

**Title: Large-Scale Block-Play and the Five Development  
Pathways**

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This dissertation is being submitted in partial fulfilment of the  
requirement for the degree of MA Education (Wales)

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**UNIVERSITY WALES TRINITY SAINT DAVID**

## **DECLARATION**

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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## **STATEMENT 2**

This dissertation is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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**Abstract:**

This study explored whether the use of large-scale block play during child-initiated time in a Reception classroom would support pupils in attaining the Five Development Pathways (Welsh Government, 2022) as outlined by the Welsh Government in its curriculum guidance for early years settings. Considering the recent curriculum reform in Wales, it is an interesting exploration of how powerful free play with ambiguous resources can be in supporting pupils to meet the descriptors of the Development Pathways and in particular how blocks can support the develop of a child's use of early language.

Ten observations on children's play were conducted in a Reception classroom in Southwest Wales. The observations were recorded, transcribed and coded according to a thematic analysis approach to examine how children used language during their play. Transcriptions were also used to examine how play choices related to gender were made by the sample group of participants. In addition to observational data, a qualitative questionnaire was used to gain the views of three practitioners in the setting on block-play and its relevance to the Curriculum for Wales.

Ten observations were carried out during children's free play with the blocks. The observations were recorded and transcribed in addition to the recording of fields notes whilst the researcher was in the field. The transcriptions were analysed using thematic analysis to determine how children use language in play and whether gender influences the play scenarios of the group. In addition to the observations, a qualitative questionnaire was used to gain insight into the perspectives of Early Years Practitioners on block play and its purpose in the Early Years classroom.

The main area highlighted by the study was the way in which children communicate during block-play, specifically how they use language imaginatively during narrative play and to influence others. Furthermore, the study also highlighted the need for an enabling environment to allow children opportunities to enhance their play and practice other key skills such as mark making and early writing. The study also provided insight into how gender can influence the play choices of young children, particularly the narratives formulated by girls.

**Keywords:** block-play, child-initiated play, Early Years, Wales, Curriculum for Wales, Five Development Pathways, early language and communication, gender.



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<b>AoLE</b>	Areas of Learning and Experience
<b>BERA</b>	British Educational Research Association
<b>EYFS</b>	Early Years Foundation Stage
<b>EYP</b>	Early Years Practitioner
<b>LLC</b>	Literacy, Languages and Communication
<b>LNF</b>	Literacy and Numeracy Framework
<b>RO</b>	Research Objective
<b>UN</b>	United Nations
<b>UNCRC</b>	United Nations Convention on Rights of a Child

## **Introduction**

### **1.1 Background**

As the world continues to readjust from the turmoil of the COVID-19 pandemic, international conflict and environmental changes, play is even more important in providing young children with the space to make sense of and understand the world and develop their sense of self (Stewart, Corr and Henderson, 2023). Whilst educators acknowledge that the pandemic has impacted early childhood education, change is also evident in recent policy reforms and reviews in Wales. The Welsh Government has recognised the need to reflect young children's learning styles and developmental stages (Allingham and Brinning 2023). Consultation with Professor Graham Donaldson resulted in the development of the Curriculum for Wales (Donaldson 2015), which recognises that children learn and progress at their own unique pace and that every child is on their own unique learning journey.

While the curriculum reform in Wales and its impact on the early childhood education sector will be considered in more depth through the literature review, it is worth giving an overview of the new curriculum in the context of this study. The Curriculum for Wales is underpinned by learning experiences with a strong emphasis on the individual pupil taking ownership of their learning with enquiry-led practice aiming to equip learners for life in an ever-evolving world. Assessment is acknowledged by the Welsh Government as a learning continuum with children not necessarily expected to meet certain targets at a certain age. Furthermore, there are 27 statements which form the basis of assessing progression through five age-related Progression Steps which can be achieved at the appropriate stage for each learner. Schools can develop their curriculum and pedagogical approaches outlined by the Descriptors of

Learning, Areas of Learning and Experience (AoLE), pedagogical principles and cross-curricular responsibilities.

Central to the agency of the child is play, with children as empowered agents in their learning (Stewart, Corr and Henderson, 2023; Featherbe, Lloyd-Evans and Moylett, 2023). Stewart, Corr and Brinning highlight the need for play as a crucial element of early childhood education, noting that ‘the child who freely chooses to build a block tower is playing but the child who is told to build a block tower is not’ (2023, p.4). This viewpoint highlights the need for allowing children to drive the learning experiences in contrast to practitioner-designed activities to ensure the child is engaged and learning experiences are formulated from the child’s interests. The strong emphasis on play and learner agency runs through the Curriculum for Wales (Welsh Government, 2022) with play, play-based learning, being outdoors and authentic learning contexts outlined in the Five Development Pathways (Welsh Government, 2022): Belonging, Communication, Exploration, Physical Development and Well-Being which aim to ‘represent a child’s right to experience an environment where play is valued for itself and as part of learning’ (Welsh Government, 2023, p.26). Furthermore, an increased interest in the influence of the early pioneers including that of Froebel and a holistic approach to teaching and learning has emerged considering recent curriculum reform (Tovey, 2017; Campbell-Barr and Tregenza, 2023). However, as argued by Wood (2020) and Campbell-Barr and Tregenza (2023) despite the increased attention on the holistic development of the child, some practitioners continue to struggle to balance adult-directed learning and focused teaching with a more fluid playful pedagogical approach to education, with developmental milestones having come to guide early childhood learning experiences and that this could be argued to be a reflection on the problematic conflict between formalised statutory frameworks and self-directed learner development in the early years (Wood, 2020).

## 1.2 Purpose of the Study

A Quality Framework for Play, Learning and Care in Wales (Welsh Government, 2023) states that children should have opportunities to develop their language skills through 'playful interactions' (Welsh Government, 2023, p.11) and that the early learning environment should allow children to move freely and engage in physical play whenever they need to. The recent resurgence in the work of Froebel and the view that blocks can 'bring together all learning in a meaningful whole' (Tovey, 2017, p.85), in addition to the Welsh Government's explicit recommendation for practitioners to implement the use of natural and open-ended resources to support children's holistic development (Welsh Government, 2023) with learning experiences being underpinned by the Five Development Pathways (Welsh Government, 2022), the purpose of this ethnographic study (Albon and Mukherji, 2018) is to explore the language use of Reception pupils during their free play with large blocks to investigate whether this type of constructive play can support young children in achieving the Five Development Pathways (Welsh Government, 2022) which underpin the new Quality Framework for Early Childhood Play, Learning and Care in Wales (Welsh Government, 2023). A sound research topic is 'one that gives you free rein to maximise self-development' (Gray, 2022, p.47). Whilst the work of Froebel (1826) can be considered to have influenced recent curriculum guidance (Campbell-Barr and Tregenza, 2023) the role of block play and its ability to attain meaningful links to all curriculum areas is unexplored in the context of the Curriculum for Wales. It is hoped that the findings from the study will inform and enhance personal knowledge and in turn support school improvement with the hope that it will enhance pedagogical practice within the setting and the wider cluster of schools. This will be achieved by observing the children during their child-initiated play time and recording their verbal exchanges and how they engage with the block play physically, emotionally, and

exploratively. In addition to observing the children, the views of early years practitioners on block play and how it links to the curriculum will be obtained using a qualitative questionnaire.

In the tradition of teachers drawing on experience and undertaking school ethnographies (Gordon *et al.*, 2001), the field of study and research objectives were developed out of personal interest and experiences as a classroom practitioner (Gray, 2022). Whilst I strive to provide the learners in my Nursery setting with play-based experiences, I was interested to see how, considering the new Curriculum for Wales (2022) approach to learning which puts play at the forefront of early learning experiences, play-based learning, learner agency and free-play with open-ended resources can support the language development of Reception Pupils and support the transition from Nursery to the Reception year. Additionally, I am interested in investigating the Froebelian approach to using block-play and whether free-play with large-scale blocks links with the attainment of the Curriculum for Wales's Five Development Pathways (Welsh Government, 2022). 'With interpretivist research, there is an assumption that knowledge is situated in relations between people' (Thomas, 2023, p.19). As I will be an 'active agent' in the research context (Thomas, 2023, p.150), I assume a position influenced by my own personal interests, experiences, and expectations which I acknowledge will ultimately affect the nature of the observations and interpretations made. In presenting this interpretative research, I accept my personal subjectivity.

### **1.3 Research Objectives**

The objectives for this research study have emerged from a practice-based issue, that is whether the Five Development Pathways (Welsh Government, 2022) can be achieved through engagement with open-ended resources specifically large-scale blocks and gaps within the existing literature, that is whether this type of play limits children to using mathematical



language and whether gender influences the type of play children engage in during playful interactions. As the aim of the research is practice-led and the study will be qualitative, I do not feel the need to formulate hypotheses.

This research sets out to address the following three Research Objectives (RO's):

**RO1.** Determine whether the use of large-scale block play supports pupils in attaining the Five Development Pathways during child-led play.

**RO2.** Investigate whether gender differences affect engagement with large-scale block play.

**RO3.** Determine whether large-scale block play limits children to using mathematical and spatial language during child-led play.

Chapter Three will present the methodology that will be employed to answer the research objectives.

#### **1.4 Significance of the Study**

Findings from the study will aim to inform school improvement and teacher knowledge as to how block play links with the Five Development Pathways (Welsh Government, 2022) and the type of linguistic exchanges it can encourage. Current literature on the subject of block-play is not pertinent to Wales and so it is hoped that the findings from this study will go some way into contributing to the wider understanding of how the early childhood pedagogical approaches outlined in the Curriculum for Wales can support teachers in planning for first-hand experiential activities which are driven by play and support learners in achieving a sense of belonging and secure well-being through developing their communicative, physical and exploratory skills.

## **1.5 Limitations**

Weaknesses of the study beyond the control of the researcher (Kornuta and Germaine, 2019) include the setting and sample of participants both of which were not randomly selected but known to the researcher as they had previously taught them during their Nursery year of schooling so it can be argued that this resulted in less accuracy and validity of findings (Roberts-Holmes, 2018). Additionally, owing to the nature of the school day and timetabling, it was not always possible for the researcher to observe the children at a set time for every observation. Therefore, it could be argued that the interactions of the children could be affected particularly when observed during the afternoon period of the school day when they were more likely to be tired which in turn would affect their overall well-being and levels of involvement. However, as argued by Coffey (2018, p.47), 'undertaking observation at different times can support the researcher in becoming more familiar with the setting and its participants and how they relate and interact.'

## **1.6 Delimitations**

As the research was practice-based, it can be focused and manageable (Kornuta and Germaine, 2019). The research was carried out in a small faith school in Southwest Wales. The researcher was confined to observing one cohort of Reception pupils in the school's only Reception classroom. Furthermore, at the time of the study this group of pupils were established as a group within the classroom and at this point in their development, play can become complex with more detailed contexts, both real and imagined and increasing social interaction (Bryce-Clegg, 2013). The researcher chose to exclude the Nursery pupils as they currently teach that group of learners and because the researcher was interested in how older

pupils interact during free play. Of the 18 participants, 10 were female. A more diversified sample group may provide more insights into the engagement of boys with this type of play.

The literature review conducted for this study and summarized in Chapter II may also be considered to impart some bias. It is important not to allow the review of the existing literature to bias the study and to recognise that 'knowledge is not fixed...different conclusions could have been drawn' (Thomas, 2023, p.75). Literature reviews are often undertaken at the start of the project but are not to be then put to one side (Gray, 2022). The researcher performed additional literature reviews 'to further investigate the issues and ideas that emerged once during the research process' (Gray, 2022, p.109) particularly concerning that of gender.

## **1.6 Definitions**

The following terms are defined to help the reader understand the context of each term in this study.

*Free play* is referred to throughout this paper and defined in this study as spontaneous, child-led play with children engaging with whatever resources are available.

*Loose parts* and *natural, open-ended resources* are toys and materials that are not fixed or themed and can be manipulated, redesigned, and used in a variety of contexts to provide children with flexible play experiences.

*Block play* is the process of learning through playing with versatile blocks and bricks. It is a form of open-ended free play, which means there are no set rules or planned agendas, and, in this study, the children were playing with large-scale blocks.

*The Five Development Pathways* (Welsh Government, 2022) are interdependent child-centred pathways (Belonging, Well-being, Exploration, Physical Development and Communication) that underpin the new Welsh curriculum experiences for learners aged 0-5 years.

## **1.7 Summary**

This ethnographic study sought to explore how the Five Development Pathways (Welsh Government, 2022) can be achieved through play with open-ended and how this type of play limits children to using mathematical language. Additionally, the study aimed to examine whether gender influences engagement with block-play. As much of the literature currently on the topic of block play is not pertinent to Wales and the recent curriculum reform has provided an opportunity for practitioners to seek guidance on play-based approaches, there is a knowledge gap as to how block play relates to the new Welsh curriculum guidance. The results of this study may support the wider teaching profession particularly those working in the early years sector. Chapter II is a comprehensive review of the literature on curriculum reform, block play and the language function of young children. In Chapter III, the topics discussed include the research methodology and the details of how this study was conducted. The remaining chapters focus on the research undertaken. The results are provided in Chapter IV, followed by the researcher's analysis and interpretation of the findings.

## **2. REVIEW OF LITERATURE**

This critical review of the literature explores literature available on this topic, including academic journals and textbooks. Bruce (1994, p.218) defines a literature review in terms of 'process and product'. The process involves the exploration of current literature and theories to 'establish the status of knowledge, formulation of an enquiry or as a tool to define the gap

neglected by previous scholars' (Furseth and Everett, 2013, p.73). For Bruce (1994, p. 218) the product of the literature review is the synthesising of current work within the field, demonstrating the accomplishment of the exploratory process, acknowledging that the function of a literature review can be considered as a prompt for the writing itself.

A literature review is essential to understanding current knowledge on a topic and explaining why the research is a worthwhile contribution to existing studies in the field (Roberts-Holmes, 2018; Denscombe, 2021). Furthermore, Denscombe (2021) and Biggam (2021) indicate that the process of evaluating and reviewing the existing literature highlights pertinent and emergent issues and in doing so supports the development of the researcher's thoughts about a topic. Similarly, Wallace and Wray (2021) note that a literature review can investigate a phenomenon that has been studied but also take this one step further, acknowledging that the phenomena in question can be examined in a different context.

The literature review conducted before commencing the study has been essential in influencing the researcher's decision to research this specific area of early years practice. It has revealed that whilst numerous scholars have conducted research concerning the role gender plays in children's creative play (Taş, 2018 and Chapman, 2016), there is limited research exploring how gender influences large-scale block play. Additionally, the literature review has emphasised that the type of play in which young children engage can have implications on their language use, and whether certain types of resources promote the use of imaginative or mathematical language (Howe *et al.*, 2021 and Cankaya *et al.*, 2023). Furthermore, the review of the current literature in this field has also highlighted the need for further research into these areas to be carried out particularly in the context of the recent

curricula and policy reforms in Wales. In this section, some of the studies will be examined and evaluated concerning their significance to this study.

A search of the available literature was conducted to provide access to available literature. This search was conducted using the university library system and Google Scholar. Keyword searches were conducted to locate appropriate literature, mainly peer-reviewed articles. Initially, the search was limited to the last ten years; however, owing to limited results, the search was extended to twenty years, but consideration was made by the researcher regarding the date and social context of the articles.

The literature relating specifically young children and their play skills during block play concerning the Curriculum for Wales and the Five Development Pathways (Welsh Government, 2022) is limited therefore international research on the topic has been included even though not all findings are synonymous with the Welsh education context. What is known from international perspectives is related to the theories of early pioneers (Tovey, 2017; Campbell-Barr and Tregenza, 2023) and comes from qualitative research studies which mainly focus on approaches to well-being and a sense of belonging in the early years, the relationship between gender and themed play materials, and the use of spatial language through constructive play. During the literature review, several 'landmark texts' (Wallace and Wray, 2021, p.206) important publications, and international studies (Campbell-Barr and Tregenza, 2023; Cankaya *et al.*, 2023; Yang and Pan, 2021; Hjelmér, 2020) have made significant contributions and shaped the existing knowledge base evaluated during the review process and consequently were included in the literature review. Howe *et al.*, (2021), Tovey (2017) and Cankaya *et al.*, (2023) make the case for loose parts and block play but indicate that whilst it can improve children's use of narrative language and negotiation, more research

is needed to inform policymakers and educators on the wider benefits concerning other developmental areas. Furthermore, the work of (Yang and Pan, 2021) highlights that further studies are needed particularly relating to gender differences during block play.

## **2.1 Curriculum Reform and the Early Years in Wales**

Early childhood educators' practice is influenced by their own professional knowledge and policy contexts which affect the environments and learning experiences they can offer to their learners (Stewart, Corr and Henderson, 2023). Policies on early childhood education can be seen to rely on 'selective appropriation of child development theories' (Wood, 2020, p.322) with governments grounding policies on the theories of early pioneers such as Froebel (1826), Isaacs (1929) and Montessori (1965) which encouraged hands-on experiences, self-directed activity problem-solving and real-world learning (Campbell-Barr and Tregenza, 2023). Policies on early childhood education vary across the four nations of the United Kingdom. The Scottish curriculum demonstrates a commitment to play, the outdoors and playful pedagogy and is learner-centred, aiming to foster successful learners, confident individuals, and responsible citizens (Education Scotland, 2020a, 2020b). In Northern Ireland, play is seen as an appropriate transition into the school setting with children gradually introduced to more formal learning in literacy and numeracy (Department for Education Northern Ireland, 2018). England's Early Years Foundation Stage (EYFS) (Department for Education, 2023) aims to ensure children learn and are 'kept healthy' whilst preparing them for Year 1. Whilst it is acknowledged to be essential, play features minimally in the EYFS policies and mainly references children taking part in play which is guided by adults. Wales's education system has recently experienced an extensive period of reform with the launch of a radical new curriculum to serve the Welsh nation (Evans, 2021). Like the Scottish curriculum, Wales has

recently adopted a focus on developing learners rather than instilling specific knowledge. To develop ambitious, capable learners; enterprising, creative contributors, ethical, informed citizens and healthy, confident individuals, the Curriculum for Wales emphasises that children should learn through authentic experiences with play providing the 'vehicle' (Welsh Government, 2022, p.15). However, it can be argued (Campbell-Barr and Tregenza, 2023) that learner-directed play-based activity is dependent on the practitioner to observe and facilitate. This can limit the possibilities for free play and self-directed learning experiences as the educator is responsible for designing and creating the play space. As argued by Chung and Walsh (2010) and Campbell-Barr and Tregenza (2023) The right to play and the understanding that children are agents of their learning means that early years education must maintain a child-centred philosophy.

The Curriculum for Wales is not the first reform foundation education in Wales has faced. The Welsh Government's approach to foundation learning has experienced policy innovation with progressivism evident in the conceptualisation of the Foundation Phase during which ministers analysed international curriculum models which championed interaction, reflection, and responsibility for self-learning (Wainwright *et al.*, 2018). It has been argued that the Foundation Phase developed some of its ideologies from international perspectives, delaying formal approaches to learning (Thomas and Lewis, 2016). This view is supported by the views of Evans (2021) and Maynard *et al.*, (2023), with the view that the introduction of the Foundation Phase, an early years policy based upon the Scandinavian model of child-centred education advocated the principles of learning through play so that children become self-aware and develop intellectually and socially. However, the approach was challenging for practitioners to consider how play could be utilised to facilitate children's learning. As noted by Tornberg and Lindholm (2009), whilst it is important to look at the models of other



countries to understand the keys to success, unfortunately, there are no blueprints for early education curricula.

The statutory curriculum Foundation Phase Framework (Welsh Government, 2015) was commonly referred to as a play-based curriculum framework, with focus on individual learner needs (Thomas and Lewis, 2016). It identified seven areas of learning which were not to be approached in isolation but instead formed a holistic and integrated cross-curricular approach to learning. Whilst this approach aimed to raise the standards and quality of early years educational provision with experiential approaches to learning promoting greater pupil engagement and deeper involvement in learning (Wainwright *et al.*, 2018), an extensive evaluation of the Foundation Phase (Wales Institute of Social and Economic Research Data, 2013) suggested that the development of foundation phase pedagogy was hampered by insufficient direction and national support. Furthermore, despite the promotion of experiential learning, it can be argued that the Foundation Phase was still driven by statutory outcomes which reflected the raised expectations of the Literacy and Numeracy Framework (LNF) and so the pressure on teachers to support children in attaining certain levels by a certain age (the end of Year 2) remained (Thomas and Lewis, 2016). Formal approaches to learning in the first few years of schooling have been criticised with the argument that if formal learning is introduced before learners are ready it can result in under-achievement and risk affecting the confidence and passion for learning (Stewart, Corr and Henderson, 2023). With the implementation of the new Curriculum for Wales, it is hoped that the new curriculum will allow for explicitly developmental approaches to learning as it advocates a play-based approach to teaching and learning with a focus on the individual child and the increased autonomy for practitioners providing a sense of optimism that Welsh education is on a 'promising path to recovery' (Evans, 2021, p.388). However, a recent line of research has

established that the changeable educational landscape in Wales has resulted in the professional workforce suffering 'reform fatigue' (Organisation for Economic Co-operation and Development, 2014, p. 34) with insufficient direction and support remaining a barrier to the success of early years educational provision with current documentation only being adopted by some schools, as it is currently aimed at non-maintained nursery settings thus not appealing to all early years settings particularly those attached to primary schools. Therefore, practitioners and early years settings are struggling to understand which document and assessment practices they should and should not be adopting.

The recent release of A Quality Framework for Play, Learning and Care in Wales (Welsh Government, 2023) which can be used for planning experiences and assessing progress, emphasises that learning experiences should be underpinned by five child-centred interdependent development pathways in addition to all learning being driven by the Four Purposes (Welsh Government, 2022). The five interdependent Development Pathways- Belonging, Well-being, Exploration, Physical Development and Communication are all to be considered with equal importance with policymakers recognising that pupils' identities are developed from interactions with family, peers, the wider community resources, and the child's own unique disposition (Chapman *et al.*, 2023). Whilst early years practitioners have welcomed the suggestions in the Welsh Government guidance (Welsh Government, 2023) in supporting the planning of the environment to enable the delivery of the Five Development Pathways (Welsh Government, 2022), the framework has attracted criticism for lack of clarity and the incongruous nature of the descriptions of learning concerning young children in addition to unclear assessment practices with many practitioners reverting to the old Foundation Phase Profile to carry out on-entry and baseline assessments (NASWUT, 2021). Furthermore, there is a distinct lack of emphasis on mathematical development and the

teaching of mathematical concepts with mathematical development, once an area of the curriculum on its own now incorporated into the Exploration and Communication pathways of the Early Years Curriculum (Welsh Government, 2022). Whilst the Quality Framework for Play, Learning and Care in Wales is aimed to support the curriculum for 0-5-year-olds, the documentation containing the assessment descriptors for the Five Development Pathways (Welsh Government, 2022) only discusses 0-3 years thus causing confusion regarding the use of the Five Development Pathways (Welsh Government, 2022) and Progression Steps for early years practitioners, particularly those working in mixed-age settings and early years units.

## **2.2 Belonging and Free Play in the Welsh Early Years Curriculum**

The concept of belonging is referenced in several recent curriculum guidelines including the Curriculum for Wales. The term belonging can have several different interpretations when considering it in the field of teaching and learning and it can be argued there is a lack of consistency when interpreting its meaning (Chapman *et al.*, 2023). In European curriculum guidelines- those of Finland, Iceland, Norway and Sweden, the concept is understood in relation to community and values. In Ireland, the curriculum framework describes pupils' learning and development using four interconnected themes of Identity, Wellbeing, Identity and Belonging, Communicating, Exploring and Thinking with a focus on feeling a cultural sense of belonging about the land and community through the Irish Gaelic concept of *dúchas*, a concept difficult to translate directly into English. In the Southern Hemispheres, the Australian and New Zealand curricula emphasise a feeling of belonging to the place you come from (Kahu *et al.*, 2022)

Like the Irish Gaelic concept of *duchas*, The Curriculum for Wales frames belonging using the feeling of *cynefin* as an ‘element in the development of learners’ identities’ (Chapman *et al.*, 2023, p.1217) which develop from interactions between family and community and the child’s disposition to understand the changing world around them. Adams (2022) suggests that the word ‘*cynefin*’ is a significant choice in policies and guidance as it provides insight into states of being in keeping with play-based approaches to learning and that the concept can be personal to an individual and their experiences. The early years curriculum in Wales states ‘When they are young, children begin to develop a sense of how they fit into the many groups to which they belong, and their importance within them’ (Welsh Government, 2022, p.28) and that the environment should include ‘diverse and authentic representation within resources, images and text (in terms of gender, ability, sexual orientation, religion, etc.)’ (Welsh Government, 2022, p.44). The aims of the Curriculum for Wales state that all children have the right to a holistic and high-quality curriculum to support them in understanding a world in which attitudes to gender and sexuality are constantly evolving which is consistent to support learners in becoming citizens of Wales and the wider world (Welsh Government, 2022) with the Curriculum for Wales considered as providing an aims-based education, where education strives to encourage and enable people to lead fulfilling personal, civic and professional lives. However, guidance on the subject disciplines and the balance between knowledge, skills and values have come under criticism for lack of clarity and their ability to attain the aims set out by the Welsh Government particularly when considering the pedagogical approaches in the Early Years (Gatley, 2020; Hughes, Makara and Stacey, 2020).

The term ‘gender’ can be understood as a system of material and social practices and expectations that constitute people as being different in socially significant ways (Tembo and

Benham, 2023). During their early childhood, children come to learn what it means to be a 'boy' or 'girl', performing their assigned birth gender (Butler, 1993) whereby they reproduce and challenge gender norms through their own unique identities. During their early years, children's dispositions and attitudes towards gender are shaped and they can develop stereotypical views of how they should be which can limit their true potential (Early Years Coalition, 2021). The work of educational philosopher Paulo Freire (1992, 2005) highlights that practitioners have an ethical duty toward children and issues concerning gender are not irrelevant to young children. For Freire, education has two purposes, for domestication or for freedom and it is up to the individual educator to determine its purpose in their setting.

Free choice materials can 'enable the child to make decisions on matters that shape their sense of self', (Tembo and Benham, 2023, p.114). International research carried out in Sweden and other Nordic countries has provided more specificity for Early Years practitioners when approaching the well-being and belonging aspects of the curriculum (Hjelmér, 2020) suggesting that practitioners should pay attention to the types of toys and resources provided for their learners, indicating that natural, non-binary toys such as blocks are the way forward however this is specific their curriculum frameworks and there remains little to no supporting research about resourcing the early years classroom in Wales. In comparison with other countries, policies in Nordic countries value equality and promote this within their preschool settings and curriculum goals are ambitious with young children learning about citizenship, democracy, and human rights (Swedish National Agency for Education, 2018) however this has also received criticism with the argument that fostering democracy in preschools is not an easy task for practitioners to manage (Hjelmér, 2020). A multiple case study, (Hjelmér, 2020) argued that in settings where the children had more opportunities to engage freely with open-ended, ambiguous, non-binary toys, practitioners and researchers observed that

the approach promoted inclusion and that there was more democracy in the setting as opposed to the use of binary toys such as dolls, prams, and themed figurines but still needs careful planning, evaluation and discussion. This is significant as it highlighted that whilst play is the one thing in education settings children can influence, teacher assumptions and expectations from boys and girls with their play informed the activities planned and the toys and play materials offered to enhance the provision. During the process of the study, when considering gender perspectives, only one practitioner was conscious of gendered play highlighting the need for further work in this field. Along the same lines, research into free play conducted in Turkey (Taş, 2018) subsequently argued that early childhood educators' perceptions of gender influence play and the play choices of young children. However, despite diverse data collection methods, the research findings were based on free play time in a public school using a relatively small sample of participants therefore questioning the external validity of the research. Furthermore, this research may be considered outdated to be useful in the present day. To date, there is little to no research which critically explores this topic carried out in Wales considering the recent curriculum reform and the new Quality Framework.

Previous studies have confirmed that free play can be heavily influenced by gender, with children often mimicking what they have witnessed in their home environments (Taş, 2018; Chapman, 2016). In an investigation into gendered play in preschools, Chapman (2016) examined the play preferences of Australian pre-schoolers in two contrasting preschool settings, one preschool located in a low-income socioeconomic area and another in an upper-class suburb of Melbourne. The study found that through data gathered during free play, boys in the low-income setting were more likely to engage in gross-motor play than passive and creative activities whilst girls opted for dramatic play and creative activities such as drawing

and painting. Furthermore, while it was observed that groups of both sexes engaged in the use of Lego and small blocks in the urban preschool, only the boys used large construction materials as part of their play. This is consistent with the data obtained by Hjelmér (2020), who in a study in Sweden examining free play and gender identity in urban and rural settings, concluded that play choices were related to what children perceived and understood to be 'normal' as a boy or girl at a specific time and in a specific context with the rural setting providing play materials based upon assumptions on gender and the urban environment more opportunities for creativity and investigation not in a pre-assumed manner. Whilst the findings may suggest that socio-economic status can impact gender choices during play, the findings are inconclusive as whilst the urban, high-income kindergartens encouraged more freedom to explore and challenge gendered play, both studies reported that only boys engaged in large-scale construction play. The studies were unable to determine how much the perceptions of practitioners and their role in designing the environment can impact children's play and how language choices during play relate to gender. Owing to the significance of the research subject further studies with larger participant samples would broaden the knowledge of the topic.

### **2.3 Resourcing play using themed and open-ended resources.**

Several studies have examined the relationship between the type of toy and children's cognitive and social development and overall well-being during play. Much of the previous literature on this topic has been exploratory, dominated by qualitative approaches (Ephgrave, 2013; Bryce-Clegg, 2021; Howe *et al.*, 2021; Cankaya *et al.*, 2023). The role of play materials in children's play interactions has been the focus of researchers for many years (Howe *et al.*,

2022; Hughes *et al.*, 2007; Leach *et al.*, 2015) specifically when exploring how play is affected depending on whether the resources available are closed or more thematically ambiguous.

Early literature (Sponseller, 1974; Moyles, 1989) has assessed the efficacy of enhancing play using themed resources, suggesting that whilst practitioners can create stimulating themed play areas that may comprise a plethora of resources, if play enhancements are kept the same for several weeks children's experiences are unlikely to progress past adult-directed play modes. However, some recent findings which can be considered within the context of this study and the resurgence in Froebelian attitudes to early years pedagogy (Bryce-Clegg, 2012; Ephgrave, 2018 and Tovey, 2017) present an argument for larger play areas which are resourced using ambiguous core resources such as crates and fabrics in place of imitations of real-life objects to develop imaginative play, social skills and extend their talk opportunities. During the analysis of a multiple case study of open-ended role-play, Bryce Clegg (2012) criticised the use of topic-specific provisions and concluded that when over-themed, a role-play area can stifle the ability to practice and develop vocabulary providing a valuable case for the use of open-ended play on developing children's expressive language.

Furthermore, the work of Bottrill (2020) suggests that when the adult creates provision areas it restricts the child and diminishes the opportunity for the child to take responsibility for their learning through exploration, impeding the development of language. These views complement Welsh Government documentation that states that practitioners should encourage children to use agency in their choice of resources (Welsh Government, 2023) to allow children to explore their thoughts and stimulate discovery. However, both cases were findings from English schools using larger samples than I intend to use and to date, there is little to no evidence of the benefit of open-ended and loose parts play on communication



relating to the Curriculum for Wales Early Childhood and Play Framework (Welsh Government, 2023) which emphasises that early years learning experiences should be underpinned by the Five Development Pathways (Welsh Government, 2022) one of which is communication. Furthermore, it is important to note that whilst the studies focused on language acquisition, in addition to how children use language during play, this study aims to examine whether the Five Development Pathways (Welsh Government, 2022) can be attained using block play and whether gender influences the choices children make. Cai *et al.*, (2022) tested the hypothesis that thematic block play would positively impact the language development of young children. During this study, the control group explored constructive play without adult intervention, to examine the theory that children should be allowed to express themselves creatively and experience higher levels of motivation when the task is child-led. However, the study was small, lacked diversity and acknowledged that there could have been differences in the teaching quality and direction between the control groups which may have contributed to differences in the assessments carried out.

Contrary to the claims of Bryce-Clegg (2012) and Bottrill (2020), Tovey (2017) noted that communication and language development were linked to the process of construction, with children using words such as 'ramps' and 'levels.' This is supported by the findings of Yang and Pan's study (2021) on block play and language carried out in urban kindergartens in China which revealed that when engaging in play with ambiguous resources such as blocks, the language used by children was dependent on specific contexts, and specifically related to spatial and positional language as opposed to being varied as previously suggested. Whilst the literature highlights the advantages of using flexible resources to enhance the development of core and spatial vocabulary in young children, it does not establish how this type of open-ended play relates to other developmental areas such as physical development

and emotional well-being so it would be more relevant if further examples of how children engaged with this type of play contextually had been explored.

Recent national and international curriculum frameworks for early years promote the use of versatile, natural, and open-ended resources to develop children's imaginative and creative skills and promote curiosity and natural exploration, (Finnish National Agency for Education, 2018; Education Scotland, 2020 and Welsh Government, 2023). These new curriculum policies can be considered to reference the theories of the early pioneers, providing open-ended 'gifts' to create curiosity and interest (Froebel, 1826). The influences of the early pioneers are evident in statements such as 'enabling adults and environments' (Welsh Government, 2023, p.22) echoing the need for stimulating resources, spaces and responsive adults. The trend towards this type of play materials has prompted further research into the role ambiguous resources play on the cognitive development of under-fives and how the resources offered can indicate to the children how the spaces are to be used (Campbell-Barr *et al.*, 2018); with the view that an adult setting up the home corner will ultimately influence how the children interact and engage. This is congruent with the view Tovey (2017, p.35) who notes that 'out if the catalogue plasticised environments can be bland, static and sterile.' Recent data from several sources suggests that open-ended resources such as loose parts and natural materials provide multiple possibilities for children to engage in diverse and flexible play experiences in addition to providing democracy in the classroom (Hjelmér, 2020; Cankaya *et al.*, 2023; Howe *et al.*, 2021). The resulting evidence supports the curriculum frameworks, establishing that play which incorporated the use of ambiguous resources encouraged children to employ more creative and collaborative play interactions. However, the effect ambiguous resources have on language and language function is only briefly addressed in the literature. The study on play materials and their effect on children's play carried out by Howe

et. al (2021) suggested that whilst open-ended resources can provide children with the opportunity to be more innovative with the physical resources, initial hypotheses surrounding language use were unsupported as the use of open-ended toys resulted in children taking much longer to agree on storylines and scenarios and as a result less sophisticated language was observed however this did provide the opportunity for children to negotiate during play. Furthermore, the closed props (a train set) prompted specific themes in the play with children employing familiar scenarios such as 'boarding the train' when using these resources. This study did not examine play interactions in an educational setting, instead, it was carried out in a domestic environment, specifically observing play interactions between siblings. The researcher also acknowledges that as the observations on free play with ambiguous resources averaged 11.75 minutes, more time would have benefited the participants in their creation of play scenarios and allowed the researcher to explore narrative language. Furthermore, the study was carried out with a sample of participants mostly Caucasian middle-class families. Studies exploring how children from other cultural backgrounds would broaden the understanding of how communication is used during play. In contrast to the findings that open-ended play resources resulted in less sophisticated language use, more recent literature (Cankaya, *et al.*, 2023) argues that loose part play facilitates the use of productive language through narrative expression, with children utilising ambiguous resources to enrich their storylines. Similarly, to the study conducted by Howe *et al.*, (2021) Cankaya *et al.*, (2023) make the case for loose parts play providing scenarios for play partners to negotiate, seeking clarification about the storyline and narrative. Whilst the literature suggests that loose-part play can improve children's use of narrative language and negotiation, its primary focus was on how loose parts improve cognitive skills and so did not focus on gender concerning the play choices of the sample group of participants. Furthermore, it acknowledges that more

research into loose-parts play is needed to inform policymakers and educators on the wider benefits of this type of play, particularly on physical development, well-being and the sense of belonging, key pathways which are not currently presented in existing literature.

#### **2.4 The Function of language in relation to block play**

Defining play is challenging however Stewart, Corr and Henderson (2023, p.4), distinguish play 'as the central agency of the child.' In addition to this statement, research carried out suggests that play is essential to the cognitive, physical, social, and emotional well-being of children (Ginsburg, 2007) that it can accelerate the language acquisition of children (Weisberg *et al.*, 2013) and more recently that it is primarily a conscious activity with a purpose (Tekman *et al.*, 2023).

Different theories exist within the literature regarding the function of language used by young children during play-based learning with much of the research examining how language varies depending on the nature of the toy (Verdine *et al.*, 2019; Howe *et al.*, 2022) or whether the play is child or adult-directed (Fekonja *et al.*, 2005; Lin *et al.*, (2021). Previous research into the topic of linguistic development in young children has focused specifically on how language serves infants. Halliday's research into language (Halliday, 1978) aimed to provide an insight into this and established that children generally use language for the following seven functions-

- Instrumental: to get needs met
- Regulatory: to influence others
- Interactional: to develop relationships
- Personal: to express preferences and their identity

- Representational: to exchange information
- Heuristic: to learn
- Imaginative: to explore the imagination (Webster, 2009: p.113)

However, it is important to note that this theory is not specific to play interactions but instead looks at the general interactions between a child and its caregiver(s). More recent attention (Weichold and Rucinska, 2022), has focused on how language is used during play-based activities however this remains a relatively small body of literature.

Several authors suggest that language development and play are connected carrying out studies that have considered the effect of language function used by children in relation to the type of play in which they are engaged such as whether it is adult-directed, child led and the type of resources in which the participants are engaging (Fekonja, 2005; Weichold and Rucinska, 2022; Stagnitti, 2016; Ferrara *et al.*, (2011)). In a study into language use during adult-directed activities and free play, Fekonja (2005) reported that during free play, which is defined as spontaneous, child-led play with children engaging with whatever toys are available to them, more representational language was used by children compared to guided play (that which is planned and led by an adult) concluding that spontaneous play with peers leads children to produce a greater variety of verbalisations compared to that of an adult-directed activity. However, during this study, the teaching quality was not monitored during guided activities and the sample size of participants was small, with the same, more able learners speaking therefore generalisations cannot be drawn.

Other studies have concluded that increased time in free play can provide greater opportunities for children to develop oral language development and stimulate linguistic interaction (Stagnitti, 2016; Martlew *et al.*, 2011). While Stagnitti (2016) explores the

influence of a play-based curriculum on the oral language of children during their first formal year of schooling, the research carried out by Fekonja (2005) is specific to a preschool setting in Slovenia, a country whose curriculum identifies certain linguistic goals which include using language in different functions and roles. Similarly, the Finnish curriculum recognises pragmatic competence as a central part of language learning for young children emphasising that children need opportunities to use language functionally through play a contrast to the Curriculum for Wales Languages, Literacy and Communication (LLC) Experiences, Knowledge and Skills framework which doesn't reference language function until Progression Step 2, noting that when expressing oneself, language should be used and adapted depending on the context (Welsh Government, 2023).

The work carried out on the benefits of free play by Fekonja (2005) is complemented by Weisberg *et al.*, (2013) who maintain that play requires a child to lead. Whilst they acknowledge that during guided play adults could capitalise on teachable moments to enhance language, their research concluded that the same outcomes can be achieved when children lead play as when an adult does. This is supported by Campbell-Barr and Tregenza (2023) who suggest that children can learn and achieve through self-directed play, but this is reduced when children are guided in prescribed directions to demonstrate particular knowledge and skills. In contrast to this theory, in an article by Lin *et al.*, (2021) preschool practitioners in China supported the view of adult-directed play over child-led play, attaching great importance to adult instruction and valuing academic progress through guided play. A recent line of research inquiry has been examining the role of adults in supporting the linguistic and cognitive development of the child as they engage in guided play with children. Recent studies into talk during block play in preschool settings (Ferrara *et al.*, 2011; Fisher *et al.*, 2013) are consistent with this theory, identifying that during adult-guided block play,

children acquired a deeper understanding of geometric knowledge and produced more mathematical spatial language, arguing that adult guidance is critical in the development of a child's cognitive skills. A later study, conducted by Cohen and Emmons (2017) again explored the frequency of spatial language used by pre-schoolers engaged in block play via videotaped sessions. The results were varied, neither proving nor disproving the theory of guided play being more beneficial to children's linguistic development than free play. Some children used a variety of spatial words while others did very little talking when working with an adult or in a peer group. The study also suggests that greater investigation is needed to explore gender differences during block play as there were differences in the type of talk observed between girls and boys. However, a later study was conducted in China (Yang and Pan, 2021). In their study which was specifically designed to examine the relationship between block play and spatial language, they concluded that the frequency of spatial language increased during guided or cooperative construction-based activities than when children worked independently. Furthermore, the more complex the structures became through the support of an older peer or adult, the more spatial language was observed. Like Cohen and Emmons (2017), this study also analysed age and gender differences during the analysis of the data gathered and concluded that older children did use significantly higher spatial language but that there were no significant gender differences in language used by boys and girls. A limitation of this study would be that it examined a small cross-section of young children's language during block play so future studies, or a longitudinal study would benefit our understanding of spatial language and gender differences during block play.

The studies support previous views that talk is specific to the type of play in which children are engaged with specific resources prompting the use of mathematical vocabulary. The

studies concerned did not comment upon other types of verbalisations or language functions and specifically focused on free play with small-scale 3D shapes or blocks and the interactions between parents and children as opposed to peer-to-peer interactions within an educational setting such as an early years classroom or kindergarten. However, some findings suggest that talk is enhanced by play which is scaffolded by an adult and resourced with well-planned curricular materials. The review of the literature related to block play highlights that there are a variety of different kinds of materials which are block play resources and that block play itself is not clearly defined as play with a particular type of resource. Previous studies have used MegaBlocs, vehicles and figures (Ferrara *et al.*, 2011), Lego and geometric shapes (Fisher, *et al.*, 2013) and standard wooden shape sets (Verdine *et al.*, 2019). This suggests that there is limited empirical research which specifically explores the relationship between language and play with large wooden blocks in the early years setting.

Together, the literature discussed provides important insights into how types of play can support linguistic development and indicate that there is a relationship between block play and language use. However, the studies presented thus far indicate a case for further research into the area of language use during block play particularly exploring whether gender affects the language used by young children during this type of play within early education settings as there remains incomplete analysis of this. Furthermore, most of the current research methods on block play have used smaller-scale bricks or blocks and have focused either on the relationship between this type of play and spatial language (Ferrara *et al.*, 2011; Yang and Pan, 2021) or on mathematical concepts such as geometry and shape (Verdine *et al.*, 2019). In summary, it has been established that from this review of the literature, further research is required to deepen the existing knowledge on this topic.



### **3. METHODOLOGY**

#### **3.1 Introduction**

Chapter Three will present the qualitative methodology that was employed to address the research aims outlined in Chapter One of this paper and will discuss the site in which the study was conducted, the selection of participants, ethical considerations and data collection and analysis. A research framework or a 'paradigm' was also utilised alongside ethnographic research to support the researcher in considering how to think and use the knowledge gained from the research (Thomas, 2023, p.108). As the research was qualitative, there were no variables for the researcher to observe and measure to test and develop hypotheses (Thomas, 2023). Instead, interpretivism was employed specifically, symbolic interactionism by which the researcher could interpret meaning by entering the setting and experiencing first-hand the social interaction process to explore the process of meaning-making (Gray, 2021). The framework was beneficial to the researcher because it acknowledged that central to social behaviour is the notion of meaning and such meaning arises from observing the social interactions of human beings, in this case, a class of 4-5-year-olds. This particular framework also supported the choice of methodology, and gathering qualitative data but also identified the positionality of the researcher in being a participant in the research, highlighting that because the social world is constructed and interpreted by us, it is dependent on our own interpretation and so the researcher must acknowledge that their likes, dislikes, cultural and social background and political views can affect interpretation. As noted by Thomas, (2023, p.112) the researcher cannot eliminate their background and views as 'they are the stuff out of which interpretation is made.'

'Pre-fieldwork practices or preliminary fieldwork' (Coffey, 2018, p.19) in conjunction with the researcher's interests supported the development of the chosen research objectives and line of enquiry. Documents including the class timetable and play policy provided insight into the running of the setting and enabled the researcher to 'read' the environment (Coffey, 2018, p.19) before commencing the study. The study was designed and carried out using the principles of ethnography, a qualitative methodology which relies on the researcher 'being there', as a participant within the setting (Coffey, 2018, p. 44) and is designed to 'deepen an understanding of themes, behaviours, and patterns through the lived experience of the participants' (Kornuta and Germaine, p.55). Throughout the study, the researcher spent time immersed in the Reception class setting to gain insights into the behaviour of the participants during their play (Albon and Mukherji, 2018). The spirit of naturalism underpins this type of research with ethnographers 'seeking to preserve the natural state of affairs' (Denscombe, 2021, p. 122). The research was contextual and was carried out in a naturalistic environment, the Reception classroom during children's timetabled free play which is a common place activity during their school day. The use of naturalistic observation supported the researcher in capturing detailed illustrations to understand how the participants were engaging in block play (James, 2007). Whilst Fetterman (2010) acknowledges that ethnographic research can be used to test a theory, Denscombe (2021) highlights that theories are usually developed via the observation of small-scale scenarios. To gain a deep understanding of the complexities of play-based learning the study used a qualitative approach using field notes and video recordings which captured the children's interactions in the block area. Each time the researcher entered the field, a new set of field notes was formulated. These were dated, and brief details were provided regarding the location, time, date and set-up of the observation site and its participants. Field notes were first recorded in the form of a condensed account

whereby the researcher jotted down observations, interactions and communication between the participants including phrases and key activities (Spradley, 1980) and immediately after the observation, time was taken to recall details and formulate a more comprehensive account of the observation. As research must tell the 'complexity of a story' (Roberts-Holmes, 2018, p.184), the study also used a qualitative questionnaire to gain the insights of early years practitioners to establish their views on large-scale block play in the Reception class so that alternative perspectives on an issue can emerge. This included asking their perceived opinions on the levels of well-being children expressed during this type of play and how it related to other areas of the curriculum.

As qualitative research seeks to obtain insights into practices that exist within a specific context, there are certain drawbacks to the chosen approach so additional qualitative measures were employed by use of the Leuven Involvement Scale (Laevers, 1998) and a socio-linguistic framework by which to code and theme the data using a coloured key for each language function. Qualitative data can be described as 'emergent' (Patton, 2002), therefore the researcher needed to be mindful that provisional ideas were subject to change during the process of data collection and analysis. It has been noted that ethnography is relational, framed by and through social interaction (Coffey, 2018). However, this can have its disadvantages. The presence of the researcher can influence the conduct of the subjects (Albon and Mukherji, 2018; Gray, 2021 and Denscombe, 2021) so reflexivity was required when approaching data collection.

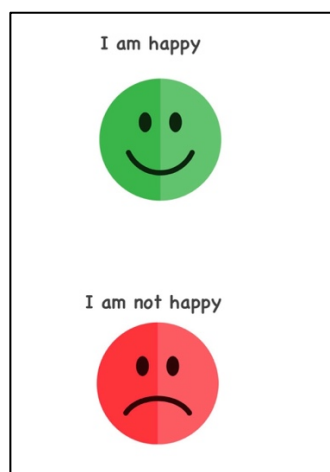
### 3.2 Ethical considerations

Ethical consideration was given to several concerns before and throughout the research process. It is increasingly common to involve young children in research which affects them and their rights to assent and withdraw from such research must be considered as they are regarded as fully participating members of society just like adults (Arnott *et al.*, 2021; Roberts-Holmes and Skanfors, 2009). However young children and their potential vulnerability owing to their age, remains a complex point of discussion. The United Nations Convention on the Rights of the Child (UNCRC) (UN, 1989) provides a supportive framework for ensuring that the rights of children relate to care, protection, provision, and participation. Article 12 is significant when considering research purposes as it specifically declares that all children have the right to hold an opinion about issues concerning them (UNCRC, 1989: Article 12). Increasingly, children are viewed as socially competent with researchers actively encouraged to listen to them and take their views seriously (Roberts-Holmes, 2018). Inclusive ethical social relationships rely upon respecting the child, meaning that they must be granted social ability. Therefore, children need to be viewed as people with worthwhile perspectives on the events that involve and affect them, and they should not be constrained because of their age. This is supported by the 'ethical symmetry' principle (Christensen and Prout, 2002) affording adults and children equal consideration as human beings and that negotiating with young children requires the same level of respect and consideration as it would with adults. However, questions surrounding children's competency, their position as vulnerable members of society and the relationship between the child participant and the researcher remain challenging for researchers (Arnott *et al.*, 2021 and Albon and Mukherji, 2007). The power dynamics between adult researchers and child participants can be viewed as a barrier to the

collection of data and question the validity of such evidence as children may feel pressured to provide answers or act in a certain way, they think a powerful adult wants to hear and observe (Roberts-Holmes, 2018). Consideration was given to avoid the misuse of power within the research. The methods used to gain consent and assent were selected as they support respectful research practices with young children. A request for ethical approval was submitted and passed by the University Ethics Committee and my supervisor assessed minor amendments before any research took place.

Opportunities to conduct overt ethnographic research require negotiation with 'gatekeepers' to gain access to the research site (Dencombe, 2021, p.123) An advantage of being a practitioner researcher is that I work within the setting however, 'gatekeepers' were approached, and written permission was sought before the commencement of the study (Reeves, 2010). In this instance, the Head Teacher and practitioners within the setting including the Additional Learning Needs Coordinator (ALNCo) were the 'gatekeepers' of the setting and were consulted before the research (Appendix A and Appendix B) in addition to the parents of the sample group of children who were also approached in writing (Appendix C). James (2007) notes that once the researcher has obtained access from the adult 'gatekeepers', one cannot assume that adults speak for the children and assent was then negotiated with the children. This is supported by the view of Arnott *et al.*, who note that 'consent or assent should not privilege the verbal voice' (Arnott *et al.*, 2021, p.142). Furthermore, it can be said that the researcher/participant relationship requires constant negotiation through a 'web of encounters' (Albon and Mukherji, 2018, p.171) meaning that it involves consulting with parents, practitioners, and children throughout each stage of the research process.

Once permission from relevant gatekeepers was obtained, the process of informed consent began (Roberts-Holmes, 2018 and Arnott et al, 2021). To support the young children in understanding what they would be participants in, a child-friendly leaflet was created using simple words and phrases seeking their assent. (Appendix D). It was made clear to the children in this leaflet that there is a limit to anonymity and the confidence the researcher can keep, and that the researcher had a duty to report any disclosures or concerns they made to a responsible adult (Roberts-Holmes, 2018). The children were able to take the leaflet home to share with their guardians and to discuss any concerns that they might have. The process of informed consent was revisited throughout the research process as it can be considered a holistic consideration which needs constant revisiting (Arnott *et al.*, 2021). Concrete manipulatives and visual methods have become increasingly popular as methods of exploring the perspectives of children in early childhood research and creating opportunities for communication and relational dialogue (Arnott *et al.*, 2021). In addition to the leaflet to obtain informed consent from the children, emotion cards (Image 1) were used throughout the process as a tool to ensure their assent was sought at each stage and displayed on the window near the block-play area acting as an in-the-moment concrete tool to allow children to review their desire to participate continually and indicate their feelings.



### *Image 1. Emotion Cards*

However, as useful as these tools are in obtaining assent, the researcher needed to remain aware of participants' nonverbal cues, actions and behaviours as cues of dissent (Skanfors, 2009; Arnott *et al.*, 2021). Identifying such behaviours requires sensitivity to being attuned to the children one is observing and can be described as having an 'ethical radar' (Skanfors, 2009). As suggested by Sudman (1998), research cannot be considered ethical if it causes negative emotional reactions and such risks should be minimised. Therefore, considerations were made regarding the timetabling of data gathering so that the other interests of the children were not disrupted. When carrying out observations, the researcher ensured that data collection did not disrupt entitlements to the children such as their break times, participation in prayer and liturgy and focused group work. Video recordings of the observations were deleted at the end of the project as digital media captured for the study does not apply beyond the life of the project (Konstantoni and Kustatscher, 2016). Consent was obtained from the adult participants who took part in the qualitative survey and all responses were anonymous.

### **3.3 Site Selection**

In qualitative studies, the reliability of the data can depend on the appropriate selection of a setting and how it relates to the research objectives (Lune and Berg 2017). The chosen site for the study was a primary school in what is considered a deprived area, providing faith education for three- to eleven-year-olds in Southwest Wales. Unavoidably, as commonplace with work-based research, the researcher already worked in the setting. At the time of the study, the school was working to implement the new Curriculum for Wales (Welsh Government, 2020) and the implementation of the Additional Learning Needs Code (Welsh

Government, 2021). Considering these reforms, Early Years practitioners within the setting had recently adapted their practice to allow more opportunities for open-ended role-play, a form of collaborative child-initiated play with minimal adult intervention and so this pedagogical approach lent itself well to the chosen area of study.

### **3.4 Sampling strategy**

As practice-based studies usually involve 'selection bias' (Thomas, 2023, p.139) and the use of a 'restricted group' (Albon and Mukherji, 2018, p.27), the main strategy used by the researcher for sampling was purposive sampling, specifically convenience sampling, as it was convenient to the researcher, enabling access to the setting and participants as the researcher worked in the setting and had a pre-existing relationship with the practitioners (Roberts-Holmes, 2018). Furthermore, this type of sampling involves a particular group of people chosen based on their relevance and knowledge about the topic which would not be obtained from other sampling methods (Denscombe, 2021). The children in the sample were all from the Reception class. There were 18 child participants which consisted of 8 boys and 10 girls. The oldest child was 5 years 7 months (67 months) and the youngest 4 years 8 months (56 months) with a mean age of 5 years 1 month (61 months). The four practitioners from the setting who agreed to take part were all female and aged between 24 and 37 years. 2 had a teaching qualification one of whom worked in the setting one day a week, one of the participants was a Higher-Level Teaching Assistant, and another held an NVQ Level 3 in childcare.

A limitation of this study is the extent to which the findings from the qualitative research can be generalised to a wider population of children as the participants were not randomly selected. The project was a small-scale research project so used a limited sample and so it can



be argued that this resulted in less accuracy and validity of findings (Roberts-Holmes, 2018). The intended sample was a cohort of Reception pupils selected because the setting was familiar to them, they were established as a group within the classroom and at this point in their development, play is more complex with more detailed contexts and increasing social interaction (Cosaro, 2005; Bryce-Clegg, 2013). The responses from the questionnaire relating to practitioner perceptions of block-play were subjective and therefore could be susceptible to recall bias (Thomas, 2023).

### **3.5 The Role of the Researcher**

As this type of study relies upon the interpretation of the researcher who is working with data gathered from a small sample of participants, it can be difficult to replicate the study to check and validate the findings (Denscombe, 2021). Furthermore, the adopted type of sampling can lead to a compromise in findings known as sample bias, whereby because the setting knew the researcher and the rationale behind the research it can be argued that data could be compromised. When in the setting as the researcher, the practitioner must present 'a true self.' As the main instrument of data collection was the researcher there can be difficulties in accepting reliability, so careful consideration was made to the presence of the researcher in the setting, reflecting upon the impact of their presence during the gathering of data and the theoretical structures drawn from the analysis using their field notes. As noted by Coffey (2018) researchers do not always conduct studies in unfamiliar settings. In this instance, the researcher was conducting the study in a familiar setting, the Reception classroom in the school in which they work. Ethnographic research involves employing reflexivity, an 'awareness of the self within a social setting and the role of the self in constructing social action and understanding', (Coffey, 2018, p.130), particularly when considering the

experiences and knowledge the researcher brings to a setting and not making assumptions on what they think they know about the environment in which they are conducting the research (Coffey, 2018, p.45). The researcher was conscious of mitigating this risk through reflexivity in their methodology (Roberts-Holmes, 2018 and Lune and Berg, 2017) and through the collection of some quantitative data to report on participant well-being and involvement using the Leuven Scale of Involvement. For practitioner-researchers like the researcher carrying out research in familiar classroom settings in which the children and families are known, a degree of reflexivity is required during data collection (Albon and Mukherji, 2018; Denscombe, 2021 and Bhatti, 2021). This is also suggested by the British Educational Research Association (BERA) guidelines (2024) which note that the researcher must be aware of how their practice as a researcher can influence others such as the participants and any colleagues known to the researcher. The researcher acknowledges that they are biased towards the participants as they were pupils of the researcher during their time in the Nursery class where the researcher is the main practitioner and so the researcher was aware of the backgrounds of the participants, friendships within the group and their interests therefore it could be argued that the researcher influenced some of the play behaviours observed during the research process.

### **3.6 Data collection**

#### **Observation**

For the purpose of this study, nonparticipant observation was carried out, allowing the presentation of a 'credible, rigorous and authentic story' (Fetterman 2010 p.1) with the researcher adopting the role of a 'marginal observer' (Robson, 2002) making field notes and observations within the block-play area of the classroom so that the subjects are disturbed as

little as possible, and the play does not become adult-led which is a potential obstacle when assuming the role of a practitioner-researcher. According to Denscombe (2011) observations can include direct observation, fieldwork, natural settings and the use of perception. Direct observation of the subject is employed with the researcher in the field collecting data first-hand. These characteristics were adhered to with the researcher carrying out observation in a natural setting- the classroom, taking fieldnotes and maintaining awareness of issues of perception. The researcher did not interrupt the running of the play sessions and positioned herself in an unobtrusive place in the classroom. The initial field notes were written in the form of a 'condensed account' (Spradley, 1980, p.69) and were taken whilst the researcher was in the field, noting as much as they could about the scene and the key interactions and phrases spoken between the participants. Whilst this form of data collection can be difficult to prove sufficient representation and generalizability (Gray, 2021), Bailey, (2007, p.80) argues that field notes are the 'backbone' for gathering and analysing contextual data and for Bogdan and Biklen, (2016), the success of a study relies upon the details and information recorded in field notes. Textual field notes were recorded to capture descriptions of the setting, chronologies of actions and descriptions of talk and other interactions (Coffey, 2018 and Gray, 2021) to offer first-hand insights into the sample group of children and to act as aide memoirs when formulating detailed descriptions after observing.

Owing to the importance of the proximity of transcription to real-time observation, observations and field notes were written up directly after play episodes (Albon and Mukherji, 2018) to support the reliability and validity of findings. The field notes were numbered and dated to ensure there was a clear record of the process in addition to the researcher making an 'expanded account' (Spradley, 1980, pp.69-70) which was written directly after the live

condensed account to provide a detailed narrative and chronology of the observation. Whilst this can be a lengthy process, it assisted the researcher in gaining a holistic overview of the study and remaining aware of how the research plan has been affected by the data collected.

Video recording was used to complement the participant observation and allow field notes to be written. A total of 155 minutes of video was recorded. Certain behaviours relating to well-being and engagement of participants during the play process were noted by use of the Leuven Involvement Scale. The use of the Leuven Scale provides a qualitative measure that focuses on the child's experience rather than purely academic or skill-based outcomes. The Leuven Involvement Scale was devised as an assessment tool to identify deep learning of young children aged between three and six years (Laevers, 1994). It is a five-point scale which rates concentration, energy, creativity, facial expression and body language, verbalisations, and satisfaction (Laevers, 1997) with level one meaning no activity, level two frequently disrupted activity, level three continuous activity, level four activity containing intense periods and level five intense activity which is sustained over some time (Laevers, 1994). The observations were carried out during periods of child-initiated play.

### **Qualitative Questionnaire**

In addition to the observations of learners, a short qualitative questionnaire was used which was comprised of a set of open-ended questions designed to gain the perspectives of the Early Years Practitioners involved in the study (Appendix E). Roberts-Holmes (2018, p.143) notes that questionnaires can be used for a variety of reasons in small-scale research projects and are a useful method of collecting views which tend to provide a broad picture of people's experiences, in comparison to interviews which provide more in-depth information. The

questionnaire was created using a web-based survey company (SurveyMonkey) to design, distribute and analyse open-ended question responses. The questions were piloted initially by two colleagues to establish the appropriateness of the questions, to ensure they were accurate and simple to complete and that they would produce the information required (Roberts- Holmes 2018 p.143; Gray, 2020, p.396). The first question elicited information on how learners engage with large blocks, the second question asked participants to identify the emotions children displayed during large-scale block play. The third question asked participants to indicate which curriculum areas they felt block play related to and the final question was designed to gauge how much participants felt gender impacted learners' play choices.

### **3.7 Data triangulation and dependability**

Triangulation, 'the collection of different perspectives' (Roberts-Holmes, 2018, p.129) is critical in corroborating results and adding credibility to the research. As noted by Fielding and Fielding (1986) the important feature of triangulation is not the combination of different types of data but relating them to counteract the threats to reliability. Comparing the findings from a range of sources strengthens the validity of the findings (Kornuta and Germaine, 2019). For this study, the triangulation of data was challenging owing to the small sample of participants and the qualitative methodology adopted by the researcher. However, the use of the Leuven Involvement Scale, field notes and coding of transcriptions using a socio-linguistic framework allowed for some data triangulation to occur. Additionally, the views of the practitioners which were obtained from the use of a qualitative questionnaire also allowed for data triangulation. Despite the limited triangulation in this study, it could be argued that it is not necessarily needed as the researcher acknowledged potential biases

through a reflexive approach (Roberts-Holmes, 2018) and an audit trail of the researcher's reflections, field notes, transcriptions and participant data is available for scrutiny. Furthermore, Thomas (2023) suggests that triangulation in interpretative research is irrelevant as the positionality of the researcher will always affect the interpretation of the data gathered.

### **3.8 Data analysis**

The Leuven Involvement Scale was used to measure levels of pupil engagement and support the researcher in assessing the participants' sense of belonging and well-being by scoring the participant's levels of involvement. The results of the practitioner questionnaire were also analysed to gain the perspectives of the early years staff. In this study, the recorded footage was analysed together with the field notes and Leuven observations to support the researcher in creating qualitative narratives for further interpretation.

The coding of notes is one of the most widely used techniques for determining the outcome of research carried out in the field (Miles and Huberman, 1994; Albon and Mukherji, 2018; Gray, 2021) and once grouped, allows the identification of themes to provide analytical insight (Denscombe, 2021). Observation notes and audio recordings were transcribed with field notes and read through before being coded and grouped. This process was also carried out to analyse the results of the questionnaire. Such analysis is not completed until themes are 'put to good use' (Dencombe, 2021, p.334). Therefore, to shed light upon the research objective concerning language use, once the field notes were transcribed, they were subjected to deductive analysis, carried out using the six phases of thematic analysis (Braun and Clarke, 2006) which involve familiarisation with the data, coding, searching for themes,

reviewing themes, defining, and naming themes and writing up. A socio-linguistic framework was employed to unpack narrative structure and linguistic function thus employing the use of deductive analysis. Halliday's Seven Functions of Language was the adopted framework with which to 'code' the functions of language used and theme the data. Halliday's socio-linguistic framework was selected because his research into children's language use established that children use it for seven functions; Instrumental: to get needs met, Regulatory: to influence others, Interactional: to develop relationships, Personal: to express preferences and their identity, Representational: to exchange information, Heuristic: to learn and Imaginative: to explore the imagination (Webster, 2009, p.113). In addition to this, the researcher also noted when mathematical language was used by the children to address the research objectives. The results of the questionnaire were analysed using inductive analysis, that is the themes emerged from the data and pre-specified codes were not imposed (Roberts-Holmes, 2018). The overall response rate was 100% and all completed questionnaires were usable.

## **4. Results Analysis and Discussion**

### **4.1 Introduction**

This chapter contains the analysis of the results of the ethnographic study conducted to answer the research objectives:

**RO1.** Determine whether the use of large-scale block play supports pupils in attaining the Five Development Pathways during child-led play.

**RO2.** Investigate whether gender differences affect engagement with large-scale block play.

**RO3.** Determine whether large-scale block play limits children to using mathematical and spatial language during child-led play.

This chapter also includes a discussion of how the analysis conducted was consistent with the chosen methodology and how the analysis links to the research objectives. A questionnaire was conducted with practitioners in the setting before the commencement of observations. The questions were derived from the literature review (See Appendix E). Following this, there were ten observation sessions in the participants' classroom. The observations took place for 10 minutes over five weeks, planned using an observation schedule (Appendix F). The participants were observed, their gender and the type of play observed was noted and interactions were recorded in field notes. As the study generated data in various forms and it is not possible to present all the findings the data was 'reduced' by generating codes and themes (Roberts-Holmes, 2018, p.175). The transcripts were analysed using a deductive analytical approach where pre-specified codes and themes were imposed on the data (Roberts-Holmes, 2018, p.184). The themes come directly from Halliday's socio-linguistic framework. to uncover codes and themes which are described and discussed in this chapter. This is per the views of Dawadi (2020) with the researcher beginning the analysis with the themes that are identified through the process of a literature review. The results from the questionnaire were analysed using an inductive analytical approach.

## **4.2 Results analysis**

Braun and Clarke (2006) formulated six phases of thematic analysis to support the researcher in identifying and analysing patterns within a set of data.



Phase of Thematic Analysis	Description
1	Familiarisation of data
2	Generation of preliminary codes
3	Searching for themes
4	Review of themes
5	Definition and naming of themes
6	Reporting and concluding

*Table 1. Six Phases of Thematic Analysis*

The data gathered from both the questionnaire results and the observations was examined under these six phases to lead to the findings being discussed. Deductive analysis was employed when approaching the observation data which was coded using Halliday’s socio-linguistic framework and inductive analysis was employed to the questionnaire results as themes emerged from the data and there were no pre-determined codes to impose (Roberts-Holmes, 2018, p.183).

#### **4.2.1 Analysis of Observational Data**

Leuven Scale observations measured the levels of pupil engagement in the play process and participants were assigned a score for involvement and well-being to ‘structure interpretations of snapshots in time’ (Arnott, McGowan and Delafield-Butt, 2021 p.140).

<b><u>The Leuven Scale for Involvement</u></b>		
<b><u>Level</u></b>	<b><u>Well-being</u></b>	<b><u>Signals</u></b>

1	Extremely low	Activity is simple, repetitive, and passive. The child seems absent and displays no energy. They may stare into space or look around to see what others are doing.
2	Low	Frequently interrupted activity. The child will be engaged in the activity for some of the time they are observed, but there will be moments of non-activity when they will stare into space or be distracted by what is going on around.
3	Moderate	Mainly continuous activity. The child is busy with the activity but at a routine level and there are few signs of real involvement. They make some progress with what they are doing but don't show much energy and concentration and can be easily distracted.
4	High	Continuous activity with intense moments. The child's activity always has intense moments, and they seem involved. They are not easily distracted.
5	Extremely high	The child shows continuous and intense activity revealing the greatest involvement. They are concentrated, creative, energetic and persistent throughout nearly all the observation period.

*Table 2. Leuven Scale Levels of Involvement.*

To become familiar with the data following collection, the researcher organised and transcribed the observational data. The recordings of the participants during play were listened to several times and detailed field notes were read and re-read in conjunction with the observation transcripts (Braun and Clarke, 2006). After the familiarisation with the data, observational data was subjected to deductive coding (Roberts-Holmes, 2018, p.184). The codes were not created by the researcher, instead, Halliday's socio-linguistic framework was employed to identify important features of the data with the researcher aware that some extracts could be coded into as many different themes as they fit (Gray, 2020, p.759). However, this framework was not without limitations as it did not include mathematical language as a function. The researcher included this as an additional code to examine how block play relates to mathematical development. Observations were dated and given page and line numbers to support the identification of the code. For example, samples of participants' use of mathematical language can be located on transcription from 22.3.24 page

1, lines 21-22, 'Look at this, did you know it's got two big tyres and two small ones?' 328 codes were created and then collated.

<b>Code</b>	<b>Description</b>
Instrumental	This is considered to be the 'I want' function of language which serves to satisfy the child's needs.
Regulatory	It is the 'let's do' function of language and is employed by a child to control the behaviour of others.
Interactional	The 'me' and 'you' function of language whereby a child interacts with those around them and who are important to them.
Personal	This function of language is employed to express and assert a child's own individuality and awareness of their place in the environment.
Heuristic	The 'tell me why' function of language and relates to children seeking information to learn and acquire knowledge.
Imaginative	The 'let's pretend' function of language whereby a child creates an environment of its own.
Representational	This is considered to be a sophisticated step in language use whereby information is exchanged with another.
Mathematical	Language concerning number, position, direction, shape, space, geometry and measure.

*Table 3. Codes used during deductive coding of data.*

As defined by Braun and Clarke (2006) a theme is a pattern which is meaningful and coherent in the data and relevant to the objectives of the research. The codes were used to identify and group data. As the researcher employed deductive analysis on the observation transcripts, the codes were specific so identifying patterns such as how often imaginative language was used by the participants was a relatively quick process. This was done manually using highlighters to indicate the codes (Gray, 2020, p.759). Codes of similar meaning were grouped thus formulating themes. For example, the codes concerning position, location, mass and size were grouped to form the theme of 'mathematical language.' The themes were then reviewed to ensure the codes corresponded with the set of data (Braun and Clarke, 2006).

In addition to this, the gender of the participants was noted and the type of play in which they were engaging, such as domestic play, was also recorded in a table.

<u>Date</u>	<u>Gender</u>	<u>Type of Play</u>
14.3.24	Boys only	School influence-Boat/ Speedboat/ Pollution/ Space rocket
18.3.24	Mixed- Boys led	Topic Work Big Cats/jungle- school influence
21.3.24	Girls only	Domestic- House with upstairs and downstairs
22.3.24	Mixed- Girls Led	Grandad's Tractor/ bus
9.4.24	Girls only	House
16.4.24	Mixed- Girls led	Spa Treatment/Beauty Salon
19.4.24	Girls only	House
20.4.24	Mixed- Boys led	Church- school influence
22.4.24	Girls only	Talent Show
25.4.24	Girls only	Domestic- babies and house

*Table 4. Gender and type of play.*

#### **4.2.2 Analysis of Questionnaire**

The results of the questionnaire were analysed using the six phases of the thematic analysis approach (Braun and Clarke, 2006). The responses to the qualitative questionnaire were read and re-read (Gray, 2020, p.759) and the word cloud tool on the SurveyMonkey website was employed to identify the most common words and phrases respondents used when answering the open-ended questions and the number of times they appeared. Tags were used to organise groups of responses and uncover common themes and trends.

#### **4.3 Discussion of Findings**

Key themes that emerged which link to the research objectives will be discussed using subheadings. Child participants will be identified by letter Child A, Child B etc. and Early Years Practitioners as EYP1, EYP2, EYP3 and EYP4 per the ethical considerations outlined in Chapter 3. Detailed analysis and interpretation of the practitioner questionnaire responses and qualitative observations would suggest that three distinctive themes emerged from the data. The predominant themes are how large-scale block play links to developmental milestones, the use of language during block play and the impact of gender on block play.

### 4.3.1 Large-Scale Block Play and the Five Development Pathways

The main aim of this study was to determine whether using ambiguous play resources specifically large-scale blocks, could support pupils in attaining the Five Development Pathways (Welsh Government, 2022). Results obtained during this study are consistent with the previous findings of Hjelmér (2020) and Bryce-Clegg (2012) that when attention is paid to the types of resources offered and children are given open-ended resources, engagement levels are higher compared to that of themed toys and practitioner-devised areas. The data demonstrating this was the response to question 3 of the practitioner questionnaire by the most recently qualified teacher which suggested that they perceived large-scale block play to *'offer a wealth of learning opportunities and can be linked with all areas of the new curriculum'* (EYP4). When considering the Well-Being and Belonging curriculum pathways, it could be said that large-scale block play was an enjoyable experience for the children as they worked together in their groups. This is corroborated by responses to the questionnaire with practitioners noting that, *'the area can become an exciting activity and others join in. The children share their ideas with each other and so extend play'* (EYP4) and *'The children communicate and collaborate together during this type of play as it usually lends itself to group work rather than solo play'* (EYP2). However, there were occasions when if a more dominant child left the play scenario, the rest of the group struggled to maintain the narrative until they returned suggesting that young children are reliant on a more capable 'player' to support the feeling of belonging because in learning, *'imitation is indispensable'* (Vygotsky 1986, p.188). This is demonstrated by the sample group in the extract below.

- 21 Child C- 'I'm going to go to work.'
- 22 Child Q to Child N- 'are you my best friend?'
- 23 Child N- 'no x is my best friend.'
- 24 Child Q- 'well I'm not going to play with you if you're playing with her.'
- 25 Child N- 'but x is my friend.'
- 26 Child Q- 'well then y is my friend then.'
- 27 Child N- 'uh well we're friends again too.'
- 28 Child Q- 'I'm doing some work.'
- 29 They play in the space, moving materials around for 10 seconds with no interaction.
- 30 Child Q- 'Look at those things blowing' (Windssocks the children had made hanging from the ceiling).
- 31 Child N- 'Oh the windssocks. The pink one is mine.'
- 32 Child Q- [pointing] 'that pink one?'
- 33 Child N- 'yes.'
- 34 Silent play again for 5 seconds.
- 35 Child Q- 'Child C is taking a long time.'
- 36 Child N- 'Where is she anyway?'

Image 2. Extract from Field Notes, 25.4.24, p.1, L21-37

During the Leuven Scale qualitative assessment, across the 10 observations carried out, there were 14 occurrences of Level 3 involvement and 16 occurrences of Level 4 and 5 engagements suggesting that block-building activities support children in engaging with and sustaining intense periods of activity. These signs included a willingness to continue and complete the task when elements of the construction had broken or collapsed, expressing confidence and self-assurance, enjoyment without restraint and animated expressions (Laevers, 1993).

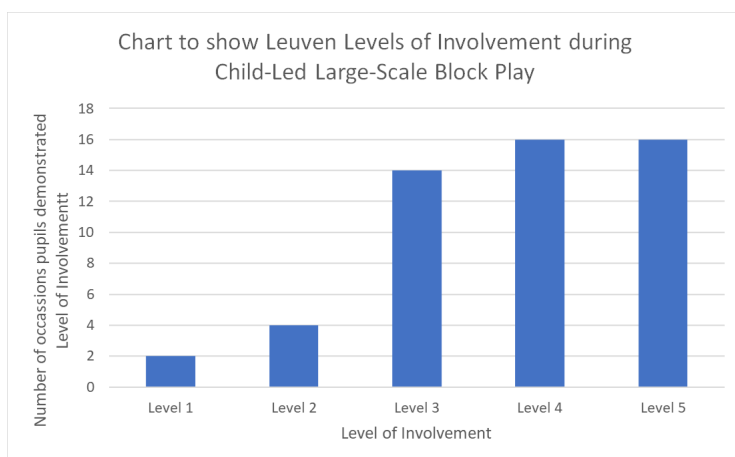


Chart 1. Chart to show the Leuven Levels of Involvement of Reception children during child-led, large-scale block-play.

Most of the participants expressed these signs and examples from field note observations (Field notes, 18.3.22, p.1, L16) included *'the four children begin jumping from brick to brick, laughing'*, and *'Child E begins jumping excitedly.'* The pupils also expressed confidence in their sense of belonging to the school and its wider community, drawing from real-life experiences of visiting the local Church for Mass and holy days of obligation when devising their narratives.



Image 3. Role playing Mass.

- 25 Child K- 'Welcome to Church!'
- 26 Child Q- 'Baby shh you need to be quiet now.' [sitting on blocks with baby doll].
- 27 Child G- 'Guys, we're in Church okay. You need to be quiet.'
- 28 Child C- [holding paper] 'I'm standing up and reading. La-dee-la-dee-da.'
- 29 Child K- 'I am the prees.'
- 30 Child J- 'What's the prees?'
- 31 Child G- 'Can I be the prees as well, in a minute?'
- 32 Child K- 'ok but I need to do something first.'
- 33 [Child K leaves play and returns 5 seconds later with a round wooden disc]
- 34 Child G- 'Guys he's gone but you still gotta be very quiet, okay?'
- 35 Child Q- 'Baby shush.'
- 36 Child K- 'you need to eat this okay?'
- 37 Child G- 'yeah but first, but first you got to hold it up like this. Because that's what Father does.' [she holds up the disc] 'then we can eat it.'
- 38 Child Q- 'But I don't want to eat it yet.'
- 39 Child K- 'it's okay because it tastes nice it does.'
- 40 Child Q- 'no!'
- 41 Child G- 'Okay then now we have to say peace with you. Guys, you got to shake my hand, okay?'
- 42 [Child K and J shake hands].
- 43 Child C- 'Okay let's put our hands together now.'
- 44 Child G- 'Guys, like this and you have to do the Sign of the Cross okay?'
- 45 Child K- 'okay.'

Image 4. Extract from Field Notes, 20.4.24, p.1, L25-47.

As block play requires perseverance and a willingness to problem solve, cope with disappointment, and learn from mistakes (Tovey, 2017), it can be viewed as a valuable tool to support children in developing positive dispositions. Furthermore, common words used in response to the question 'What emotions do children express during block-play?' included 'happy' 'engaged', 'busy', 'pride' and 'enjoy' with all three practitioners noting that from their experience *'the children are generally very happy and engaged when in this area'* (EYP1 and EYP3). It was particularly revealing to note that one practitioner (EYP2) mentioned that the children invest in this type of play *'and often request to leave what they make so they can return to it later in the school day or the following day'* highlighting that early years practitioners should allow adequate 'time and space for children to develop their explorative and creative skills (Welsh Government, 2022). There were exceptions to the reception block play received as a resource for promoting positive dispositions, as demonstrated by the responses of two practitioners. EYP4 noted that naturally pupils can express, *'anger and frustration when they feel it has gone wrong'* and EYP2 wrote that *'there are occasions when a dispute may arise such as children not wanting to build what other children are constructing.'* Whilst there were no observations of extreme behaviour recorded, there were examples of Leuven data and field notes (Field notes, 9.4.24, p.1, L26-35) of low-level pupil involvement particularly when the pupils had conflicting ideas of what to build or wanted to see their own ideas realised before allowing others to join the play *'No, no we don't need any help, there's just one builder'* (Field notes, 9.4.24, L22). Despite this, EYP4 noted that negative emotions *'become a learning opportunity for the teacher and pupil'* and for EYP2 these instances become an *'opportunity for staff to model problem-solving and social skills.'* The consistent theme of block-play observations was that high levels of engagement were



demonstrated by the majority of pupils for most of the time and that the large blocks do provide a platform for pupils to develop positive dispositions to learning.

The findings suggest that large blocks provide opportunities for pupils to attain elements of the physical Development Pathway of the Curriculum for Wales. When asked if they felt block play related to other areas of the curriculum, three out of four practitioners felt it would, noting that *'they [the children] lift the blocks so it does require some physical skill (EYP 3), 'they also lift and carry the blocks which require physical strength' (EYP2) and 'Physical development- they lift and carry' (EYP 1)*. This is supportive of the views adopted by Tovey (2017) and Louis *et.al*, (2008) that block play allows for precision in movements, awareness of the body and space and strength to lift and carry heavy blocks through repeated access to the materials. EYP2 agreed that the blocks would provide opportunities for gross motor development but also expressed concerns regarding the development of fine motor skills, *'the blocks don't really lend themselves to fine motor development.'* Observations of the group would also corroborate the views that blocks allow children to develop strength and an awareness of their bodies in space *'There's too many in this house. Only one allowed or maybe just 2'* (Child L, Fieldnotes, 14.3.24, p.1, L19). However, as noted by the practitioner during the questionnaire, there were no explicit demonstrations of fine motor skill development by the learners. Confirming the views of the practitioners and earlier literature, the participants were observed lifting and positioning blocks and in one observation they were seen to *'jump from brick to brick'* (Field notes, 18.3.22, p.1, L16) and *'the group begin running up and down and jumping between the bricks'* (Field notes, 18.3.22, p.1, L33) however there were no observations of other gross motor skills such as throwing, tracking, and catching and out of the 10 observations of child-initiated play only one observation demonstrated the children

initiating a game with a focus on physical movement. This may reflect the time of year during which the data was gathered, the Spring Term, during which there were several days of inclement weather. It would have been interesting to see if the play changed during the summer and whether the blocks would be brought outdoors and incorporate different elements such as skipping ropes and balls in the play.

The variety of constructions the participants made provides a strong association between block play and the exploration area of the Development Pathways with children building houses, speedboats, and staircases to name but a few. In response to the questionnaire, EYP4 notes *'[blocks] are an ideal tool for creativity, working collaboratively, helping pupils to communicate and solve problems. Large blocks are a learning tool that helps develop a wide range of skills.'* However, contrary to the suggestions of previous research that block play provides significant engineering skills regarding gravity and geometrical thinking (Gura, 1992 and Tovey, 2017), this study did not find a significant association between large-scale blocks and mathematical and scientific development. This is somewhat surprising given the fact that other research would suggest that this type of play would promote scientific and mathematical concepts. Whilst the observations of the participants in their play revealed them to be moving blocks, stacking them, and exploring them in the space there were no explicit mathematical skills linked to aspects of shape, measure or geometry demonstrated by the participants and very little evidence of understanding the relationships of cause and effect, weight stability and symmetry. Whilst this may seem counterintuitive, a possible reason for this may be that other studies focused on using small-scale resources such as Lego and MegaBlox and some of the literature involved explored how an adult guides the play and seeks opportunities to explicitly shoehorn in these concepts (Ferrara *et al.*, 2011; Fisher *et al.*, 2013). Owing to the scale of the resources used during this study and the fact that the

participants were observed during free-play and without adult direction, the participants focused more on constructing bases for the development of their imaginative play. The findings suggest a need for greater research to be carried out relating to play directed by well trained, confident enabling adults who can support for scientific and mathematical thinking during children's exploration with block play.

All practitioners felt that large-scale block play provided children with opportunities to develop their communication skills noting that pupils '*sometimes engage in role-play so this links to LLC*' (EYP2), '*Literacy- supports narrative play*' (EYP1), '*the children communicate and collaborate during this type of play*', (EYP3) and '*[block play] helps pupils to communicate*'(EYP4). The literature suggested that blocks can develop an abstract structure to stand for something else (Tovey, 2017) but what was interesting was how far these young children took this, with the blocks aiding them to assume and communicate through different roles. The imaginative play was popular throughout the observations, with children assuming roles of builders, domestic personalities such as mums, and pirates.



Image 5. 'Pirate Ship'

Furthermore, during an end of year trip to a local beach, the pupils were observed discarding the buckets, spades and other plastic beach toys school staff had brought with them, instead opting to play with driftwood and pebbles on the beach. An interesting finding was that pupils were also observed mark-making and writing for a purpose, creating tickets on the writing table for their 'talent show', a sign for the postman to identify their 'house', paper money to use in their 'spa' and 'magazines' while they waited for their 'beauty treatments' highlighting the power of an enabling environment where play is 'the central agency of the child' (Stewart, Corr and Henderson, 2023, p.4).



*Image 6. 'performing' in a talent show.*



*Image 7. 'Sign and number' to identify house.*



*Image 8. 'Paper money.'*





*Image 9. 'Magazines.'*

Furthermore, children were observed gathering resources from other areas of the classroom such as cars to make a 'village' and books to make a 'library' demonstrating that children should feel empowered and in control of their learning (Ephgrave, 2018) confident to access and obtain a variety of resources to support their learning through play.



*Image 10. An example of how children used other resources to enhance play creating a 'village.'*



*Image 11. A 'library.'*

The group communicated with each other verbally during most of the observation time, using language for different purposes which will be discussed in the next section.

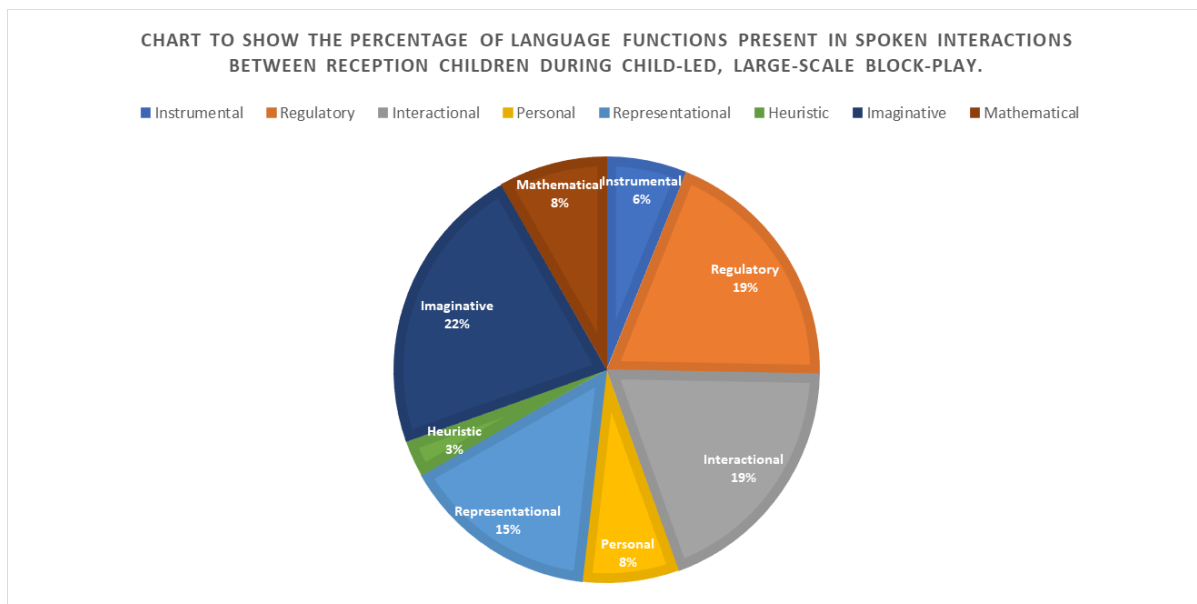
#### 4.3.2 Large-Scale Block Play and Language Function

One of the aims of this study was to discover how children use language during child-led play with large scale blocks. Out of the ten observations carried out in the Reception classroom, there were 318 coded verbal interactions recorded. Table 5 shows the number of occurrences for each language function across the 10 observations carried out by the researcher.

Number of occurrences of language function									
Date	Instrumental	Regulatory	Interactional	Personal	Representational	Heuristic	Imaginative	Mathematical	
14.3.24	4	1	3	0	7	0	7	1	
18.3.24	3	4	7	3	3	3	2	1	
21.3.24	1	2	10	2	2	0	7	0	
22.3.24	3	3	6	3	4	1	4	3	
9.4.24	4	17	9	7	7	0	8	3	
16.4.24	0	3	12	2	10	0	15	7	
19.4.24	3	7	0	1	1	0	10	5	
20.4.24	1	8	1	2	7	3	4	4	
22.4.24	1	14	3	1	3	1	6	2	
25.4.24	0	4	12	3	5	1	10	1	
Total	20	63	63	24	49	9	73	27	328

*Table 5. Number of occurrences of language functions across the 10 observations carried out.*

The chart below, presents the percentages of occurrences of language function recorded.



*Chart 2. Chart to show the percentage of language functions present in spoken interactions between Reception children during child-led, large-scale block-play.*

As in previous studies, (Howe *et al.*, 2021 and Cankaya *et al.*, 2023) the general picture emerging from the analysis of the spoken language interactions is that this type of play supports children in using their imaginations and in applying imaginative talk to their play with 22% of the verbalisations including this function. Image 3 provides an example for how imaginative language was incorporated into play.



- 11 Child O- "You can play computer games" (leaves)
- 12 Child N- "Computer games? Yay!"
- 13 Child P- "and I can play on my tablet" (holds small block of wood)
- 14 Children N and P are observed 'typing' on their 'tablets'.
- 15 Child P- "You have to press play, okay?"
- 16 Child N- "play." ('presses' imaginary button)
- 17 Child O returns
- 18 Child P- "We're playing 'puter games".
- 19 Child O begins to hand out plastic shapes to Children N and P.
- 20 Child O- "rainbow for you, star for you. Cookies! You get three and You get 2."
- 21 Child N- "Why?"
- 22 Child O leaves and returns with another shape and hands it to Child N.
- 23 Child O- "Here's another one! You've got three. Now, you two share and they're both
- 24 strawberry they are. I made them at my work."
- 25 Children N and P mime eating.
- 26 Child O- "Yummy? Yeah?" She leaves and Children N and P continue to mime eating.
- 27 Child O returns with more star and rainbow shapes which she hands to the children.
- 28 Child N- "Mamma, Dadda can you take this away?" (Hands child O rainbow shape)
- 29 Child O- "Now I'm going to the doctor, so you all be good!"
- 30 Child N (holding wooden square) "this can be a camera".
- 31 Child P- "I'll press play."

*Image 12. Extract from Field Notes, 19.4.24, p.1, L11-31.*

The findings also suggest that this type of play provides young children with the opportunity to control and influence others and to interact with their peers with 19% of the interactions used to manipulate others in game play.

Results obtained in this study are not always consistent with findings from previous studies particularly when concerning the use of mathematical, instrumental, and heuristic language. Where previous studies have concluded that blocks provide young children with the opportunity to explore, find things out and develop their use of language linked to shape, space, and measure, (Verdine *et al.*, 2019 and Yang and Pan, 2021) the use of mathematical language during this study was limited. Whilst the children used the blocks creatively, positioning them to create different structures and shapes and exploring concepts such as symmetry and pattern, the corresponding language was not used by them.



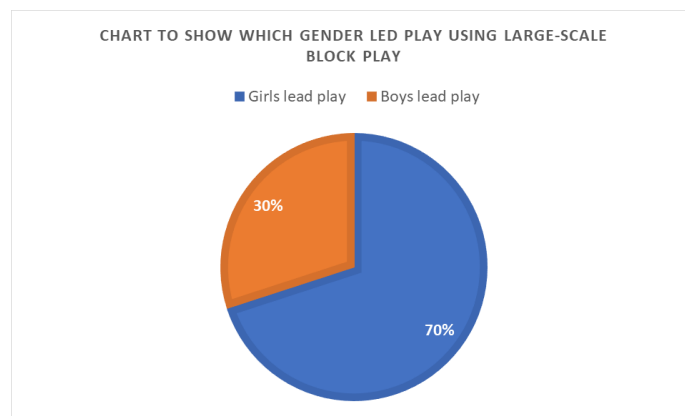
*Image 13. Example of block construction demonstrating mathematical pattern.*

An interesting finding of the data gathered is that when analysing the number of language occurrences which totalled 328, only 27 (8%) expressed mathematical concepts and 9 (3%) of the interactions expressed the desire to seek knowledge. Interestingly, the instrumental language function, often termed as the 'I want' function of language which one might expect to dominate the play of a group of four-year-olds only represents 6% of the utterances. However, prior studies (Ferrara *et al.*, 2011; Fisher *et al.*, 2013; Yang and Pan, 2021) involved the use of a teacher, parent or sibling leading the interactions, noting that children acquired a deeper understanding of geometric knowledge and produced more mathematical language, with adult guidance. By contrast, the observations made during the current study were whilst the children played freely without the guidance of an adult to potentially lead the language use and notice moments in the play during which this could be taught, modelled or developed further.

#### **4.3.3 Large-Scale Block Play and Gender**

An aim of this study was to determine whether gender affects children's engagement with large scale construction-based play. The participant group consisted of 18 pupils, 10 of whom

were girls and 8 of whom were boys. As shown by the chart below, of the ten visits to the field, seven play interactions were led by girls or involved only girls and 3 were led by or involved boys during the period of observation. This was not selective; the whole class were able to move freely around the environment and enjoy the variety of provision on offer.



*Chart 3. Chart to show which gender led the play during child-led, large-scale block-play.*

These findings contrast to the research of Chapman (2016) and Hjelmer (2020), who observed that children will engage in play which is related to what they perceive as 'normal' for their gender with boys using large construction materials as part of their play and girls opting for creative activities such as drawing and painting. These findings support the views of Tembo and Benham (2023, p.114) that it is not appropriate for educators to 'police the agency of the child in their play' when considering equipping the setting with play resources and ensure children do not experience constraints that limit their self-expression.

However, as in previous studies (Taş, 2018; Chapman, 2016), the analysis of the data from this study confirms that children will often mimic what they have witnessed in their home environments or through family experiences and performing as their assigned gender (Butler, 1993) and highlighting how early experiences can shape a child's ideas about who they are

and how they should be. This was particularly evident in the play observed which was led by the girls which involved domestic play, beauty treatments and putting on a talent show.



Image 14. Nail treatments in the 'beauty salon.'

- 11 Child O- 'Are you open?'
- 12 Child C- ['typing' on block] to Child O- 'Go next door and see my other person.'
- 13 Child O moves into another area of block play [an elevator]. Child C continues 'typing.'
- 14 Child O- 'up, up, up, up here!' [gets out of 'elevator']
- 15 Child C- 'Hello, are you ready to get your nails done?'
- 16 Child O- 'oh yes I am!'
- 17 Child C- 'Sit here ma'am.'
- 18 Child O- [laughing] 'ma'am?!'
- 19 Child C- 'Sit down here. Let's paint your toe tails.' [mimes painting nails and then uses
- 20 wheels of small toy car to 'file' fingernails']. 'Done!'
- 21 Child J- 'I've got more money.' [Child C takes this.]
- 22 Child O- 'here's your dollar bucks'.
- 23 Child C- 'you're welcome!'
- 24 Child O- 'can I go to school now?'
- 25 Child C- 'you can, just tell the elevator where to go.'
- 26 [Child O gets into 'elevator']
- 27 Child C- 'down, down, down!'
- 28 Child G enters play
- 29 Child C- 'hello ma'am. Do you have a problem with your eyebrows?'

Image 15. Extract from Field Notes, 16.4.24, p.1, L11-26.

An interesting side finding was that when the boys dominated the play, it was influenced by what they had experienced from the teaching and learning experiences and this area of the

classroom was used by them to consolidate learning which included occasions when they attended the local Church with their class teacher to learn about religious practices and topic work linked to space and pollution as demonstrated by the extract below.

- 22 Child H "I want to go to the beach."  
23 Child L steers for a few seconds "Right, here is the beach."  
24 Child L lowers the block. "Now here's the beach. You have to clean up the beach. You have to  
25 clean the beach! Yeah, clean the beach."  
26 Child L places block back, "There's too many in this boat. Only one allowed or maybe just 2."  
27 He climbs back in.

*Image 16. Extract from Field Notes, p.1, L22-27.*

These findings may warrant further exploration which will be discussed in the next chapter.

## **5. Conclusion and Recommendations**

### **5.1 Introduction**

In this qualitative research project, I aimed to investigate how large-scale block play links to the Welsh Government's release of the Five Development Pathways (Welsh Government, 2022) for the Early Years Curriculum. The recent curriculum reform in Wales has recognised the growing need to adapt teaching and learning experiences to holistically meet the learning styles and developmental stages of our youngest learners (Allignham and Brinning, 2023, p. 26). The study was designed and carried out using the principles of ethnography, and employed a qualitative methodology whereby the researcher was a participant within the setting (Coffey, 2018, p. 44) to acquire a deep understanding of themes and behaviours of the participants (Kornuta and Germaine, p.55). Throughout the study, the researcher spent time immersed in the block-play area of Reception class setting to gain insights into the behaviour of the participants during their child-initiated play and the views of four practitioners who worked in the setting.

## 5.2 Summary of findings

**RO1: Determine whether the use of large-scale block play supports pupils in attaining the Five Development Pathways during child-led play.**

Pupils demonstrated four of the Five Development Pathways (Welsh Government, 2022) consistently during their play with the large blocks. Well-being and a sense of belonging were evident in how they engaged in the play, interacted with each other and sustained interest in their chosen activities. They communicated with one another throughout the play using a variety of language purposes and utilised other elements of communication such as mark-making and writing to create signs and other literature to enhance their play. Exploration of shape, space and measure was also evident in the diverse creations the pupils constructed however, the physical element of the pathways was lacking, and pupils were limited to lifting and carrying the blocks.

**RO2: Investigate whether gender differences affect engagement with large-scale block play.**

Analysis of the play periods indicates that despite the findings of previous research, unexpectedly, the girls engaged more with the large-scale blocks than the boys. This was an interesting outcome, and explorations of how mixed gender groups and the use of more non-binary play materials impact the play choices and gender views of young children would be a worthwhile choice for future research. However, observational data confirmed the findings of previous research with the girls opting to lead more domestic play scenarios and the boys leading play narratives influenced by their experiences from teaching inputs and active play such as that of Church and weapon play.

**RO3. Determine whether large-scale block play limits children to using mathematical and spatial language during child-led play.**

Results obtained from the analysis of the spoken language interactions during child-led play suggest that large-scale block-play provides the opportunity for children to use their imaginations and apply imaginative talk to their play. However, occurrences of mathematical language were minimal, and whilst the views of the practitioners in the qualitative survey indicated that the resources would encourage the use of mathematical language, the verbalisations of the participants recorded during the play periods did not reflect this. However, that is not to say mathematical concepts were not present in the children's free play, as there were occurrences where the participants were observed exploring concepts of space, shape, position, measure, and pattern but without the interaction of the teacher, opportunities to promote and encourage mathematical language use and to model language were missed as the observations were made during periods of child-led play.

**5.3 Research strengths and limitations**

The study achieved answers to the objectives it set out to investigate by use of an appropriate research methodology that enabled the collection of suitable data.

The study was qualitative and practice-based and so the researcher acknowledges that there were weaknesses beyond their control (Kornuta and Germaine, 2019). This included the chosen site and a limited sample of participants to gain rich perspectives both of which were not randomly selected but known to the researcher. The research carried out during this study is a snapshot of block play in one Reception class therefore findings are not generalisable.

#### **5.4 Areas for Future Study and Recommendations**

I enjoyed the experience of conducting a research project. It has enabled me to think differently when planning the classroom environment and considering opportunities for children to experience uninterrupted free play with ambiguous resources such as blocks. Each time I analysed the data, reviewed the findings and discussed them with my tutor during our supervision sessions, I learned something new about the unique role blocks can play in the classroom in attaining the Five Development Pathways (Welsh Government, 2022) and how children use this classroom resource to enhance their learning through play.

This study aimed to find out if block play could support learners in attaining the pathways outlined in government guidance. The research has demonstrated that the use of block play in the early years provides pupils with opportunities to develop a range of cross-curricular skills including language exploration. The knowledge from this study could be further extended and advanced during a longer-term study with a larger sample group during different times of day, in different locations such as the outdoors or at varied points during the academic year to increase the generalisation of the present findings. Additionally, whilst the present study examined how children use language during block play, there was no presence of the Welsh language element of the curriculum therefore future studies could examine if and how Welsh is used by children during free play in an English-medium setting. Mixing gender groups could also be a worthwhile line of enquiry as several of the observations in the present study involved just girls or boys. It would be interesting to observe this type of play in older year groups as this would provide a deeper understanding of how gender influences play choices and whether the stereotypical play demonstrated by the girls becomes more embedded as they age or if their play becomes more diverse. More inclusive



practice won't necessarily occur at a small-scale individual level such as that of one Reception classroom. A wider, collective approach is needed to support young children in shaping their identities.

Future studies examining this type of play could also focus on the classroom environment itself and how block play relates to other areas of an enabling environment, examining further how resources are used by young children to enrich their play. This could also include how block play in the outdoor environment affects the level of physical development in young children as this was not evident in the findings of the present study. The role of the adult within block play could also be considered an area for future study. As noted by Wood (2020) and Campbell-Barr and Tregenza (2023) despite the increased attention on the development of the child, some practitioners continue to struggle to balance adult-directed learning with play-based approaches resulting in a conflict between formalised statutory frameworks and self-directed learner development in the early years (Wood, 2020). The participants in this study demonstrated many key skills during independent play, however, there were occasions when the presence of a well-trained, enabling adult would have advanced their understanding and play further. Therefore, the role of an enabling adult during block-play is a worthwhile exploration for future study.

### **5.5 Dissemination of Findings**

As it is recognised that a teaching profession that is supported in and shares in its professional learning will ensure the attainment of quality learning outcomes for pupils (Sachs, 2007), I intend to share the findings of the research with the staff of my setting during one of two planned INSET days at the beginning of the new academic year (Appendix H). The school is part of a federation with another setting and staff and governors from the other site will also

receive this information to enhance their understanding of how block play can align with the Five Development Pathways (Welsh Government, 2022). I hope to maintain contact with my university supervisor to further disseminate the findings of this research to future early years teachers.

## APPENDIX A: Gatekeeper Letter

Dear [REDACTED], (Headteacher)

As part of my studies towards a Master of Arts degree in Education at the University of Wales Trinity Saint David, I am hoping to complete a small-scale research project to gain a better understanding of how block play links to the new Quality Play Framework released by the Welsh Government. My research question is *Does block-play support pupils in achieving the Five Development Pathways?* I am interested in finding out whether large scale block play supports pupils in attaining the 5 Development Pathways which underpin the Welsh Government's Early Childhood curriculum framework. The pathways I will be examining are:

- Belonging
- Communication
- Physical Development
- Well-Being
- Exploration

I hope to observe the children during their play and talk to practitioners about their views and understanding of block play. I am seeking permission for this to be conducted from your setting. The research will follow the approach of a mixed-methods study using ethnography, a well-established approach in the field of early childhood research. If conducted in the Reception class, the research will be carried out in a 'naturalistic' environment, the classroom which will support me in capturing detailed illustrations to gain an understanding of whether block play is useful in achieving the Five Development Pathways.

The information gathered will be used in my dissertation. All names, locations and identifying features will be changed to ensure confidentiality and anonymity throughout the project.

Permission to take part will be sought from all participants, including informed consent from the children, who will be offered the opportunity to take part and the ability to withdraw from the research at any time. I intend to use age and stage-appropriate participatory methods to engage and explain the project to the children, and to ensure that the research is conducted ethically by use of a child-friendly leaflet which will be read to the children and sent home for parents and carers to revisit with them.

An ethics form has already been submitted and approved by the University Ethics Committee and full ethical consideration will be given to the full process to ensure "no harm is done". I will also be supported throughout via supervisory meetings from my supervisor.

If you have any questions relating to this project, do not hesitate to contact me.

Yours sincerely,

[REDACTED]

Please initial to confirm your understanding of the study and that you are happy for your organisation to take part and for your facilities to be used for the project.

1. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information and ask questions and have these answered satisfactorily.
  
2. I understand that participation of our organisation and students/members in the research is voluntary and that they are free to withdraw at any time, without giving a reason and that this will not affect legal rights.
  
3. I understand that any personal information collected during the study will be anonymised and remain confidential.
  
4. I agree for our organisation and learners and staff to take part in the above study.

Name of Gatekeeper:

Date:

Signature:

Name of Researcher:

Date:

Signature:

## APPENDIX B: Practitioner Letter

Dear [REDACTED] (practitioner),

As part of my studies towards an MA in Education at the University of Wales Trinity Saint David, I am hoping to complete a small-scale research project to gain a better understanding of how block play links to the new Quality Play Framework released by the Welsh Government. My research question is Does block-play support Reception Pupils in achieving the Five Development Pathways? I am interested in finding out whether this type of play supports pupils in attaining the 5 Development Pathways which underpin this new Quality Play Framework for the Early Years. The Five Development Pathways which I will be investigating are:

- Belonging
- Communication
- Physical Development
- Well-Being
- Exploration

I am writing to seek permission from you as governor for this to be conducted in your school setting. The research will follow the approach of a qualitative study using ethnography as the use of qualitative methods is a well-established approach in the field of early childhood research. If conducted in your Nursery/Reception class, the research will be carried out in a 'naturalistic' environment, which will support me in capturing detailed illustrations to gain an understanding of whether block play is useful in achieving the Five Development Pathways. The information gathered will be used in my dissertation. All names, locations and identifying features will be changed to ensure confidentiality and anonymity throughout the project.

Permission to take part will be sought from all participants, including informed consent from the children, who will be offered the opportunity to take part and the ability to withdraw from the research at any time. I intend to use age and stage-appropriate participatory methods to engage and explain the project to the children, and to ensure that the research is conducted ethically by use of a child-friendly leaflet which will be read to the children and sent home for parents and carers to revisit with them.

An ethics form has already been submitted and approved by the University Ethics Committee and full ethical consideration will be given to the full process to ensure "no harm is done". I will also be supported throughout via supervisory meetings from my supervisor.

If you have any questions relating to this project, do not hesitate to contact me.

Yours sincerely,

[REDACTED]

Please initial to confirm your understanding of the study and that you are happy for your setting to take part and for your facilities to be used for the project.

1. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information and ask questions and have these answered satisfactorily.
  
2. I understand that participation of our organisation and students/members in the research is voluntary and that they are free to withdraw at any time, without giving a reason and that this will not affect legal rights.
  
3. I understand that any personal information collected during the study will be anonymised and remain confidential.
  
4. I agree for our organisation and learners and staff to take part in the above study.

Name of Practitioner:

Date:

Signature:

Name of Researcher:

Date:

Signature:

## APPENDIX C: Parent Consent

Dear Parents/Carers,

I am studying towards a Master of Arts degree in Education at UWTSD. As part of my final dissertation, I am hoping to complete a small-scale research project to gain a better understanding of how Reception children engage with block play by observing the children during their play and talking to practitioners about their views and understanding of the topic. The information gathered will be used in my dissertation. All names, locations and identifying features will be changed to ensure confidentiality and anonymity throughout the project.

I am asking for your permission for you and your child to take part in the process which will entail the following involvement:

1. For observations of your child to be made during their play with blocks. Your child will have the choice of whether to join in or not, to decide how long they spend engaged in this play and can change their mind at any point. The comments your child makes will be anonymised and used to support the research.
2. Observations of their play are to be recorded using video recording.
3. Photographs of their play and the structures they build are to be recorded using an iPad camera.

If you do feel able to support me in this project, please complete the attached permission slip and return it to school by Wednesday 20<sup>th</sup> March 2024. If you change your mind at any point or have any questions about the research, please do not hesitate to contact me at the number below. Your child should feel no pressure to take part and can withdraw at any point.

Yours sincerely,

[Redacted]  
[Redacted]

I give permission for my child .....to take part in the block play research project to be conducted at [Redacted] during April 2024.

Signature.....parent/ carer Date: .....

I give my permission for photographs taken of my child..... to be used in the project. I understand that faces will not be identifiable in photographs used outside of the school and digital images will be destroyed or deleted after use.

Signature.....parent/ carer Date: .....

I give my permission for video recordings taken of my child..... to be used in the project. I understand that faces will not be identifiable in photographs used outside of the school and digital images will be destroyed or deleted after use.

Signature.....parent/ carer Date: .....

# APPENDIX D: Informed Consent Leaflet

**Research into Language and Block Play**

This information sheet has been designed to try and answer some questions you may have about research. You may share it with your parents/guardians and share your feelings on the attached sheet.

**What is Research?**  
Research is a bit like being a detective! It is about investigating something and collecting evidence so you can learn more about it.

**What is this research about?**  
It is all about block play and how we talk in different ways when we are playing in this area of the classroom.

**Why have you been chosen to take part?**  
I am a grown-up, so I don't know exactly what is like to be a child playing with blocks. The best people to tell me are children so your views and how you play are important to me.

**What will you be doing?**  
You will be playing with the large blocks and planks in small groups with your friends.


**Who else will be involved?**  
Your teachers will be asked about their views on block play.

**Do you have to take part?**  
You have the choice to take part and do not have to if you don't want to. Nobody will be cross or upset if you choose not to.


**Will anyone be told about what you say and do?**  
I will need to write about what I learn but nobody will know who said or did what. If you tell me something that worries you, I will have to tell your head teacher.

Please tick the appropriate box below and return your completed form to school by Friday 15<sup>th</sup> March 2024.

I am happy to take part in this project.



I am not happy to take part in this project.



My name is : \_\_\_\_\_



## APPENDIX E: Qualitative Questionnaire

### Large Scale Block Play in Reception

1. How do the children in your setting engage with the large blocks?

2. What emotions and feelings do the children express when working in the block area of the classroom?

3. How do you feel block play links to the areas of the early years curriculum?

4. As a practitioner, do you feel that the children engage differently with the blocks depending on their gender?

**APPENDIX F: Observation Schedule**

<b>March 2024</b>				
Monday 11 <sup>th</sup>	Tuesday 12 <sup>th</sup>	Wednesday 13 <sup>th</sup>	Thursday 14 <sup>th</sup>	Friday 15 <sup>th</sup>
		Visit class, speak to children about the project explain role and ethics. Gather consent forms from class teacher.	<b>Observation 1</b>	
Monday 18 <sup>th</sup>	Tuesday 19 <sup>th</sup>	Wednesday 20 <sup>th</sup>	Thursday 21 <sup>st</sup>	Friday 22 <sup>nd</sup>
<b>Observation 2</b>			<b>Observation 3</b>	<b>Observation 4</b>
<b>April 2024</b>				
Monday 9 <sup>th</sup>	Tuesday 10 <sup>th</sup>	Wednesday 11 <sup>th</sup>	Thursday 12 <sup>th</sup>	Friday 13 <sup>th</sup>
<b>Observation 5</b>	Residential Trip			
Monday 16 <sup>th</sup>			Thursday 19 <sup>th</sup>	Friday 20 <sup>th</sup>
<b>Observation 6</b>			<b>Observation 7</b>	<b>Observation 8</b>
Monday 22 <sup>nd</sup>			Thursday 25 <sup>th</sup>	Friday 26 <sup>th</sup>
<b>Observation 9</b>			<b>Observation 10</b>	

## APPENDIX G: Observational Notes

1 22.3.24

2

3 Observation of children's block play conducted on Friday 22<sup>nd</sup> March 2024 in the Reception classroom of  
4 [REDACTED]. Participants included 1 pupils from the Reception cohort during their child-initiated time. The  
5 blocks were stacked against the wall of the classroom and a clear carpet space was available for the  
6 children to freely construct, explore and play. Field notetaking was live using iPad/Microsoft Word app  
7 and observations were recorded as they happened.

8

9 Venue: [REDACTED]

10 Time in 9.47am

11 Time out: 10.03 am

12

### 13 Condensed account

- 14 • Child G- tractor ride at grandad's farm, 'Guys, why don't we make a tractor like my grandad?' 'Yes,  
15 yes!'
- 16 Child C- 'I like tractors and I like combines.'
- 17 • wanted to build one
- 18 • Child C and F- building using blocks. C 'the block is heavy, I can't lift it.'
- 19 • 'Put it on there. No not like that, like that.' [arranges] 'driving seat.'
- 20 • Child I left but returned with John Deere toy. "Look at this, did you know it's got two big tyres and  
21 two small ones?"
- 22 • Child G "Yeah and a steering wheel down like that" [holds wheel horizontally to show]
- 23 • Children G, C and F enter 'tractor.' 'I'm the passenger, I'm the passenger.'
- 24 • Group agreed they need tyres and a steering wheel which was sourced outdoors- child C "I will  
25 get them tyres now"
- 26 • Child F "And me. I can carry them."
- 27 • Child I- wants to join but doesn't fit inside. "Oh no- puncture"- Child I. Leaves. Returns with  
28 toolbox and hi vis.
- 29 • 'Fixing' with screwdriver.
- 30 • 'Wheels on the Bus'- 'Wheels on the Tractor'
- 31 • Child I- stop and go signs. Sheep on road.

32

### 33 Expanded Account

34 A group of children are playing in the large block area. Child G was very excited about visiting his  
35 grandad's farm where she got to ride on the tractor. Expresses the desire to build a tractor. Child 2 begins  
36 dragging large blocks and stacking them. Child G says he wants to build a John Deere like Grandad has.  
37 Child I leaves the play. Children C and F begin stacking blocks which Child G rearranges. 'Put it on there.  
38 No not like that, like that.' He creates 'driving seat.' Child C requests help from Child F- 'the block is heavy  
39 I can't lift it by myself.' Child I returns with a John Deere tractor she found in the box of wheeled toys.  
40 "Look at this, did you know it's got two big tyres and two small ones?"

41 Child G "Yeah and a steering wheel down like that" [holds wheel horizontally to show them]. The children  
42 look at this and agree they need a steering wheel and tyres. Children C and F leave the play to bring tyres  
43 from the outdoor loose parts area. Children G, C and F enter their creation. Child C with steering wheel in  
44 hand. 'Child G-I'm the passenger, I'm the passenger.' Child I attempts to join inside tractor but realises there  
45 isn't room for him. He observes the others for a minute or so and then says 'Oh no! There is a puncture in  
46 the tyre.' He leaves the play and returns with a hi-vis jacket and a toolbox. He begins 'fixing' with a  
47 screwdriver tool. Child C places the tractor toy on the side of their construction 'ta-dah!' Children G, F and  
48 C are seated 'in the tractor', steering using a wheel. 'In a tractor, the steering wheel is down like this' Child  
49 G. Child 2 begins singing 'The Wheels on the Bus' which is quickly changed by Child G to the 'Wheels on the  
50 Tractor.' The other children start singing the wheels on the tractor go round and round. Child I adds 'stop  
51 and go' signs to the play 'There's sheep in the road!' he says.

### 52 Reflections

53 The play was predominantly led by one child's experience.

54 The children linked learning- the nursery rhyme had been a focus rhyme of that week in class, and they  
55 were able to innovate some vocabulary and make their rhyme up based on prior learning.

56 Much of the play was based on real-life experiences- sheep on the road, roadworks, punctures and was not  
57 fantasy play. Child, I adapted his role so he could still be a part of the narrative.

58

59 Emerging questions- is the play scenario always guided/led by one individual and real-life experiences? Is  
60 the block play limiting physical development?

61

### 62 5 Development Pathways

63 Belonging- drawing from experiences, assuming and changing roles, cooperative play, sustained play.

64 Communication- the expression of wants -the nursery rhyme.

65 Exploration- tractor and its features.

66 Physical- little physical but some children lifted blocks.

67 Well-Being- playing cooperatively, expressing feelings, sustained play.

# Block Play and the 5 Development Pathways

MA Education 2024

## Background

- As the world continues to readjust from the turmoil of the COVID-19 pandemic, international conflict and environmental changes, play is even more important in providing young children with the space to make sense of and understand the world and develop their sense of self (Stewart, Corr and Henderson, 2023).
- Central to the agency of the child is play, with children as empowered agents in their learning.
- Educators acknowledge that the pandemic has impacted early childhood education, change is also evident in recent policy reforms and reviews in Wales.
- The Welsh Government has recognised the need to reflect young children's learning styles and developmental stages (Allingham and Brinning, 2023).

# The 5 Development Pathways

- The strong emphasis on play and learner agency runs through the Curriculum for Wales (Welsh Government, 2022) with play, play-based learning, being outdoors and authentic learning contexts outlined in the Five Development Pathways for Early Years.
- Belonging, Communication, Exploration, Physical Development and Well-Being which aim to 'represent a child's right to experience an environment where play is valued for itself and as part of learning.' (Welsh Government, 2023, p.26)
- An increased interest in the influence of the early pioneers including that of Froebel and a holistic approach to teaching and learning has emerged in light of recent curriculum reform.

## Why Block Play?

- Recent findings which can be considered within the context of this study and the resurgence in Froebelian attitudes to early years pedagogy (Bryce-Clegg, 2012; Ephgrave, 2018 and Tovey, 2017) present an argument for larger play areas which are resourced using ambiguous core resources such as crates and fabrics in place of imitations of real-life objects to develop imaginative play, social skills and extend their talk opportunities.
- National and international curriculum frameworks for early years promote the use of versatile, natural, and open-ended resources to develop children's imaginative and creative skills and promote curiosity and natural exploration, (Finnish National Agency for Education, 2018; Education Scotland, 2020 and Welsh Government, 2023). These new curriculum policies can be considered to reference the theories of the early pioneers, providing open-ended 'gifts' to create curiosity and interest (Froebel, 1826).

# The Aims of the Project

The objectives for this research study have emerged from a practice-based issue, that is whether the Five Development Pathways can be achieved through engagement with open-ended resources specifically large-scale blocks and gaps within the existing literature, that is whether this type of play limits children to using mathematical language and whether gender influences the kind of play children engage in during playful interactions.

- **RO1.** Determine whether large-scale block play supports pupils in attaining the Five Development Pathways during child-led play.
- **RO2.** Investigate whether gender differences affect engagement with large-scale block play.
- **RO3.** Determine whether large-scale block play limits children to using mathematical and spatial language during child-led play.

# Methodology

- Parental consent and consent from school staff were obtained to carry out the project.
- The environment was changed, shelving units were removed to allow for more space for children to construct using large blocks
- Children were observed during Amser Dewis for six weeks. A total of 10 observations were carried out.
- The language interactions were transcribed and analysed to see how the children used language.

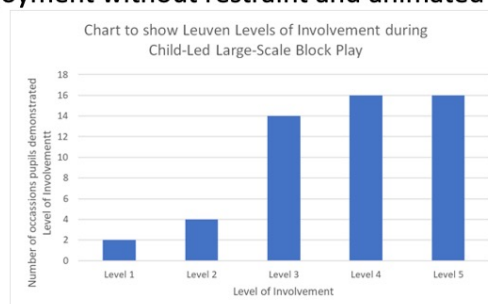


# Methodology

- Qualitative research
- Small sample size- practice-based, 'selection bias' (Thomas, 2023, p.139) Purposive sampling, specifically convenience sampling.
- Contextual using naturalistic observation
- Observations, field notes, qualitative questionnaire
- Data coded and analysed using thematic analysis- 7 Language Functions (Halliday, 1978)
- Ethical considerations
- Reflexivity – Role of practitioner-researcher

## Data Analysis- Observational Data Pupil Engagement

- Leuven Scale observations measured the levels of pupil engagement in the play process and participants were assigned a score for involvement and well-being to 'structure interpretations of snapshots in time' (Arnott, McGowan and Delafield-Butt, 2021 p.140).
- During the Leuven Scale qualitative assessment, across the 10 observations carried out, there were 14 occurrences of Level 3 involvement and 16 occurrences of Level 4 and 5 engagements suggesting that block-building activities support children in engaging with and sustaining intense periods of activity. These signs included a willingness to continue and complete the task when elements of the construction had broken or collapsed, expressing confidence and self-assurance, enjoyment without restraint and animated expressions (Laevers, 1993).



# Data Analysis- Observational Data Language

Out of the ten observations carried out in the Reception classroom, 318 coded verbal interactions were recorded. These were grouped according to language function to see how children used language during play using Halliday's Seven Functions of Language (Halliday, 1978).

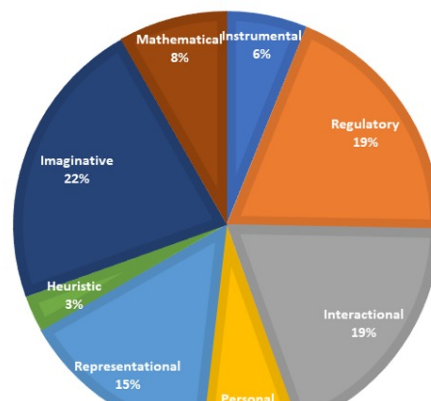
Code	Description
Instrumental	This is considered to be the 'I want' function of language which serves to satisfy the child's needs.
Regulatory	It is the 'let's do' function of language and is employed by a child to control the behaviour of others.
Interactional	The 'me' and 'you' function of language whereby a child interacts with those around them and who are important to them.
Personal	This function of language is employed to express and assert a child's own individuality and awareness of their place in the environment.
Heuristic	The 'tell me why' function of language and relates to children seeking information to learn and acquire knowledge.
Imaginative	The 'let's pretend' function of language whereby a child creates an environment of its own.
Representational	This is considered to be a sophisticated step in language use whereby information is exchanged with another.
Mathematical	Language concerning number, position, direction, shape, space, geometry and measure.

## Findings- Language

As in previous studies, (Howe *et al.*, 2021 and Cankaya *et al.*, 2023) the general picture emerging from the analysis of the spoken language interactions is that this type of play supports children in using their imaginations and in applying imaginative talk to their play with 22% of the verbalisations including this function. The findings also suggest that this type of play provides young children with the opportunity to control and influence others and to interact with their peers with 19% of the interactions used to manipulate others in game play.

CHART TO SHOW THE PERCENTAGE OF LANGUAGE FUNCTIONS PRESENT IN SPOKEN INTERACTIONS BETWEEN RECEPTION CHILDREN DURING CHILD-LED, LARGE-SCALE BLOCK-PLAY.

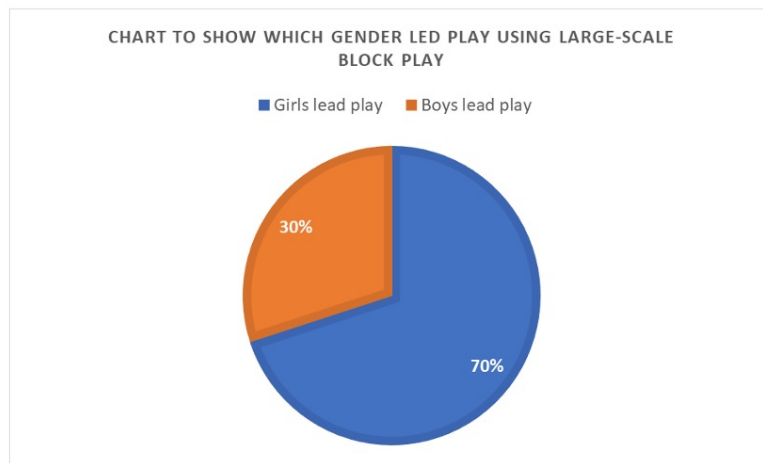
■ Instrumental ■ Regulatory ■ Interactional ■ Personal ■ Representational ■ Heuristic ■ Imaginative ■ Mathematical





# Findings- Gender

The participant group consisted of 18 pupils, 10 of whom were girls and 8 of whom were boys. As shown by the chart below, of the 10 visits to the field, 7 play interactions were led by girls or involved only girls and 3 were led by or involved boys during the period of observation.



# Findings- Gender

The analysis of the data from this study demonstrates that children will often mimic what they have witnessed in their home environments or through family experiences. This was particularly evident in the play observed which was led by the girls which involved domestic play, beauty treatments and putting on a talent show.

- 11 Child O- 'Are you open?'
- 12 Child C- ['typing' on block] to Child O- 'Go next door and see my other person.'
- 13 Child O moves into another area of block play [an elevator]. Child C continues 'typing.'
- 14 Child O- 'up, up, up, up here!' [gets out of 'elevator']
- 15 Child C- 'Hello, are you ready to get your nails done?'
- 16 Child O- 'oh yes I am!'
- 17 Child C- 'Sit here ma'am.'
- 18 Child O- [laughing] 'ma'am?!'
- 19 Child C- 'Sit down here. Let's paint your toe tails.' [mimes painting nails and then uses wheels of small toy car to 'file' fingernails]. 'Done!'
- 20 Child J- 'I've got more money.' [Child C takes this.]
- 21 Child O- 'here's your dollar bucks'.
- 22 Child C- 'you're welcome!'
- 23 Child O- 'can I go to school now?'
- 24 Child C- 'you can, just tell the elevator where to go.'
- 25 [Child O gets into 'elevator']
- 26 Child C- 'down, down, down!'
- 27 Child G enters play
- 28 Child C- 'hello ma'am. Do you have a problem with your eyebrows?'

## Findings- Gender

An interesting side finding was that when the boys dominated the play, it was influenced by what they had experienced from the teaching and learning experiences and this area of the classroom was used by them to consolidate learning which included occasions when they attended the local Church with their class teacher to learn about religious practices and topic work linked to space and pollution

- 25 Child K- 'Welcome to Church!'  
26 Child Q- 'Baby shh you need to be quiet now.' [sitting on blocks with baby doll].  
27 Child G- 'Guys, we're in Church okay. You need to be quiet.'  
28 Child C- [holding paper] 'I'm standing up and reading. La-dee-la-dee-da.'  
29 Child K- 'I am the prees.'  
30 Child J- 'What's the prees?'  
31 Child G- 'Can I be the prees as well, in a minute?'  
32 Child K- 'ok but I need to do something first.'  
33 [Child K leaves play and returns 5 seconds later with a round wooden disc]  
34 Child G- 'Guys he's gone but you still gotted to be very quiet, okay?'  
35 Child Q- 'Baby shush.'  
36 Child K- 'you need to eat this okay?'  
37 Child G- 'yeah but first, but first you got to hold it up like this. Because that's what Father does.' [she holds up the disc] 'then we can eat it.'  
38 Child Q- 'But I don't want to eat it yet.'  
39 Child K- 'it's okay because it tastes nice it does.'  
40 Child Q- 'no!'  
41 Child G- 'Okay then now we have to say peace with you. Guys, you got to shake my hand, okay?'  
42 [Child K and J shake hands].  
43 Child C- 'Okay let's put our hands together now.'  
44 Child G- 'Guys, like this and you have to do the Sign of the Cross okay?'  
45 Child K- 'okay.'

## Findings- An Enabling Environment

An interesting finding was that pupils were also observed mark-making and writing for a purpose, creating tickets on the writing table for their 'talent show', a sign for the postman to identify their 'house' and paper money to use in their 'spa' highlighting the power of an enabling environment where play is 'the central agency of the child' (Stewart, Corr and Henderson, 2023, p.4), with children in control of their learning (Ephgrave, 2018) and confident to access and obtain a variety of resources to support their learning through play.



# Areas for Future Study

- Future studies could examine if and how Welsh is used by children during free play in an English-medium setting.
- Mixing gender groups would provide a deeper understanding of how gender influences play choices when children are given agency.
- A focus on the classroom environment itself, block play relates to other areas of an enabling environment and how young children use resources to enrich their play.
- Exploration of how block play in the outdoor environment affects the level of physical development in young children as this was not evident in the findings of the present study.

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