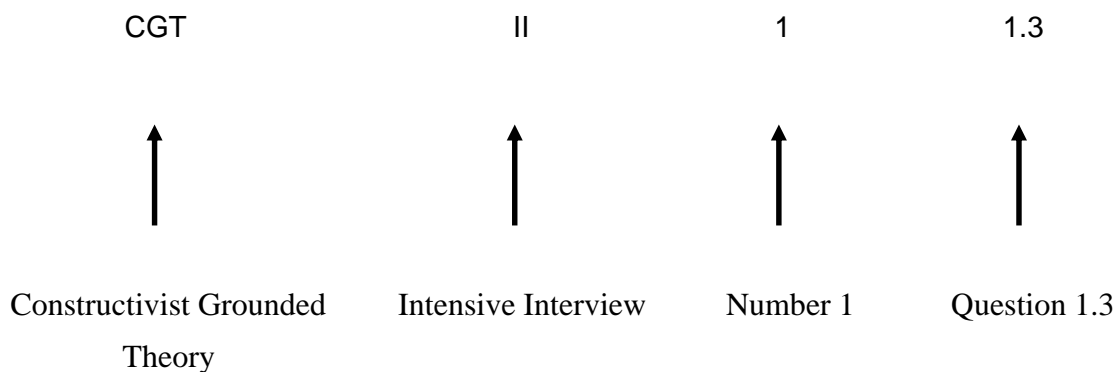
CGT	II	1	1.3
↑	↑	↑	↑
Constructivist Grounded Theory	Intensive Interview	Number 1	Question 1.3

1. Current classroom environments

1.1 What current classroom spaces / areas do you have? (refer to drawing of classroom) Can you talk me through your map?

We've got the carpet area. Which obviously I do most of my main teaching points on the carpet with an interactive whiteboard, again, that I use for teaching points and the children love the interactive white board particularly printing things off. And just behind there is the reading area. It's quite a new, revamped area with a listening station in it as well. Now, even though I've done a huge push on what we do and there is lovely magazines in there and comics pertinent to their likes. They still tend to go in and roll all over the floor and hide under the table and exactly what they are not supposed to do, and quite what I'm supposed to do about that I don't know. As, no matter how much I say no, that's not what we do, that is what they always do. The wet area in the middle, that is really used well, used properly. They always paint at the painting easel, the water tray is really well used. We put different equipment in the sand and water every day so it is always something new for them. There's a play-dough table as well, in that area. That is used really well as well. I'd say, probably out of all the areas in the classroom that's the one they use properly. Whether or not it's because I'm always here (points to table used for focused tasks which is next to the painting, sand and water area. Behind that we've got a building area, we've got a castle in there at the moment because we're learning about castles. Again, really well used, particularly by the boys, the building area. They can get a bit over zealous I suppose and we try and say, 'only this box out today' but you turn around and they've got ten boxes of things out. We've got a little maths activity area there, again, if I'm honest that isn't used very well at all. Over the other end of the classroom then, we've got a role play shop. Again, even through the play has been modelled they don't use it properly really. If you have got an adult there it's a different story but obviously you can't always have an adult there and their play changes when there are adults there as well. [So, what kind of things do you see them doing in there?] climbing, throwing things, not playing shop. Then we've got a numicon area, the children absolutely love the numicon, now they are supposed to order and match, which they do to be fair, they're pretty good. We've got the cwtch cymraeg, it's literally just Welsh puppets, Welsh posters and they're supposed to go in there and speak Welsh. If I'm honest, no they don't. They love going in there but they don't use it as it was intended. We've got the colouring table that is just here, they're just writing, drawing, colouring. Next we have the messy table, I've been cooking on it this morning. That tends to be a guided activity, space. Computers next, again, they love the computers. Having said that I have noticed a real change since we've had the iPads. They would choose an iPad everytime. Which in years gone by, it was always the computer but it's iPads now. [Do they have access to the same programmes on each?] No, They are really good on the iPad, so much so that even if I have put guided access on a code so they can't change the app they work it out and they will change it. We've then got a little puzzle table, and they have fits and starts with the jigsaws. They are either obsessed and it's really well used or they don't go near it, so, it's really strange. Then the writing area there, and again, the same as the colouring, they are supposed to different things in there but you turn around and they've got paper out of the printer and they are just drawing and colouring and obsessed with paper. I think that's it. I don't think I've missed anything.

Obviously - space related pedagogy?
Main teaching - for everybody?
Teaching points - content/curriculum driven?
Enjoying the 'interactive' aspect of materials.
Single space for reading?
Creating new spaces for the class - why?
Modelling - space behaviours?
'Pertinent to their likes' – Whose? How?
Physical/playful engagement with space
The 'supposed to' of spaces.
Feeling unsure?
Monitoring/moderating/controlling space
Children's subversion 'proper use of space'.
Spaces 'used well, used properly' (difference?)
Spaces being 'really well used' (same as used properly?)
Providing different/new resources daily in spaces.
Spaces 'used really well'.

'proper' use.
Adult proximity influencing children's use of space
Separate areas for different activity.
Separate are for building.
Spaces/resources driven by learning/topics.
Spaces – really well used by boys.
'over zealous' use of particular spaces
Children's subversive use of space
Subject specific areas (Maths area)
Space that isn't used very well.
Space for role play
Modelling play space behaviours / no 'proper' use
Adult changes space dynamics/behaviours
Shortage of adults?
Change in play with adult
Physical interaction with space –
Not using space for its purpose. Area for numicon
Children enjoying resources/materials.
Using spaces properly - linked to behaviour.
Expected space behaviours / activities
Materials to encourage specific outcomes
Not completing expected outcomes for space.
Not using space as intended.
Specific spaces for colouring/writing
Space for 'messy' activities
guided space - space related pedagogy
Space for computers
Change in 'likes' since i pad
preferring different technology
Preferring iPad over computers.
Competent use of ipad
Children's technical ability
Space for puzzles
Intermittent use of jigsaws
Used a lot or not at all.
Space for writing
Expected use of space
Different space behaviours - depending if being monitored - Children's subversive use of space?

1.2 What do the children do in these spaces? Are there specific activities? Are they adult led / child led.	
It's a bit of both because I'll say to the children, in the sand today you have got x, y or z. Or, on the play dough table what I would like you to do today is make this many flags for the castle. So, they are teacher directed but again, like anything, unless I am there or somebody is there they might start doing what I've asked them to do for 30 seconds, but, it's the nature of little children isn't it, they change it, most of them change what I've asked them to do into their own play and there is a place for both, you know. The powers that be would say everything needs to be directed but my Foundation Phase head would say, well no, I want the children to be thinking for themselves and making up their own play. So, it's a bit of both. Year one do things very differently, they put challenges in each area but again, they would say that unless there is somebody there, even in year two, they will change it. Sometimes I think why am I even thinking of these because, you know, they will make things up anyway. Even if I say to them, I would like you three to go to the sand, you three to go to the water, if that is not where they would like to be within seconds, they've gone.	Spatial practice as a mixture of adult led/child led. Different materials for specific activities Outcome driven spaces / materials / activities. Topic driven activity Teacher involvement needed - to stay on task. Accepting children's subversion/change. Children changing teacher directed activity. 'own play' v's 'topic/outcome driven activity' Place for both – how? Who are the powers that be? Directed how? 'FP head' how is this different to 'directed' activity? Wanting to promote thinking, play .... Different practices in different year groups Other teachers facing similar issues Children off task - subverting space/activity Feeling pointless? Teacher directing/choosing specific spaces for children Children following their own agenda
You've talked about the spaces that children play and can have individual and group activities … are there any spaces where you look to work with children. If we think of the foundation phase as split into three, the continuous provision, the focused, teacher directed tasks and then the little bit that looks at sustained, shared thinking, co-construction. Are there any areas in your classroom that lend themselves to this way of working more?	
There are, but if I'm honest, that side of things has slipped. In the past we'd say to the children, our topic is castles, what can we make in the role play for example that's to do with castles. They would make everything and we would do everything together. They would make everything, all the props for the role-play but that has really slipped because we are under so much pressure for the literacy and numeracy. It is just push, push, push and forget about everything else. It goes against everything that I believe in but we have been told that that is what we must do. So, all the lovely things and the shared working with the children, that's gone. I try to enhance areas, last week we made Rapunzel puppets and it was for a maths lesson and they had to make puppets with long hair. Longer than the body. So, they were measuring and they loved that and that was my teacher directed activity. Then I left everything on the messy table for the next couple of days. They could then go there independently and do their own and they did, they had learnt the skills so we enhanced it that way. But, the co-working with the children, planning and then following it on, it's gone. It's really sad.	Shared thinking/ co-construction 'slipped'. Teacher led - Topic based learning 'structured choice' topic-led? Children making everything - in relation to topic? Memory of making resources collaboratively. Practice slipped because of pressure. Pressure led by L & N. Sole focus on L & N. Practice in conflict with belief. Shared working equated with 'lovely things'. Shared Practice gone. Enhancement – topic led. Maths focused activity. Children enjoying teacher directed task. Materials from focused task left for 'independence' Children choose to use space/complete activity Skills based on knowledge – needing to be taught. Emotional about loss of practice

1.3 Who designs these current classroom spaces? Me, with the LSA's really. They are brilliant and we'll all say, that's not working, let's change it. But again it tends to be, you know, it used to be right children, let's change this and do it together but that time has gone. It's now the adults doing it unfortunately. [how do you decide what areas to have?] It is topic led. Obviously there are areas that are always going to be the same. You know, the water, sand, painting areas, they are always going to be the same. The reading area is always going to be a reading area, the building area pretty much stays the same. The role play are the two biggies that are to do with topic stuff. Having said that you wouldn't know that at the moment because it's been dragons and castles and there is nothing to do with dragons and castles apart from the junk castle that we made. We were talking, because they are not using the shop properly, we are thinking of changing that into a big castle. But again, it probably wouldn't particularly be with the children. It would be done with a, there you go boys and girls.	Working with (appreciative of) other adults Change based on perceived 'not working' Used to involve children Recognised as a 'new time' old practice gone… Emotional about loss of practice. Topic led space. Certain 'obvious' and 'always' spaces Fixed spaces. Fixed space for reading / building Role-play spaces = topic led. Current spaces don't reflect practice little topic related materials in current spaces Castle in role play related to topic Children not using shop properly - this driving change (topic driven) Adult created spaces - space presented to children.
1.4 When are these spaces created? (at the beginning of the year – before school starts etc ..?) All year round really. Everything is done before September ready for them to come in but then, you know what it is like, things change constantly, because we think, that's not working, let's change it. So, it's ongoing, it's all of the time.	Spaces created before school starts / all year Spaces created to be ready for children. Constantly changing– based on adults perception of 'not working'. Changing spaces on-going.
1.6 What prompts this change? If the areas are not being used properly. We try and really keep an eye on what is going on and if they're not used we try and change them, or move them, or change them into something new. Again, if things are looking tatty, we try and make areas that children want to go and use them and if the look nice, invariably they want to go in them. But then, what we think might look nice might not be appealing to the children. It's on going, you know. All throughout the year really.	spaces are changed if their not - 'used properly' Space change based on lack of use. re-positioning of space / re-working of space Change based on aesthetics / how things look. 'nice' spaces - according to who? Recognition of possible differences between teacher / children's opinions. on-going change of space

2. Current classroom pedagogy

2.1 What pedagogical approaches/ teaching methods do you currently use in the different classroom spaces? (refer to classroom layout diagram).

Teaching wise, that's a hard one. I always try to make things as fun, inviting and relevant to the children as I possibly can, This topic that we are doing at the moment, Dragon tales, has been absolutely lovely because, on that wall is the journey, from where we started with a letter from a dragon, it was all burnt and they could smell the smoke and that just sparked them straight away, she'd lost her egg, could we go and find the egg, so we found the egg, then we had to wait for it to hatch, when it hatched the dragon had disappeared and then we had to find it and look after it. It has just sparked their imaginations. At first I thought, are they going to be frightened because it's a dragon but I read them loads and loads of story books about lovely dragons and kind dragons and not one of them was frightened. I thought I might have had some parents in saying, right, what are you doing but not at all. Now, it's led onto focusing on the castle and sometimes a dragon rescues a princess from a castle and it's just been lovely so, From a teaching point of view it's been easy because it got their interest and attention straight away. I tend to do whole class teaching, on the carpet with all of them and then the children come and work with me on a teacher directed activity. Quite often Karen or Janine will either do exactly the same activity as me or they will do a very similar activity, just to re-enforce whatever concept we are trying to get over to the children. I tend to work with only two or three children at a time as a lot of the time they really need it. They need my undivided attention. The way we work we do a numeracy focus on a Monday and Tuesday morning and then it's numeracy for the whole morning, it's just easier as you've loaded your computers up with numeracy things, you've got numeracy things in the sand and the water. So, rather then stop at breaktime and flip to literacy which is what we used to do, that is really hard work. So we do numeracy Monday and Tuesday all morning and literacy Wednesday and Thursday all morning. The afternoon tends to be, well on a Monday and Tuesdays are reading and other literacy activities and Wednesday and Thursday tend to be everything else. Friday is then P.E and circle time and finishing off things really. It is very, very structured. There is no lee way really anymore, even in reception. So, what documents do you use when you plan these? A bit of a mix. We use Conerstones, have you heard of that? We bought in Cornerstones about a year ago and the whole school uses it, it's lovely, this is where the dragon tales came from. So, we use that but in reception it's different to the rest of the school because from year one up it is very much, you've got to cover this skill and this skill. For nursery and reception it's very much, this is your topic and you could enhance the reading area by doing this, you could enhance the writing area by doing this. So, it doesn't tell you exactly. If I'm honest I go off on a bit of a tangent and will do a mind map and lets do this and lets do that. We have got to take things from the LNF now and make sure those things are covered. There is a very heavily pushed. So, I make sure those are being covered. Plus, the Foundation Phase document. And I also, Caerphilly did a, produced a fantastic document. They basically took the Foundation Phase and, because the Foundation Phase document is quite woolly, isn't it, and they basically broke down everything into outcomes and they've said that the Foundation Phase says that you've got to be able to do this but what are all the steps that come before it. I've got that and I use that really heavily because it's fantastic. It really breaks things up into manageable steps. Is that a document they have put out for everyone to use? No, I went on a visit to a school that was apparently in our family group of schools. So I went to visit it. When I got there it was so far removed from this school it was unbelievable, an affluent area, they give out homework and it is back in the next day, it was not really like this school at all. One of the teachers there was fantastic and she gave it to me. Much more forward thinking, it's a brilliant document. So, you are planning from all of these things.	Difficulty reflecting on pedagogy/ teaching methods. Fun and relevant - but recognises restrictions? Topic led learning / enjoying topic Displays relating to topic 'journey' Inventive activities/ideas - where from? Activities - problem solving around topic - where from? Activity driven by topic Activities 'sparking imagination' Teacher's pre-conceptions unfounded. Adapting/presenting 'kinder/softer' view of dragons Teacher guiding the topic / content to be covered. Expecting conflict with parents over topic. Exploring dragons and castles - role-play? Dragons rescuing princesses – gendered play 'easy' way to teach - had children's interest and attention. Whole class teaching (space driven pedagogy) children grouped for teacher directed activity. LSA's doing same activity. Using TA's to reinforce activities/concepts. Small numbers of children in focused activities. Children needing a lot of time Numeracy focus 2 days AoL driving activities Focus kept for whole morning for ease - same resources Spaces 'enhanced' for specific activities / AoL focus. Changing AoL focus based on ease. Changing practice for ease. Activities all morning - literacy and numeracy driven. Literacy / numeracy focus. Reading focus / literacy focus. Focus – everything else / other AoL grouped together… Recognition of structured practice. Cornerstones - Pre-developed curriculum School purchased external curriculum. Whole school approach /'lovely' curriculum/activities Recognition of difference (in approach?) in reception. Skills driven in higher year groups. differnet approach in nursery and reception External ideas on enhancing areas. suggestions rather than 'telling' Not seen as too prescriptive - ability to go on a tangent Will allow flexibility but LNF requirements LNF requirements 'heavily' pushed. Need for LNF coverage. Draw from FP document too Caerphilly document too. FP document = woolly. Breaking down outcomes in FP. Steps leading to FP outcomes. Using (external) documents heavily. Manageable steps. Visiting other settings Schools organised into family groups. Unable to relate to family group schools. different practices with home/school links Praise for other teachers. Other school seen as forward thinking. Recognising planning from different documents.

2.2 Do you support child initiated learning in your classroom? How do you support this? Are certain areas more suitable for this way of working? How do you plan for this? There is very little, if I'm honest, very, very little. Like I said the LNF has been pushed so much, that has to be in our planning and that leaves absolutely no lee way for children to initiate anything, at all. It's, you have to learn this and I have to teach it and you will do that activity. It's very, very, do you know what, I can't remember the last true child – initiated thing we did. Which is really sad, really, really sad because we used to be really good at it but, it's just gone.	Very little child-initiated learning. Push on LNF - by who? (at expense of what?) No opportunity for children to initiate anything. Teaching and learning see as teacher imparting knowledge to children - through specific activity. Unable to recall last child-initiated learning. Feelings of sadness at loss of practice. Remembering feeling 'good at it' child-initiated practice
3. **Children designing classroom spaces** **3.1** So, in terms of children designing classroom spaces and thinking about the project that we are going to be doing can you tell me about children's involvement in designing classroom spaces now? Very little.	Children not involved in designing classroom spaces.
3.2 So, what do you think about having The Empty Space in your classroom? I'm really excited about it because it's what I would love to do but am no longer able to do really. It'll just be lovely to see what the children come up with. What they want and what I'm really looking forward to is when we've done all of your work and they've designed it, it'll be lovely to see how it is used because everything is done by us. And yes certain areas are used properly and well and others aren't but it will be lovely to see. Yes, really excited about it.	Excited by research - feels like old practice 'allowed to do' - not in control of own practice 'lovely' feelings towards children's ideas Wanting to see children's ideas. focus on how space is used - use is important recognition of overwhelming teacher input areas used properly or not properly. excitement about process
3.3 What types of pedagogy (practice) do you think these spaces might encourage? I don't know is the honest answer. I really don't because I don't know what they are going to come up with. If they come up with ideas, I really don't know because they are given no lee way in school, really to think for themselves in lots of ways so have they lost it? Are they going to be able to think of ideas? Will they be way off the scale or will they be achievable? I really don't know what they are going to do.	Feelings of the 'unknown' Pedagogy/practice linked to activity. Unsure of children's ability to have ideas. Children not given opportunities in school Ability linked to practice? Questioning if process is 'achievable'. Process is an unknown ...

3.4 Do you think this will impact on the teaching and learning in the classroom? I am hoping so, depending on what happens, will hopefully give me a, right it's worked there so let's try it in other areas as well. Which then will hopefully impact on the children and they'll use the areas properly. There is nothing worse than when you make an area that you think is going to be fab and they're just not interested or they don't use it. Like that area (the book corner) we thought that they would love the listening station, they are going to sit and love looking at the comics I brought in. My little boys comics, Octonoughts and things like that. So, you think, it's disheartening, and I've tried putting what my boys would like but for whatever reason, it's not to say that if I was in a different school, with different children, it might, but with these currently, they were under the table, under the settee, hiding.	Hopeful research will changing pedagogy Research giving confidence - why is it needed? research as 'impact' on children A need for children to be using areas properly. Feelings of disappointment around staged spaces Children not interested in all teacher created areas. different expectations on spaces/materials Enhancing areas for children -bringing in materials Feeling 'disheartened' when spaces don't work different children like different things/spaces Recognition that different children like different things. Using space is unplanned way.
4. The research process **4.1 Have you been involved in classroom based research before? (Expand)** Yes, it was a project based on well-being. It was really interesting talking to the children about their likes and dislikes and different areas of the school. Which areas they felt happy and comfortable in. it was really, really interesting. Their perceptions on what they were good at and what they weren't so good at. How it made them feel. It was really, really interesting and it was just interesting to talk about the children's well being and it's relationship to learning. If their well-being isn't high they're going to find it difficult to learn. It really has an impact, we have so many children that come from, for whatever reason, very difficult backgrounds, and it has a massive impact on them when they come to school. We've got the nurture group which is full, we could have six nurture groups and they'd all be full.	Previously involved in research Found it interesting / accessing children's opinions Exploring areas of school with children. Exploring children's ideas 'interesting'. Exploring children's perspceptions Exploring children's feelings Interesting to talk to children. Interesting - well being relationship with learning. Well-being linked to learning 'success' Research as impactful Children from difficult backgrounds. home environment impacts on school life Not enough space for children in nurture group. Need for nurture.
4.2 Ok. So, how do you feel about the project? Methods to be employed? Photographs? Audio? I think the children are going to absolutely love the photographs, as I've said to you, I think the biggest problem is going to be that they are all going to want to be involved. Because they will, it's the nature of it, they are going to want to be involved.	Expecting children to love photographs. Predicting problem Problem - not everyone can be involved. Predicting children will want to be involved.
4.3 What do you want to get out of the research? I can't wait to see what happens really, it's sort of such the unknown at the moment. We need to start it and see.	Excited about research an unknown process/product

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Appendix I: Pilot study - Interview transcription example

1. **Current classroom environments**

   1.1 What current classroom spaces / areas do you have? (refer to drawing of classroom) Can you talk me through your map?

Ok, we've got obviously a writing table we use during our carousel sessions in the afternoons, we are quite formal in the mornings. We do our literacy and our maths at our tables but for carousel, obviously we've got our writing table, which children will use if they would like to go and write using our alphabet and the resources we put on the tables. Along the back of the window, where our displays for our number lines and our maths. That first table will be used as a maths area and I'll bring out a folder that will wither have a maths challenge or a maths activity in there. The children will then choose where they would like to go in the afternoons. They'll write their name on the little laminated area, so obviously in the maths area there's one stuck to the window so they write their name and then they can come in to the maths area and there will be an activity to do with maths. The next table with be a play dough or something … fine motor skills but generally the play dough will go onto this area or cutting and sticking. So, that is that area. We've got curriculum Cymraeg cwtch where the children will go in and just talk generally un cymraeg, very little children will chose that option, they won't go in there to speak Welsh. They'll go in there to speak to Rhoderi, he's our rights respecting dragon, they might read a book, by just looking at the pictures, it's there and they do use it generally with an adult who will be asking… Then we've got the creative area at the back where I limit it to two children, because each area is only allowed a certain number of children, in the creative area there is only two due to the space. On that creative area, depending on our topic, there will be a certain activity that will link in with our topic. So, this term it was boats, we started off looking at and labeling boats, they had to choose a boat and then label it, in the creative area. The book corner, which the children love going in to, there is only three allowed, because there is only two chairs, and a little beanbag. It's just to get the children, obviously, to know, only a certain number of children are allowed in there. Then we've got our role play, the children love that area, it's the most chosen area to go to, straight away it's,

'can I go to the role play please?'. We change the role play every term to go with our topic. That table will be used as a writing table for any writing activity in the carousel. We have an activity where either myself or one of the TA's will do a piece of work, group work, and we'll use the bigger table. We have a computer which we will use along side our iPad's. There are two iPads and the computer, which then they can use the interactive white board. That is generally the area. The construction, like the blocks and clucksky (??), they will come on to the carpet area. At the moment there is no small world due to lack of resources and space. This classroom is for the year two, but for carousel, which is in the afternoon, we rotate, to a different classroom, where we did have water play and junk modeling, which I am hoping will carry on because it's quite nice for fine motor skills. So, that is all the areas in our class.