

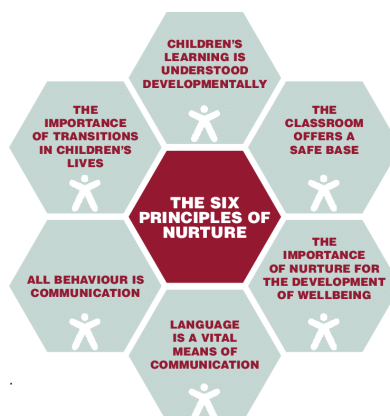
Final Report Action Research Grant, the role of Block Play in developing children's vocabulary through symbolic play in Primary One, Dalreoch Primary School.

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Overview

Our purpose in undertaking this research was to learn about the benefits of wooden block play in relation to communication and language development. Dalreoch Primary School was asked by the local authority to pilot a play-based pedagogy approach in Primary One. Primary One children are between the ages of 4 and 5 years old. Our research takes into account the 12 Features of Play (Bruce 2021) and the belief that play-based learning makes a vital contribution in providing a high quality learning environment. With support from our local authority, we were able to purchase a full set of large wooden hollow blocks and small unit blocks. These resonated with the heritage and legacy of Froebel's 'Gifts'. The children helped us rearrange the classroom to make space for a block area; children were invested in this area and excited by its creation.

The aim of this project was to provide a stimulating, high quality learning environment guided by the 6 Principles of Nurture (Lucas, Insley & Buckland, 2006) which are in line with our school ethos, and to demonstrate that blocks are a much-needed resource for Primary One.



Our original research objectives were aligned with the Froebelian principles as outlined by Helen Tovey (2020). These objectives were:

- to observe and analyse block play (*The central importance of play*)
- to observe and analyse symbolic play (*Creativity and the power of symbols*)
- to observe and analyse the impact on vocabulary and language development (*Freedom with guidance*)

Dalreoch Primary School is a local authority funded school in Dumbarton, a small town near Glasgow. The majority of our children live in Scottish Index of Multiple Deprivation (SIMD) areas 1 and 2 which are some of the most deprived parts of our local authority. 31% of children are living in poverty which is above the West Dunbartonshire average. There is a national poverty-related attainment gap in Scotland. Research suggests that the attainment gap in literacy and numeracy between children from low income and high income households starts early (Sosu & Ellis, 2015). To address this, we wanted to ensure we provided a high quality, language-rich learning environment. Block play is believed to make significant contributions to children's cognitive development (Cartwright, 1988) and we wanted to observe the impact of blocks on communication and language development. Covid-recovery plays an important part in the context of our setting. Children's language development did not seem as well developed as in previous years, therefore this was an area on which we wanted to focus. The introduction of a small number of blocks into our Primary One environment, and the interest from the children, prompted our desire to research the impact of blocks on language development. We observed immediate and noticeable changes in both the depth and breadth of children's communication and language skills whilst they played with the blocks.

We undertook narrative observations of children engaged in block play. The research set out to analyse the impact of block play and symbolic play on language development. The research provides evidence of the benefits of block play in Primary One. The 6 principles of nurture (Lucas, Insley & Buckland, 2006) complemented the Froebelian practice and children's relationships were observed to develop; relationships with both peers and other adults in the room. By affording children freedom with guidance to explore the environment, we observed developmental progress in language development and children learning by *doing*. Children grew in confidence and tried new things, for example, new vocabulary, mark making, and, latterly, attempting to spell words phonetically. We found that introducing blocks in Primary One helped with the transition process from nursery to school as all nurseries in West Dunbartonshire have a set of blocks. We observed an increase in reciprocal conversation and concentration; children began to wallow in their play for longer periods of time. We observed an increase in mark making and children using their individual floor books to document their own learning through photographs and writing.

Summary of achievements

The focus of our research changed from vocabulary on its own to communication and language development in general. We felt that focusing on vocabulary was too rigid and would not allow the project to be directed by the children and their interests. We noticed children engaging in language-rich play with their peers, often with one child taking the lead. Children who were quiet in other areas seemed to increase in confidence whilst playing with the blocks. We observed many instances of symbolic play and noticed how this type of play enhanced language development.

We have achieved a complete transformation of the learning environment, from a 'traditional' approach to child-led and play-based. Children have been afforded space and time in a rich learning environment where adults promote freedom with guidance.

Children appeared to be comfortable playing and building their own creations alongside their peers, but not necessarily discussing their creations. When observed closely, children were seen to be making connections and making the inner outer. Inner thoughts and knowledge were demonstrated through the outer creativity of block play. This learning could be extended and revisited to continue the process of making the inner outer and the outer inner. Children were observed to be recreating real-life situations; "Children need to master symbolic codes." (Bruce, 2005, p.116).

"It's bedtime now!"

"Tidy this up now before you go to bed!"

Two boys were playing together pretending that they were parents and it was night time. The blocks were "mess" that their children had to put away. At this stage, children's play was rather solitary however we noticed that children were beginning to converse with one another as they played with the blocks.

"I made a hospital...it has people in it." This child had watched a news story on television discussing Covid-19 hospital cases.

Other times, children were observed in deep discussion whilst explaining their creations to one another.

"See the propeller there? The bow is the front of the boat. The stern is the back. It's the same size as the Titanic."

This child had a good knowledge of the Titanic and used block play to represent the Titanic and other boats, real and imagined. He also shared new vocabulary with his peers and made use of the writing materials available in the new block area.

Similarly, children were seen to be engaged in high levels of discussion whilst creating structures together. We observed children allowing others into their play which promoted a sense of wellbeing and friendship in our learning environment, as shown in the data extract below.

Child A and B were working together to create a structure, discussing how they could keep the pet dry. Child C was then observed to join the play; commenting on the size; she picked up a block and added to the structure. Child A and B allowed this to happen and all three children worked together to completion. This demonstrated that the children were developing effective strategies for working together, side by side. They were gaining mastery of the blocks and using them in increasingly complex symbolic play (Gura, 1992).

Child A: "If you put this big bit on the top, that's like a roof. It will keep the hamster dry."

Child B: "Yeah the hamster can be all snuggled in here because it's warm. He's happy."

Child C: "Woah, that's really big!"

Child A: "I know. We are going to add more and more and make it higher, aren't we?"

Child B: "Yeah, that's what we're doing."

We were aware that we would need to approach this research as a team and utilised the expertise of the Class Teacher and Early Learning and Childcare Officer (ELCO) in Primary One. They were able to observe and record significant observations during periods of play that we would have otherwise missed. Throughout the course of the research, we noted the importance of our relationships with the Class Teacher and ELCO; having these positive relationships meant we could provide a nurturing environment and stay true to the 6 Principles of Nurture- (Lucas, Insley & Buckland, 2006). The adults in the classroom modelled positive interactions and communication. One notable outcome of the research was the deepened respect between adults and children in our class.

Originally *ThingLink*, an online platform for sharing photographs and videos, was to be used to share our learning with families and to try to ensure that families felt connected to their child's learning. This was particularly important as parents were not permitted to be inside the classroom due to Covid-19 restrictions. However, parents commented that they were able to access the school's website more easily and so the decision was made to use our website as a communication tool with parents. We also created an interactive web page using Microsoft Sway to showcase our learning, as well as a Jamboard to showcase the changes to our environment.

Research activity

All Primary One children were included in the research. We chose to undertake narrative observations as we wanted to provide children with unhurried time in which to play with the blocks. We wanted to be able to observe where the children were and start with the child, encouraging children to be autonomous learners (Matthews, 2003).

A full set of hollow and unit blocks was purchased; children were familiar with blocks from their time at local Early Learning and Childcare Centres (ELCCs). We felt this provided a sense of unity and connectedness, one of the Froebelian principles, and positively impacted the transition to school Tovey (2020). It also meant that children could learn autonomously and through self-activity and reflection which we felt helped us undertake narrative observations; children were engaged in high levels of play with an adult present to support or extend where appropriate Tovey (2020).

The 7 Stages of Block Play (Johnson, 1933) were used to support our observations. We spent time observing children at play; our initial observations included lots of stacking, bridging, and enclosures. After some time, we observed children building complex structures and then the incorporation of dramatic play. The 12 Features of Play (Bruce, 2021) were used to support our observations and helped us analyse what we saw.



After beginning our research, we realised that we were not present in the classroom for long enough to record all of the significant learning, the Class Teacher and Early Learning and Childcare Officer (ELCO) recorded observations to aid our research. Both the class teacher and ELCO were keen to learn more about Froebelian practice which resonated with Froebel's belief in the importance of knowledgeable, nurturing educators, as outlined by the Froebel Trust (Tovey, 2020).

Freedom with guidance played a major role in our research which is something we had not considered during the beginning stages. We wanted children to be autonomous learners and we believe play should be open-ended (Pratt, 1948). Time was given for children to reflect on

their learning and children were seen as individuals; we began with what the child could do. As researchers, we had to consider how to ensure we afforded children this guidance (Fisher, 2016). We joined children in the block play area, but avoided dominating play by initiating conversation. Instead, we responded to children, showing interest in their play as "participant observers" (Gura, 1992, p. 18). We observed children growing in confidence as they explained their creations to adults and/or peers.

The children in Primary One each have a personal learning journal and these were used heavily during the research to record observations. Children were able to add to these themselves and used them to record plans for their structures. These journals were also used as a means of reflection and provided a sense of unity and connectedness. At the end of the year, these journals are gifted to children and their families.

Due to Covid-19 restrictions, we were unable to invite parents/carers to the classroom to see our block area. To keep families involved, we utilised online platforms to showcase our learning. The children in Primary One were already familiar with documenting their learning using floor books, so we decided to extend this good practice for our project. This encouraged discussion, reflection, and gave children a direct voice.

The first thing we observed was that children who tended to flit from one area to another were engaged in block play for significant periods of time. We wondered if this was due to the fact that there was not an expected outcome from the adults in the room; children were

free to create what they wanted. Children were given freedom with guidance; the space to create, complemented by supportive adults who were available when needed.

We noticed that some children were very keen to share their creations with an adult and some children preferred to quietly create, without the desire to provide an explanation.

We observed children struggling when tidying away the blocks. We responded by adding labels to our boxes and noticed an immediate improvement. Putting the blocks away in the correct space seemed to give children a notion of completion and pattern.



We also recognised that some play needed to be continued after break or lunch. By creating a large space for blocks, children were able to leave their structures and return to them without huge interruption (Johnson, 1933).

Children had natural conversations, learning from each other and developing their communication skills. We were able to observe children representing first hand experiences and connections. One particular child has an interest in boats and was explaining to two others what a 'hull' was. This began a whole-class interest in designing boats, utilising the writing materials we had added to the area. Children were also keen to add the designs to their individual journals. We observed some children growing in confidence as they felt pride for their creations and had a desire to safely record the evidence in their journals, knowing that they were able to reflect upon their learning at any time. We observed children creating structures using both the large and small blocks, adding objects from other parts of the classroom to tell their story. For example, one child added dolls, lying down inside the blocks; this was a "hospital for sick people."



For our children, the language development was evident. Children learned new words through conversations with peers and through interactions with ourselves, the Class Teacher, and the ELCO. For example, children learned about symmetry. We observed children explaining what symmetry meant to their peers.

Child A: You need to put one block there. Then you need to put that at the next side. It's the same. That's symmetrical.

Through our observations, we noticed an increase in language use as well as the development of vocabulary. Children who did not normally interact with others gained

a new sense of confidence whilst showcasing their creations. We observed quiet but reciprocal conversations taking place amongst the children who did not wish to share with an adult. Children appeared to be more engaged in their play and we could see the impact across other areas. For example, boats being drawn, painted, and created with loose parts outside. This provided evidence for the holistic nature of learning and language development.

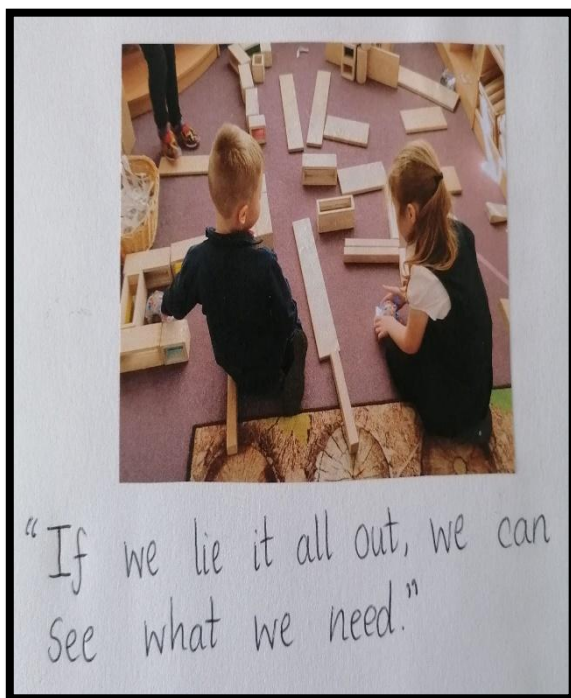


Conclusions

Narrative observations were found to be a useful tool with which to record learning. The Class Teacher and ELCO were able to utilise the observation templates and provide us with insightful observations. Observations were recorded and placed either in a folder created

specifically for our research or inside the children's individual learning journals. Going forward, we would be keen to use the same format for future research.

Most children were very comfortable using the blocks and displayed high levels of engagement and enjoyment. We observed numerous interactions between children, verbal and non-verbal; these interactions, over time, improved concentration and language development. Through observations, the researchers noticed more reciprocal conversations and children using new vocabulary with confidence. This had an additional impact on the wellbeing of the class members, meaning there was a positive effect on children's ability to play with one another and the development of meaningful relationships.



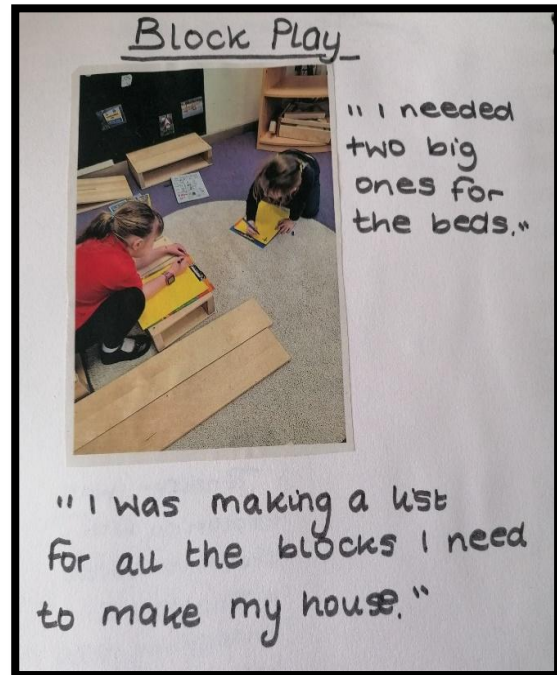
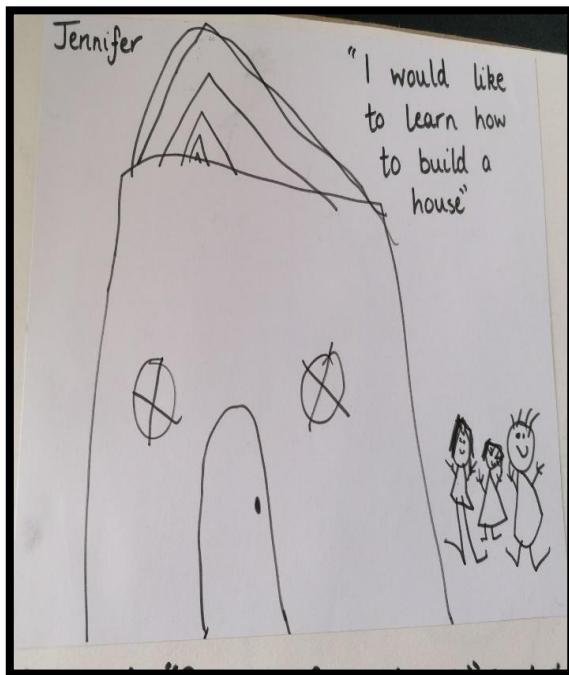
The 'power of symbols' was observed as children re-created real life experiences. Children were able to use prior knowledge to engage themselves and others in block play. Language was developed through the use of symbolic play.

As previously noted, most children were very comfortable playing with blocks which could be due to the fact all West Dunbartonshire ELCCs have been provided with a set of blocks. Having blocks in Primary One helped to aid a smooth transition from ELCC to primary school. Children were able to look through their nursery personal learning journal and reflect upon their block play at nursery. We remained true to the 6 Principles of Nurture (Lucas, Insley & Buckland, 2006) and were able to create a space where children felt valued and respected.

We believe that this research provides evidence that blocks should be available for children throughout their early years at school.

A small group of children were not overly interested in block play and it would be interesting to research into why this is the case for some. Although we found that most

children used the block play over the course of the research, two children did not. It could be that we did not successfully engage them with our chosen provocations. We observed that children who chose to mark make during play were not as eager to use the blocks. However, one child sometimes chose to draw a picture and then create it using blocks. This was in contrast to the majority of children who preferred to create using the blocks and draw and describe their structure afterwards. It is also interesting to note that this child began by listing all of the blocks she would need to build her house.



Learning

As a learning community, we aim to provide a nurturing environment for children and a reflective learning environment for educators. Froebelian Principles worked extremely well alongside Nurturing Principles to enhance the wellbeing and holistic nature of our environment. 'To learn a thing in life through doing is much more developing, cultivating and strengthening than to learn it merely through the verbal communication of ideas' (Froebel 1885:2). One of the 6 Principles of Nurture relates to how children's learning should be understood developmentally. Children in our setting were given the freedom to explore their environment by *doing*. We noticed children's relationships develop as their confidence increased; they were in a safe environment where they trusted their peers and the adults around them. This relates to the nurturing principle that states that the classroom should be a safe base (Lucas, Insley & Buckland).

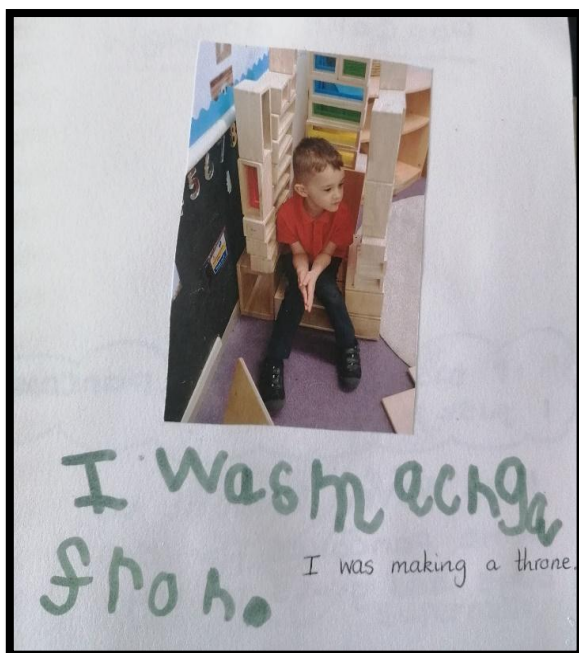
We originally noticed the joy that the blocks brought to the children and the increased interaction between peers. Through our research, we learned about the benefits of block play on early literacy. We observed an increase in sophistication of children's vocabulary and oral language as they learned new words from their peers and the adults around them.

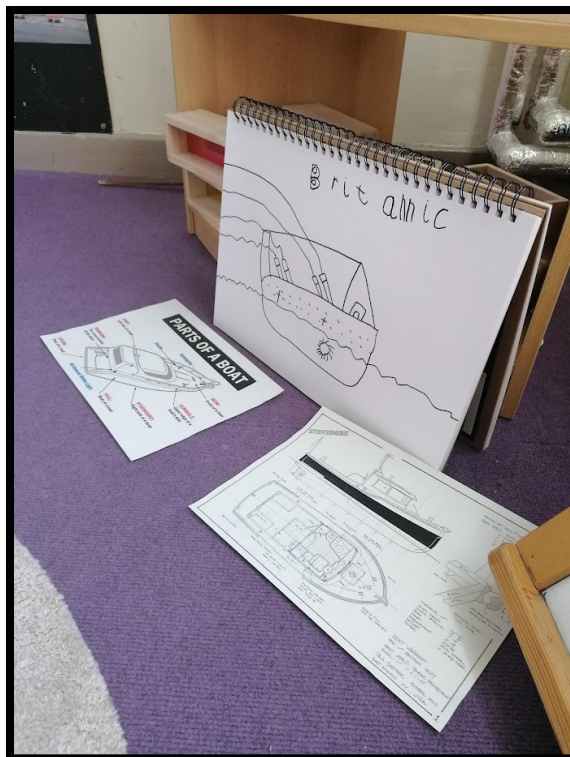
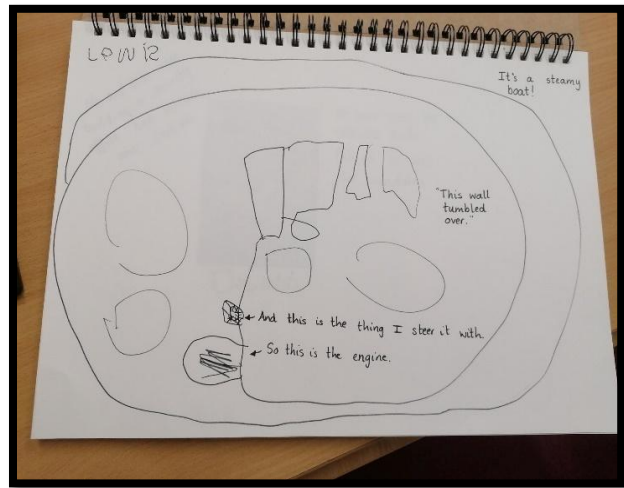
We also saw an increased level in concentration which further contributes to the development of literacy skills. We observed children's confidence increasing as they mastered new skills and gained new knowledge. As children play with blocks, they develop their fine motor skills and coordination which encourages mark making and helps when children begin to write (Stroud, 1995).



To provide a literacy-rich block play area, we looked at previous research and found suggested materials such as books, magazines, Post-its, and various types of paper (Nueman and Roskos, 1990). We tried to ensure we provided resources that met the three criteria of: authenticity, utility, and appropriateness. We found that the children in our class responded well to books and paper on clipboards. We provided a variety of writing utensils and found children chose fine-tipped black pens for the majority of their mark making. We provided graph paper in various styles but found that children usually selected blank paper. However, when provided with specific plans of objects for which they had a passion, for example boats, most children selected these.

Children's transition from ELCC to Primary One is very important. Children brought their personal learning journal from nursery to Primary One for the first two months. After which, they began recording learning in their Primary One journal. These folders hold a lot of importance to the children, therefore we positioned them close to the block play area. Children were able to incorporate these into their block play, with adults writing comments for them or, latterly, children writing independently.





The overall lesson from our project was that block play has a huge role to play in children's communication and language development. Affording children the space and time to create- is so important. Equally important is affording children the autonomy to choose if and how they wish to share their creations with adults. We found that affording children this autonomy was not detrimental to their language development. Reflecting on this, we realised that prior to conducting the research, there was a general view that children should be encouraged to talk and explain why they have done something in a particular way. Not all children respond positively to this type of questioning and the benefits of affording children space were clear. Structures were built with phenomenal precision and delicacy; sometimes children chose to discuss their creation with another child, with one of the adults present, or not at all. As a community, we leaned into being allowed to choose how and when we shared with others.

Children would often choose to share their creations with their peers which meant they were using language in a social way. Children used language to communicate, as well as silent modes of communication, which enhanced their joint play. Children had a clear and shared purpose which motivated them to use more language in their play, in some cases sharing specialist vocabulary such as 'hull' and 'symmetrical'. Children sometimes chose to draw their creation which meant they were developing concentration, fine motor strength, and learning about the relationship between symbolically representing something two dimensionally and three dimensionally. These drawings were often chosen to be added to their Primary One personal learning journal; children would write an explanation or have an adult annotate, again promoting early literacy skills and development. These observations are evidence for allowing children to choose when, and how, they share their play.

We believe that a play-based pedagogy with a designated block play area should be a staple in every Primary One classroom and, going forward, we will share our findings with colleagues in our local authority and beyond. West Dunbartonshire is developing a play-based approach in early primary and this research has implications for how best to implement block play with a view to developing language and communication skills.

We noticed a change in the practice of teaching staff. The Class Teacher and ELCO became more confident in allowing the children to bask in play and to recognise that children will share their learning in a way that reflects and develops their development stage. The Class Teacher is now completing the Froebel & Childhood Practice course at the University of Edinburgh to gain more insight into Froebelian practice and how it can enhance the learning environment.

Ethical issues

We explained to parents, carers, and children that we were conducting research about how we use blocks in primary one. We gained verbal consent from children and requested parental permission using a consent form (see Appendix 1). We received written consent from all parents/carers.

Publications and other outputs

- On 24th August 2022, the project was presented to a team of Early Stages Teachers who work within our ELCCs and Primary One classes in West Dunbartonshire.
- On 11th October 2022, Jennifer & Michaela presented the project to colleagues in Dalreoch primary school and ELCC.
- On the 16th of March 2023, Jennifer and Michaela will lead further professional learning on the benefits of block play with our ELCC class.
- On the 27th of May 2023, Jennifer and Michaela will present this research at the Froebel Network in Edinburgh, following an invitation from Jane Whinnett.

- We have had a brief dialogue with Nursery World where they have expressed interest in publishing. We would discuss the content with The Froebel Trust before submitting anything to Nursery World. Our Local Authority would also need to see it before publication.

Future plans

It would be interesting to further research the impact of block play on the development of literacy skills as children progress through primary school. The Class Teacher who worked alongside us is currently undertaking the Froebel & Childhood Practice course at Edinburgh University; she is keen to embed Froebelian practice after seeing the any benefits over the course of our research.

Our primary school has a nursery attached and we plan to consider how blocks are used at this early level; are we using the area in the most effective way to develop language and literacy skills? This area is often used as more of a construction area, with hard hats and hi-vis vests. This is an area we want to develop and plan to undertake narrative observations whilst we do so. Again, we feel this will have implications for our local authority in terms of how block play is used in early learning settings.

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