

How does the teaching of pre-writing shapes improve confidence and readiness for writing in Reception?

Orchard School, EYFS Phase

Abstract

The aim of this research was to examine the effectiveness of teaching pre-writing shapes in order to support writing development in Reception. Using a small group intervention model, the study followed the implementation of structured daily sessions with selected children over a period of ten weeks. During this time, children received a daily ten minute fine motor intervention delivered by a member of support staff. Each week focused on a different pre-writing shape; these strokes include the following strokes: |, —, O, +, /, □ \, X, and △. Each week the activities were themed around a familiar nursery rhyme. Class teachers incorporated each new stroke learnt into recorded outcomes during continuous provision and opportunities for children to revisit the activities independently were provided across the setting.

Over time, the children involved in the project demonstrated a more positive attitude to writing as well as the ability to hold and control a pencil with increased fluency and effectiveness; thus producing legible writing. The member of support staff implementing the project reported that the boys involved looked forward to the daily sessions and often asked to repeat the activities during independent learning. Class teachers were also able to identify the shift in the children's attitude to writing. The most noticeable difference was that they were willing to incorporate writing into their play independently. As the project focused on one pre-writing shape each week in sequential order and to an age specific level, the project also gave the EYFS team a knowledge of the shapes and how best to support and facilitate the development of writing for all children.

Introduction

Orchard is a larger than the average sized primary school situated next to a large housing estate in the vibrant and diverse London Borough of Hackney. The proportion of pupils eligible for the pupil premium is higher than the national average and a significant number of children who enter EYFS are below the age expected level in all areas of learning.

Children learn and develop more from birth to five years old than at any other time in their lives, (DFE, 2021). Fine motor control and hand eye coordination is linked with early writing. In order to develop confidence in this area, children need to be provided with repeated and varied opportunities to explore, play and practise using small tools alongside adult modelling and precise feedback. This in turns allows children to develop proficiency and control. In order to meet the writing Early Learning Goal at the end of their Reception year, children must be able to demonstrate that they can write recognisable letters, most of which are correctly formed; spell words by identifying sounds in them and representing the sounds with a letter or letters; write simple phrases and sentences that can be read by others.

In relation to Physical Development, one of the prime areas of the EYFS Framework, children with a good level of development must be able to hold a pencil effectively in preparation for fluent writing, using the tripod grip in almost all cases.

It is noteworthy to mention that this research was conducted after two years of partial closures across educational settings due to COVID-19. Many children entering the Reception cohort in September 2021 having not had the consistency or exposure to opportunities that would support good levels of development that previous cohorts had. Admissions analysis shows many children starting at a previous Nursery setting at a much later age or not at all. The School Starters study, funded by the Education Endowment Foundation (EEF), found that prior to the term beginning in Autumn 2020, 97% of the schools asked were concerned that pupils would struggle with literacy. Once school had started, 89% of schools that took part were still concerned about the progress children were making in this area, (EEF, 2021).

These findings are also echoed in our in-house data (see figure 1). The baseline data shows the lowest areas of attainment were Literacy (29%), Communication and Language (40%) and Physical Development (40%). Furthermore, in Pupil Progress meetings at the beginning of the Spring Term with each Reception teacher, a clear thread of poor fine motor skills was evident as having an impact on children’s writing skills. With this in mind, the research topic was chosen.

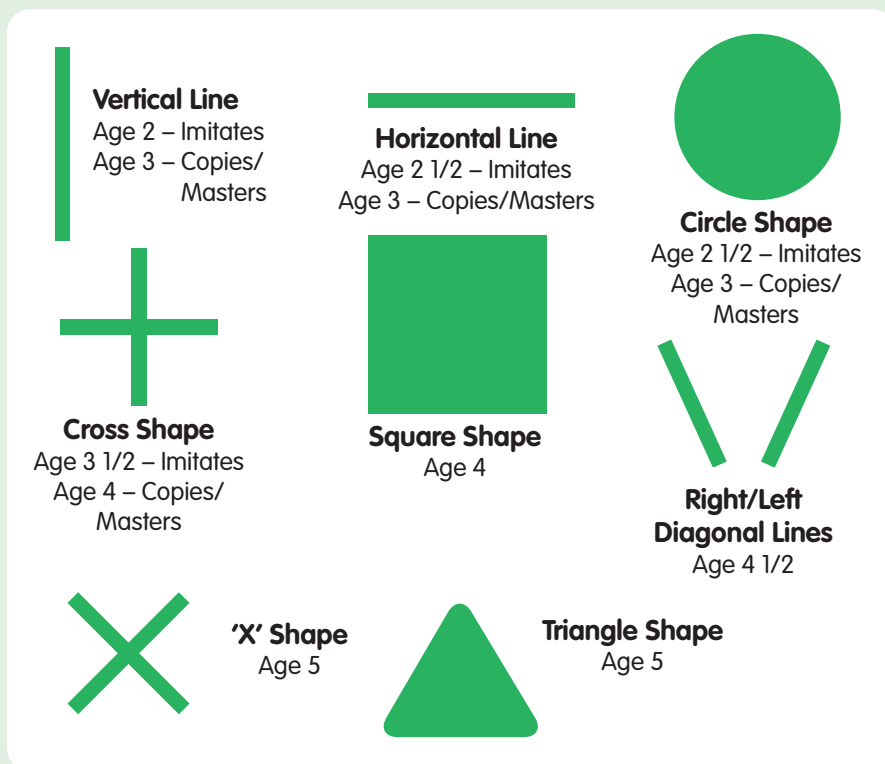
Fig 1: Orchard EYFS Data, December 2021

Communication and Language	Baseline	Autumn
	40%	57%
PSE Development	Baseline	Autumn
	62%	79%
Physical Development	Baseline	Autumn
	40%	60%
Literacy	Baseline	Autumn
	29%	61%
Mathematics	Baseline	Autumn
	44%	67%
Understanding the World	Baseline	Autumn
	40%	65%
Expressive Arts and Design	Baseline	Autumn
	59%	89%

Pre-writing skills are the fundamental skills children need to develop before they are able to write. A major component of pre-writing skills are the pre-writing shapes. Berry (1999) proposed that a child will be ready for formal instruction in handwriting if they manage to master the first 8 figures of the Developmental Test of Visual

Motor Integration (VMI). These 8 shapes are the pencil strokes that most letters and numbers are comprised of. They are typically mastered in sequential order and to an age specific level. Fig. 2 summarises the pre-writing shapes and at what age a child will typically be able to imitate (watch a modelled example before doing the same) and copy (see a picture and draw themselves).

Fig. 2: A summary of the 8 pre-writing shapes



When children create these writing shapes spontaneously without being guided using hand-over-hand, for example, they are further developing pathways in their brain, strengthening their muscles in their hands, allowing for sensory feedback, learning to coordinate micro movements of the shoulder, elbow, wrist and fingers as well as testing out different grasps on writing tools, (Klein, 1990).

Research Process

At the beginning of the research project, all teachers met to discuss children's writing development as this was identified as a key thread from Autumn data analysis. Five barriers to children's writing development were identified: lack of confidence or self esteem, poor muscle development, lack of interest in writing, limited phonic knowledge of letters and sounds and lack of adult support.

Through discussions, key children were identified across the year group and it was decided that they would take part in a daily intervention group with a consistent member of support staff. It was important for all members of the EYFS team to have knowledge and understanding of the developmental stages of the writing shapes to ensure a greater awareness to support children's learning. It was decided that these shapes would be a focus for decided recorded outcomes for table top activities as well as support more precise adult facilitation of children's pre-writing across Nursery and Reception.

Planning the right activities was crucial. Staff decided upon a format that linked each pre-writing shape to a familiar nursery rhyme and this was used as a hook in to the learning at the beginning of each week. Staff also wanted to ensure a range of tools, sensory experiences, skills and outcomes were included to maintain children's interests and develop both fine and gross motor skills to have a greater impact on development.

Using these parameters, a four day weekly plan was devised (fig 3). The fifth day was determined by the children whereby they could revisit one of the previous activities from the week. This allowed for an element of child led learning as well as self assessment on their improvements across the week. To support the member of support staff leading each session, key vocabulary, resources and a clear identification of skill development were included in the plan.

Fig. 3: Week 1 daily intervention planning focusing on the first pre-writing shape vertical line

Week 1	Focus: Vertical line	Theme/text: Incy Wincy Spider	Vocabulary: water spout, rain, dried
Day 1: Incy Wincy Spider			
Resources: https://www.bbc.co.uk/teach/school-radio/nursery-rhymes-incy-wincy-spider/zr4yt39			
Activity: Show children the nursery rhyme video and use actions to sing (E.g Down: vertical lines with arms and wiggling fingers. Sunshine: moves arms from shoulders spreading high and wide)			
Skill development: Teaching children nursery rhymes helps them to hear the difference between speech sounds which is an important pre-reading skill. They are a great way to introduce new vocabulary and show children how words and phrases are put together which helps to develop their speech. Singing nursery rhymes helps children to develop their pronunciation. This nursery rhyme also supports maths skills as it contains positional language.			
Day 2: Rain, rain go away!			
Resources: Chalk pens, water, squeegee, sponge			
Activity: Use chalk pens to draw rain on windows by making lines from top to bottom . Use the sponge to wash the rain away and sing 'Rain, rain, go away'. Then use the squeegee to wipe the water away, again moving from top to bottom to make the first pre-writing shape.			
Skill development: Shoulder and Arm strength – Making large movements strengthens the shoulder and arm muscles. This will provide strength and stability to allow controlled hand movements when children begin to write.			
Day 3: Spider Pegs			
Black card, scissors, pencil, circular object to draw around, pegs			
Activity: Help the children to draw around a circle and cut out a circle. Clip the legs on to make legs. You could count to 8 as you add the legs.			
Skill development: Pincer Grasp – Squeezing the peg to open it develops their pincer grip which will help to develop good pencil grip. Encourage child to hold the pegs using thumb and index finger. Hand and Finger Strength – Squeezing the pegs develops the muscles needed to control a pencil when writing. Fine Motor Skills – Placing the peg on the card is working on motor planning and hand-eye co-ordination.			
Day 4: Magic Rain			
White wax crayon, paper, water colour paint, paint brush, water			
Activity: Use a white wax crayon to make lines on the white paper. Encourage the child to start from top to bottom. Use water colour paint to paint over the page. Watch as the rain appears on the page. You could also draw a spider web and spider so that they appear as the page is painted over.			
Skill development: Tactile Pressure – Children need to learn how hard to grip their pencil and what pressure to apply to the paper. This activity will help them to learn about how the pressure can be adjusted. If they press too lightly, their design won't show up when they paint over it. Hand and Finger Strength – Drawing with crayons helps to develop and strengthen the muscles of the hands and fingers. Hand and finger strength is important as it helps to develop the endurance to complete activities such as writing a full page. Pencil Grasp – Using a broken piece of crayon will encourage your child to use a pincer grip to hold it. Grasping the crayon with their thumb and index finger is good practice as it will enable them to hold and manipulate a pencil.			

Findings

At the end of the project, teachers met to discuss impact and to complete a questionnaire. At the outset, teachers had selected children who had poor fluidity, pencil control, legibility and lacked confidence in mark making and writing. Teachers were able to articulate confidently the progress children had made with regards to these criteria. They gave examples of observations they had made of children involved in the project independently drawing the pre-writing shapes as part of their play. One example involved a Reception child teaching a Nursery child how to draw the shape using the tools they had used in the intervention session. With all the children that took part, there was an evident increase in self confidence with regards to writing. This was seen in both formal and informal EYFS observations and in response to their small group Literacy focus groups too.

The children selected to take part in the project were working below the expected standard and not on track to achieve GLD at the end of Reception. When assessed at the end of the project, all children achieved the Early Learning Goals in Gross Motor Skills, Fine Motor Skills and Writing and 9 out of 12 of the children achieved ELGs in Physical Development and Writing.

Fig 4: Statutory framework for the early years foundation stage Early Learning Goals

Physical Development		Writing
Gross Motor Skills		
<ul style="list-style-type: none"> Negotiate space and obstacles safely, with consideration for themselves and others. Demonstrate strength, balance and coordination when playing. Move energetically, such as running, jumping, dancing, hopping, skipping and climbing. 		
Fine Motor Skills		<ul style="list-style-type: none"> Write recognisable letters, most of which are correctly formed. Spell words by identifying sounds in them and representing the sounds with a letter or letters. Write simple phrases and sentences that can be read by others.
<ul style="list-style-type: none"> Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. Use a range of small tools, including scissors, paintbrushes and cutlery. Begin to show accuracy and care when drawing. 		

Children were initially asked to imitate, copy and draw independently each of the pre-writing shape. Once they had completed the ten weeks of interventions, this process was repeated to inform assessment. The table below (see figure 5) shows how many children out of the 12 participants were able to imitate (watch a modelled example before doing the same), copy (see a picture and draw themselves) and master (draw from memory) each shape before and after taking part in the daily interventions. The data shows that from taking part in the interventions, there was an increased ability in forming these shapes; when imitation a shown example, copying

independently from a static example as well as being able to replicate the shape independently without an example. It is worth noting here that children’s understanding of the shapes and the associated vocabulary significantly improved. This is hugely beneficial when forming letters and strokes in independent writing.

Pre-writing shape	Prior to the project			At the end of the project		
	Imitate	Copy	Mastered	Imitate	Copy	Mastered
Vertical line	9	7	6	12	12	12
Horizontal line —	8	8	5	12	12	12
Circle O	8	5	5	12	12	12
Cross shape +	7	4	4	12	11	10
Right diagonal line /	3	1	0	12	10	9
Left diagonal line \	4	1	0	12	9	9
Square	2	1	0	12	8	8
X shape X	2	1	1	11	9	9
Triangle ▲	1	0	0	9	8	7

Fig. 5: A table showing how many children out of 12 were able to imitate, copy and master the individual pre-writing shapes before and after the project

Through the assessment, it was observed that, if the child was able to form the shape correctly, they were able to do this with increased precision, fluidity in their movement and with more control. All children who took part in the project developed a secure tripod grip.

The members of staff involved in the project were Early Career Teachers and members of staff new to EYFS. Through knowledge of the planned sessions and CPD opportunities, teachers were upskilled and their subject knowledge was developed. This ensured that the focus of pre-writing skills and the development of the pre-writing shapes had a greater impact on all children in the cohort too. In response to the question: Has the research project developed your subject knowledge? All teachers and members of support staff answered in the affirmative. One teacher stated: "Yes. I now understand the progression of mark making to writing more clearly. Now I know the buildup of the skills and which ones to teach in what order, I can plan for these during table tops planning." Another teacher went on to add, "I have shared the pre-writing shapes with parents and have given some examples of how to include these in play at home such as washing the wheels of the bike or wiping the windows." This dissemination of ideas and resources to parents is crucial to support children's learning and development in the early years.

Impact and conclusion

This project sought to interrogate how the teaching of pre-writing shapes can improve confidence and readiness for writing in Reception. It is evident that children involved with the project are now more confident and feel more ready for independent writing. They are able to form the letters as well as the shapes taught with fluidity and precision resulting in legibility. This has ensured they have typically achieved GLD at the end of EYFS.

At the end of the project, as a team, it was discussed how the work from the research project could continue next year. It was agreed the small group interventions would continue yet begin earlier in the term when children have been assessed at baseline levels. The structure of the sessions was successful and this will remain the same. However one key discussion point was the introduction of this programme to Nursery and also developing a more robust system of communication to parents around the developmental stages of prewriting shapes. It is clear that teachers' subject knowledge has improved which has resulted in a more precise facilitation of developing children's writing skills. This has and will continue to impact provision put in place for all children across the early years setting.

The following recommendations are to be made as a result of this research:

References (wider reading)

Claudine Bowyer-Crane, Sara Bonetti, Sarah Compton, Dea Nielsen,

Katrina D'Apice & Louise Tracey The School Starters study, funded by the Education Endowment Foundation (2021) *The impact of Covid-19 on School Starters: Interim briefing 1 Parent and school concerns about children starting school*

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Klein, Marsha Dunn, (1990) *Prewriting Skills. Communication Skill Builders*

Department of Education Development Matters Non-statutory curriculum guidance for the early years foundation stage July 2021

<https://www.nhsggc.org.uk/media/266766/pre-writing-shapes-information-sheet.pdf>