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## Supporting Preschoolers' Early Writing Through Parent-Teacher Collaboration: A Design Based Study

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SUPPORTING PRESCHOOLERS' EARLY WRITING THROUGH PARENT-  
TEACHER COLLABORATION: A DESIGN BASED STUDY

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A Dissertation  
Presented to  
the Graduate School of  
Clemson University

---

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy  
Literacy, Language, and Culture

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by  
Oluwaseun Ayobami Oti  
May 2023

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Accepted by:  
Dr. Celeste Bates, Committee Chair  
Dr. Susan Fullerton  
Dr. Jacquelyn Malloy  
Dr. Lisa Aker

## **ABSTRACT**

This study used a design-based methodology to investigate the impact of parents' and teachers' collaborative efforts in supporting preschool children's early writing. The sample included the lead teachers of the 3K and 4K classrooms at a local child development center. Six parent-child dyads from the 3K classroom and five parent-child dyads from the 4K classroom were selected using a convenience sampling technique. Data on children's literacy skills and parents' and teachers' involvement were collected using quantitative and qualitative measures. Children's literacy skills were measured in four areas: concepts about print, letter identification, letter writing, and name writing using Clay's Observational Survey instrument. Children were expected to write daily using the Teacher Child Parent (T.C.P) Writing Collaborative Notebook with the support of their parents. Teachers' involvement in children's early writing skills was collected through classroom observation, pre- and post-semi-structured interviews, and feedback in the notebook. Parents' involvement in children's early writing skills was collected through pre- and post-semi-structured interviews and comments in the writing notebook. Findings revealed that children's emergent literacy skills were significantly improved and were connected to the frequency of the use of the notebook and the strategies used by parents. Parents employed different strategies to support their children's writing. Interestingly, the type of feedback teachers provided in the T.C.P Writing Collaborative Notebook and the frequency and nature of this feedback influenced parents' motivation to work with their children and send the notebooks back to school daily. Therefore, this

study demonstrated that effective parent-teacher collaboration significantly improves preschool children's early writing and other related skills. It also makes important contributions to existing research because no studies known to the researcher have examined how parents and teachers can collaborate to support preschool children over a period using an iterative, design-based method that integrated research-based strategies.

## **DEDICATION**

This dissertation is lovingly dedicated to God Almighty, Who has given me the grace and fortitude to complete this doctoral journey, and my daughter, Ayomide Aina, who has continued to inspire me to be the best version of myself.

I also dedicate this research to every single mother on this doctoral journey, “You can do hard things!”

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# **Supporting Preschoolers' Early Writing through Parent-Teacher Collaboration: A Design-Based Study**

## **CHAPTER ONE**

### **Introduction**

Preschool children need support to develop their early writing skills because studies have revealed there are benefits in fostering these skills (Al-Maadadi & Ihmeideh, 2016; Cunningham et al., 2009; Gerde et al., 2012, 2022; Kim et al., 2015; National Early Literacy Panel, 2008; Quinn & Bingham, 2022). For example, one of the significant benefits of supporting preschool children's early writing is that it gives them a literacy advantage in kindergarten (Clay, 2001; Teale, 1978). Furthermore, early writing is related to later reading and writing achievement (Gerde et al., 2022; National Early Literacy Panel, 2008; Quinn & Bingham, 2022; Tortorelli et al., 2022).

Studies indicate that the level at which preschool children's writing skills develop is directly proportional to the support they receive from adults (Bindman et al., 2014; Bingham et al., 2017; Gerde et al., 2015, 2019; Neumann, 2018; Neumann et al., 2012; Neumann & Neumann, 2010; Skibbe et al., 2013). This early writing support may be more effective for preschool children when teachers build on writing activities that take place in the home and parents do the same with activities that happen at school. Research shows that parent-teacher collaboration strengthens children's academic and social

development (Castro et al., 2004; Fantuzzo et al., 2013; Hindman & Morrison, 2011; Hindman et al., 2013; Lee & Rispoli, 2019; Marcon, 1999; Sheridan et al., 2010) and its absence can “impede children’s healthy development” (Litkowski & Kruger, 2017, p. 212). Therefore, this study aimed to enhance preschool children’s emergent writing skills through the collaboration of parents and teachers.

### **Problem Statement**

A review of relevant literature (e.g., Bingham et al., 2017; Diamond et al., 2008; Gerde et al., 2015, 2019; Thomas et al., 2020; Tortorelli et al., 2022) indicates preschool children’s writing is often not adequately supported in the preschool classroom. As a result, some children may arrive in kindergarten without the skills needed to participate in writing-related activities. Dahl and Freppon (1995) found that children who lag in reading and writing in kindergarten often exhibit behavioral issues, low self-esteem, and a lack of confidence. In addition, children who do not catch up are more likely to be referred to special education, suffer from expulsion or truancy, and drop out of school than their peers who do not struggle (Bramlett et al., 2002). These reasons necessitate providing preschool children with a solid foundation in writing skills that kindergarten teachers can readily build.

Certain factors are responsible for the inadequate writing support children receive in preschool. Studies revealed that some preschool teachers (Bingham et al., 2017; Gerde et al., 2015, 2019) and parents (Bindman et al., 2014; Neumann, 2018; Neumann et al., 2012; Neumann & Neumann, 2010; Skibbe et al., 2013) are unsure of the best way to support preschoolers’ writing skills. In addition, the support often provided to

preschoolers in the classroom does not encourage children to write to communicate their ideas and thoughts (Bingham et al., 2017, 2022; Gerde et al., 2015, 2019). Furthermore, there is often little connection between what parents do at home and what teachers do in school (Litkowski & Kruger, 2017).

Historically, studies have either focused on parents' early writing support (Bindman et al., 2014; Neumann, 2018; Neumann et al., 2012; Neumann & Neumann, 2010; Skibbe et al., 2013) or teachers' early writing support (Bingham et al., 2017; Gerde et al., 2015, 2019) without drawing upon support from both stakeholders. Furthermore, many studies focusing on supporting preschool children's early writing also employ an observational research design that observes adults' support of children's writing on specific timed writing tasks. Unfortunately, this does not provide an opportunity to observe how adults' support impacts children's writing progression over time.

This study used a Design-Based Research (DBR) approach to encourage the collaboration of parents and teachers to support preschool children's emergent writing skills over time. Involving key stakeholders in the process as they collaborate to make meaningful changes that promote early writing provides a unique perspective not found in the existing literature. Using DBR, I refined the intervention and advanced it toward the pedagogical goal (Barab & Squire, 2004) of enhancing preschool children's emergent writing skills.

### **Overview of the Theoretical Frameworks Used in This Study**

This research is grounded in the Ecological Systems Theory by Bronfenbrenner (1979). It is also guided by the constructivist concepts of the zone of proximal



development and scaffolding theory, as promoted by Vygotsky (1978) and Wood et al. (1976).

### **Ecological Systems Theory**

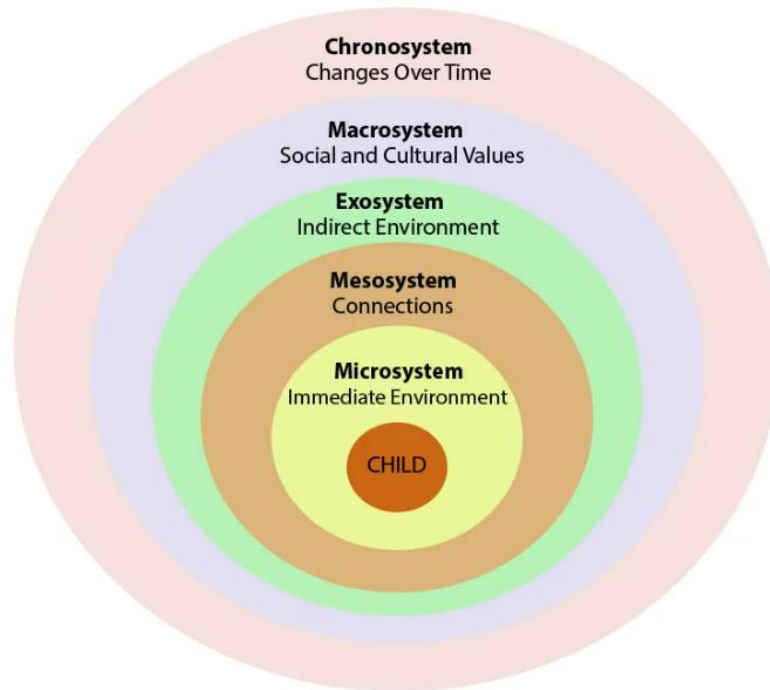
The Ecological Systems Theory by Bronfenbrenner (1979) provided a framework that guided and informed how the researcher understood the impact of the environment on a child's early writing development. This environment consists of key stakeholders that influence a child's development. In this context, these are the parents and teachers. Bronfenbrenner (1979) highlighted these stakeholders as influencing a child's development and touched on other factors that may influence a child's development. In Figure 1, Bronfenbrenner (1979) showed that five ecological systems can influence a child. These are the microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

#### ***Microsystem***

This is the developing child's immediate surroundings. In the context of this study, this is the home and preschool.

**Figure 1**

*Bronfenbrenner's Ecological Systems Theory*



*Note.* Ecological Systems Theory. (<https://www.psychologynotesq.com/bronfenbrenner-ecological-theory/>)

***Mesosystem***

Bronfenbrenner (1979) described how the symbiotic relationship between adults influences the developing child. He identified that the system could break down when there is no symbiotic relationship between the key adults interacting with the child.

***Exosystem***

This system is described as events in a setting a child is not part of but that indirectly influence a child's development. These may include the demands at a parent's workplace or the availability or unavailability of a classroom curriculum. Relating this

system to this study, it was crucial to understand the factors that limited parents and teachers from supporting their children's early writing development in the home and school.

### ***Macrosystem***

Bronfenbrenner (1979) described distinct cultural differences in the systems that precede the macrosystem, which may include the home culture, classroom culture, and standards by policymakers.

### ***Chronosystem***

Bronfenbrenner (1979) noted that changes might occur in cultural values over time. For this study, parents and teachers changed how they interacted with children when they received new information through educational research-driven materials, meetings, and other collaborative efforts. These changes, therefore, informed how children moved toward the pedagogical goal of enhanced emergent writing.

### **Zone of Proximal Development and Scaffolding**

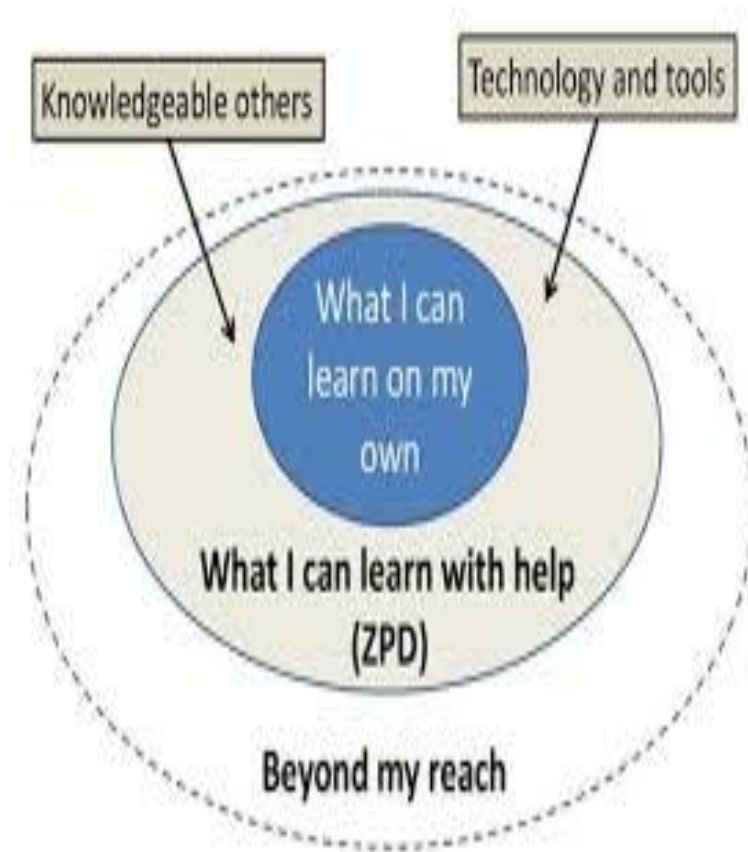
The constructivist concepts of the Zone of Proximal Development and Scaffolding provided a framework in which the researcher understood how a more knowledgeable other scaffolded learning within a child's Zone of Proximal Development. According to Vygotsky (1978), the Zone of Proximal Development is the "distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined by problem-solving under adult guidance or in collaboration with more capable peers" (p. 86).

As shown in Figure 2, this framework helped the researcher examine what a child can do independently, what they can do with adult support, and how to move a child toward the pedagogical goal of emergent writing while being provided with adult support. Using a design-based approach, this study helped to capture how this support level changes across cycles.

The concept of scaffolding connects with the Zone of Proximal Development. It is the “process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts” (Wood et al., 1976, p. 90). In this study, this concept helped the researcher understand how adults control the writing difficulty that occurs for emergent writers so that children can still focus on what they can gradually learn or complete without becoming frustrated (Wood et al., 1976).

**Figure 2**

*Zone of Proximal Development*



*Note.* Adapted from Practical Psychology (2022; <https://practicalpie.com/zone-of-proximal-development/>)

Bronfenbrenner's (1979) Ecological Systems Theory and the constructivist concepts of Zone of Proximal Development and Scaffolding helped to shape these study's methods and data collection and guided the interpretation of the research findings.

## **The Purpose of This Study**

This design-based study aimed to enhance preschool children's emergent writing skills through the collaboration of parents and teachers. The study is critical because it explored multiple ways to enhance children's early writing skills. The research questions that guided the study were:

1. How can intervention activities be refined to enhance children's emergent writing skills?
2. How can intervention activities encourage parent-teacher collaboration?

## **Overview of the Methodology**

To address these questions, I used a design-based method. Wang and Hannafin (2005) defined DBR as a "systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories" (p. 6). Design Based Research was relevant for this study because it occurred locally. Also, the design allowed the researcher to collaborate with teachers and parents as they made meaningful changes. In addition, DBR enabled the use of different methodological approaches and welcomed confounding variables to better understand the local context.

The research setting for this study was a local child development center. Two lead teachers and 11 parent-child dyads participated in the study. The composition of the 11 parent-child dyads included six parents and their six children from the 3K classroom and five parents and their six children, including twin sisters from the 4K classroom. The

participants were recruited through convenience sampling. This sampling technique allowed for the selection of those willing to participate and commit to the requirements of the study. Data were collected at different time points throughout the study. For example, the preliminary data helped provide baseline information about children's literacy levels and teachers' and parents' literacy perspectives. This baseline information included pretests for preschool children and a pre-intervention semi-structured interview for teachers and parents. Also, during the intervention, data were collected within four iterative cycle points. Each cycle lasted for two weeks. These data included periodic classroom observations, writing notebooks, children's writing samples, implementation meetings with teachers, bi-weekly meetings with parents and teachers, researcher's field notes, teachers' anecdotal notes, and lesson records. Finally, data collected after the intervention included post-tests for children and a post-intervention semi-structured interview with the caregivers.

The pre- and post-test for preschool children were used to evaluate change over time in children's early writing development. The interviews with parents and teachers at the beginning and end of the study helped to understand how intervention activities encouraged parent-teacher collaboration. The data collected during the intervention provided information that helped improve the instruction across cycles. It also helped to clarify how parent and teacher collaboration supported or inhibited children's writing progression.

## **Rationale and Significance**

In a 2020 news report, the governor of a southern state identified the importance of giving young children a good head start. In response, the state made budgetary plans to expand its full-day 4K program statewide. The governor stated that:

Every year we delay is another year of young people who are not going to be able to make it to the first rung of that educational ladder. If they are not ready when they go to 5K, they are never going to catch up (Adcox, 2022).

This quote underscores the importance of providing preschool children with a good foundation. As 4K programs expand, we must give children opportunities to develop the requisite skills to succeed in kindergarten, including an emphasis on early writing. This study is significant because it developed and implemented ways for teachers and parents to collaborate to support preschool children's writing development. Overall, this study explored an opportunity that contributed to preschool children's writing development. This writing development attained in preschool may contribute to success in kindergarten and beyond.

## **Definition of Key Terminology**

The following terms are essential because they relate to this study's primary constructs: children's early writing, parent and teachers' support in early writing, parent and teacher collaboration, and the role it plays in early writing.

- *Conventional writing* is defined as writing that an adult easily reads.
- *Early writing* is defined as scribbles, random-like letters, letters, and simple words used to communicate ideas and thoughts.



- *Early writing progression/development* is defined as the development or progression of children's writing into more conventional writing as they become exposed to writing opportunities and are supported within their zone of proximal development.
- *Early writing support* is defined as the support that is offered to a child within their zone of proximal development.
- *Emergent writing* is defined as the continuous development of children's writing from scribbles to conventional writing. In this study, every emerging level is recognized as important.
- *Parent-teacher collaboration* is defined as teachers and parents working together to improve children's literacy development
- *Young children, preschoolers, and preschool children* are defined as those between three to five years old.

## **Chapter Summary**

This study of preschool children's early writing addressed gaps found in the research by including the following components: children's early writing, parent and teachers' support in early writing, parent and teacher collaboration, and the role it plays in early writing. In addition, this study examined how design-based research can facilitate parent-teacher collaboration to support preschool children's early writing skills.

Therefore, the study was designed to answer the following research questions:

- (a). How can intervention activities be refined to enhance children's emergent writing skills?

(b). How can intervention activities encourage parent-teacher collaboration?

This chapter included an introduction to the study, a problem statement, a statement of the purpose, research questions, an overview of the methodology, rationale and significance, and a definition of the key terminologies. The study aimed to understand how the early writing skills of preschool children could be supported as teachers and parents collaboratively worked toward the same goal. Chapter Two reviews current research on the key constructs. It also discusses the theoretical underpinnings for the study. Chapter Three describes the intervention's methodology, research design, and procedures. Chapter Four presents the data findings, while Chapter Five provides the research summary, implications, and conclusions.

## **CHAPTER TWO**

### **Literature Review**

This research aimed to support preschool children's writing using a collaborative communication mechanism between parents and teachers. Therefore, the scope of this review comprises the following four main components: (a) early writing, (b) adults' support of early writing, (c) the environment, and (d) parent and teacher collaboration and the role it plays in early writing.

#### **Early Writing**

Early writing is using symbols, letters, and written representations based on an awareness of writing conventions and emerging skills to communicate ideas and attitudes (Hall et al., 2015). Children begin to express their thoughts and ideas as early as two years old through drawings and marks (Byington & Kim, 2017; Rowe, 2018; Rowe & Neitzel, 2010). Over time, children represent their ideas in more recognizable and readable forms. As shown in Table 1, Gentry and Gillet (1993) described children's writing progression using a scale that defines each stage. It is important to note that children may move back and forth along the continuum depending on their literacy learning, exposure, or task demand. For instance, a three-year-old child may write his name in a readable form but may still scribble when asked to present his ideas in written form (Rowe, 2018).

**Table 1**

*The Writing Scale*

---

Writing Scale	
Stage 1- Scribbling, drawing	Young children often start by communicating their ideas with scribbles, marks, and drawings.
Stage 2- Pre-communicative	Letter writing does not represent sounds.
Stage 3 - Semi-phonetic	Letters represent words during which phonemic representation is still forming.
Stage 4- Phonetic	Letters represent all the sounds in the word.
Stage 5- Transitional	Children use invented spelling.
Stage 6 - Conventional	Consistent use of conventional spelling.

---

*Note.* This table is adapted from the five stages of invented spelling (Gentry & Gillet, 1993, p. 25). The writing scale provides information on how children progress in writing.

### ***Types of Early Writing***

Studies showed that preschool children engage in different types of early writing when asked to write, including scribbling, letter writing, name writing, and the writing of words (Bennett-Armistead et al., 2005; Bloodgood, 1999; McNair, 2007; Rowe, 2018; Sulzby et al., 1989). This section addresses the research around each type of early writing.

**Scribbling.** Scribbling is one of the earliest forms of writing that young children use to express their ideas, thoughts, and feelings. When children begin to scribble, it is usually uncontrolled, but over time, it develops into more controlled and repetitive forms and eventually into sophisticated controlled marks. As children mature in their scribbling, they can talk about what they have written (Bennett-Armistead et al., 2005; Rowe, 2018). However, Rowe (2018) noted that talking about what is written is a behavior that develops over time and also depends on children's literacy learning. In her study, children between the ages of 2 years 6 months and 6 years were given a photo of themselves and encouraged to write what they were doing in that photo. For example, one child was given a picture of himself on a bicycle and was expected to write what he was doing in the picture, which would have been, "I am riding a bike." Rowe wanted to determine whether children's writing would align with their oral expression and activity in the picture. When children were asked to talk about what they were doing in that picture, Rowe found that some children's narration was unrelated to the picture on the page or social event. This demonstrates that it takes a while before young children begin to connect their writing attempts (i.e., scribbles, drawing) with their thoughts and ideas.

Through more literacy learning opportunities, children start to understand that their writing attempts can convey their thoughts and ideas. When they reach this point, their narration will connect to their picture and the early writing they produce on a page.

**Letter Writing.** As children learn to control the pen, they make letter-like forms and letters to convey their thoughts. At first, the letter may not take a conventional form, but gradually the marks begin to look like readable letters (Bennett-Armistead et al., 2005; Rowe, 2018). Some children may string together as many letter-like forms as possible, referring to them as words. While this shows a developing understanding of children's concepts about print, they are still not readable by an adult (Rowe, 2018). As children understand letters as a “separate system,” the letters become clearer and more readable (Bennett-Armistead et al., 2005, p. 145). Sulzby et al. (1989) aligned with this assertion, stating that children will only begin writing recognizable letters when they know, name, and write at least a few letters.

**Name Writing.** When children understand that they can communicate their ideas and thoughts using letters and letter-like forms, they start attempting to write their names. As children interact with people in their social environment, they understand how important and meaningful names are (McGee & Richgels, 1989; McNair, 2007). Before young children master the writing of their full names, they may write a letter or a couple of letters found in their names. The more children master the letters in their names, the more likely these letters will appear in their writing (Bloodgood, 1999).

**Writing Words.** As children’s letter formation becomes more controlled, they experiment with letters and combine them to form words. Children “match the sounds

they hear to the letters that they write” (Bennett-Armistead et al., 2005, p. 145). These letters gradually develop into the production of invented spelling with children using knowledge of both letter names and sounds. For instance, the letter “R” may represent the word “are,” and “B” may be used for a ball. Children’s writings may capture the first and last letter sounds and, eventually, more letters connected to sounds in a left-to-right sequence.

Young children gradually grow into conventional spelling. The journey toward conventional spelling varies from child to child. As they interact more with adults, books, and writing tools, children may memorize words and conventionally write them. For example, words like “mom” or “cat” may be words they can spell independently (Rowe, 2018). Rowe (2018) captured the developmental changes in writing for children between the ages of 2 years 6 months and 6 years and found that some children between the ages of 4 and 5 years 11 months produced words from memory. Other children, however, may not demonstrate conventional spelling until much later (Bennett-Armistead et al., 2005) as the types of early writing follow a unique trajectory.

### ***Individual Differences in Early Writing***

Guo et al. (2018) classified young children’s writing according to three profiles (1) highest emergent writing, (2) average emergent writing, and (3) lowest emergent writing. Understanding that children’s writing is varied, this study provided insight into which categories children may be grouped after accounting for their individual differences. Thirty-nine preschool children with a mean age of 52.9 months (4 years, 4 months, and 4 weeks) participated in this study. Findings revealed that preschool children

with the highest emergent profile were proficient in letter writing and spelling. Likewise, those who fell under the average emergent writing profile could write their names. It was also determined that children with the lowest emergent writing profile had limited skills on all measures.

Certain factors may be responsible for the variation in preschool children's writing abilities. These could range from literacy learning experiences in the home and school (Clay, 2001; Pelatti et al., 2014), cultural experiences (Saracho, 2004), children's personalities, and personal interests (Neumann & Neumann, 2010). For instance, concerning literacy learning experiences at school, Pelatti et al. (2014) found across 81 classrooms that the average time four- and five-year-old children participated in writing or were involved in writing with their preschool teachers was just two minutes a day.

This limited amount of time does not allow children to grow their writing skills. On the other hand, Saracho (2004) found that in specific cultural contexts, many preschool children learn to "write before they attend formal school" (p. 306). In these contexts, children are likely provided with more opportunities to write and have had writing scaffolded and modeled for them. In 2010, Neumann and Neumann found that a child's interest in writing could also serve as a motivation to keep writing and learn new writing skills like how to form letters and copy simple words. Thus, children's interests were a significant factor in their writing progression.

Teale and Sulzby (1986) concurred that children's progress in literacy, the relevance of developmental stages, and the "nature of individual differences within general patterns of development" are tied to children's social environment and unique



personal investigations (p. xxi). Therefore, the extent to which young children can develop their writing depends on their social environment and personal interests. In summary, preschool children exhibit writing in varied forms. Depending on their literacy learning and age, their writing could consist of scribbling, name writing, or letters and words. With time and through interactions with adults, children understand that writing is done with a purpose and should communicate something.

### ***Benefits of Early Writing***

Children's early exploration of writing in a supportive environment leads to continuous development. Furthermore, supportive social and literacy environments assist in developing children's knowledge of writing in three key areas: "composition," "writing concepts," and "transcription" (Tortorelli et al., 2022, p. 729). Composition is defined as the "skills involved in generating and developing ideas of what to write," writing concepts as the "foundational skills about how writing works, e.g., print has meaning, print is arranged from left to right on the page," and transcription as the "skills and knowledge required to put ideas on paper, e.g., handwriting and spelling" (p. 731). Tortorelli and colleagues identified these critical areas as skills preschool children need to be "successful in school and later life" (p. 731).

In addition, children's exploration of writing also supports their reading, alphabet knowledge, phonemic awareness (Clay, 1977, 2001), and oral language development (Gerde et al., 2022). For example, as children write, they learn about left-to-right and top-to-bottom directionality. As they continue gaining control over directional movement, they attend to print and match sounds to each letter as they write (Clay, 1977, 2001).

These skills are needed when they participate in reading activities. Furthermore, one of the first things children attempt to read is their writing. Reading their writing strengthens the connection to oral language. Children “begin to understand the relationship between oral and written language” as they engage in more writing (Gerde et al., 2022, p. 3). Beyond reading what they have written, they also talk about what they want to write before or during the writing process. These crucial skills are the foundation for more complex writing and reading (Clay, 2001; Teale, 1978). Additionally, early writing contributes to later reading and writing achievement in elementary school (National Early Literacy Panel, 2008; Quinn & Bingham, 2022; Thomas et al., 2020). This is because other component skills, including alphabet knowledge, letter-sound correspondence, decoding, phonemic/phonological awareness, print concepts, and verbalizing ideas and thoughts, develop as children emerge as writers (Gerde et al., 2022; Thomas et al., 2020).

Children need a supportive social and literacy environment to thrive as writers. Through this environment, preschool children understand that writing carries meaning (generative), is for a purpose (conceptual), and is made up of letters and words (procedural) (Byington & Kim, 2017). As preschool children thrive as writers, they grow in other related skills, such as understanding concepts about print, developing reading skills, alphabet knowledge, phonemic awareness, and oral language development. This strong foundation in these literacy skills is the basis for more complex reading and writing, supporting reading and writing achievement in elementary school and beyond. Providing children with opportunities to practice and grow as writers lays a solid foundation for future literacy learning.

## **Adults' Support of Early Writing**

The support preschool children receive during their emergent writing explorations impacts their early writing behaviors. These early writing behaviors include letter formation, grapho-phonemic awareness, and composing. This section focuses on how adults support these early writing behaviors in children.

### ***Letter Formation***

Preschool children's letter formation gradually develops over time. Adults use different approaches to assist in the formation of letters. There are two ways to categorize the assistance of letter formation: direct and indirect. Direct assistance involves the physical support that adults offer to guide the formation of letters on paper. Indirect assistance involves using verbal cues that serve as a direction that children can follow as they form the letters.

**Direct Assistance.** In the studies reviewed, adults supported letter formation by providing dotted lines for tracing, hand-over-hand support, and writing for children to copy (Gerde et al., 2015, 2019; Neumann, 2018; Neumann et al., 2012). Specifically, Gerde et al. (2019) found that only 12.5% of teachers provided dotted lines so that children could practice tracing, and this was used for children's names. In an earlier study, they also found that 25% of teachers used hand-over-hand support to help young children write (Gerde et al., 2015).

Another form of direct assistance is offering a model for children to copy. The number of adults who offered this support varied (Gerde et al., 2019; Neumann, 2018; Neumann et al., 2012; Skibbe et al., 2013). Neumann (2018) investigated the varying

types of scaffolding practices when 47 mothers supported their children in writing two words (rabbit and jump) conventionally using pencil and paper and then writing them digitally on an iPad. The 47 mother-child dyads were videotaped as they worked together. They found that, on average, mothers wrote the words “jump” and “rabbit” for their children to copy when using both paper and pencil or the tablet. In addition, 33% of mothers (Neumann et al., 2012), 31.2% of teachers (Gerde et al., 2019), and an average of 24% of parents (Skibbe et al., 2013) supported children’s writing by providing a model for them to copy.

In some cases, adults did not involve children in the process of letter formation and instead did the writing for children. Skibbe et al. (2013) found that 24% of parents wrote letters that their children did not know how to write during the writing task. They suggested that parents may have written for children because they probably considered the physical formation of letters unimportant.

**Indirect Assistance.** Adults can guide children to form correct letter shapes on paper using verbal directions linked to motor movements. Using clear verbal directions, the adult may connect a letter to a corresponding shape, object, or name with which the child is familiar. The child can then use this knowledge to write the needed letter. For instance, Neumann and Neumann (2010) documented how a mother used directional language to help her child remember a letter she did not know how to write. In addition, they found that when mothers linked the letter sound and the movement to form the letter, it assisted the child in learning the letter “(e.g., /F/ for fish goes down, across and across)” (Neumann & Neumann, 2010, p. 91).

In another study, Neumann et al. (2012) investigated whether parents naturally scaffolded the writing of a shopping list using available environmental print. In addition, they examined the kinds of strategies parents used during the writing task. Thirty-five mother-child dyads participated in the study, and the mean age of the children was 4.3 years old. The researchers found that “very few mothers allowed their child to randomly scribble” (p. 1356). Instead, they mediated writing by providing verbal cues. For instance, some mothers described letters with shapes like “c is half a circle” (p. 1357). They also offered descriptions to which children could relate, for example, “E like in your friend Eva or c like in Jack.” In addition, some mothers linked the letter shapes to everyday objects, “P looks like a lollipop, and m is like two bridges or two mountains.” (Neumann et al., 2012, p. 1357). While using language to direct letter formation is beneficial, it is only used sometimes by adults, as evidenced in this study, with 15 of the 35 mothers using directional language to support their children’s letter shaping.

Bindman et al. (2014) noted that few parents mediated the letter-writing process by providing directional language to either describe the shape of the letters or help children retrieve letter shapes from memory so that they could write them. Even though Neumann (2018) found that support for letter formation was positively associated with children’s knowledge of letter sounds and letter names, less than 20% of mothers who participated in a study about early writing used directional language. However, some mothers directed their children to familiar words to remind them of certain letters. These findings are consistent with a 2019 study by Gerde and colleagues, which found that most teachers also failed to use directional language to support children’s letter creation. Only

34.3% of teachers scaffolded letter formation using directional language and movement (Gerde et al., 2019).

### ***Grapho-Phonemics***

Grapho-phonemics is the sound-to-symbol correspondence in writing (Bindman et al., 2014). Adults who offer grapho-phonemic support to children help by slowly articulating words to connect the emphasized sound(s) to the equivalent letter(s). For this kind of support to be effective, children must identify that a particular sound stands for a specific letter(s). While beneficial for children, this support was the least likely to be provided (Bindman et al., 2014; Gerde et al., 2015; Neumann, 2018; Neumann et al., 2012; Skibbe et al., 2013). Bindman et al. (2014) specifically examined the nature and differences in parents' support to their preschoolers, who averaged 4.56 years old, during a shared writing task. They investigated the relationship of parents' support to children's (n=135) spelling and decoding skills, their use of language to compose meaningful text, and fine motor skills. The researchers found that parents provided a reasonable level of grapho-phonemic support for their children as they assisted them in writing an invitation for a pretend party. This support was mainly offered as children wrote names on the party invitations.

Parents did not lend grapho-phonemic support to other words on the invitation, meaning they did not frequently isolate or help children match sounds with the corresponding letters (Bindman et al., 2014). This could be because children were more familiar with the sounds associated with the letters in their names and were still developing their understanding of other letters (Bindman et al., 2014). This finding is

consistent with other studies investigating the level of grapho-phonemic support (Neumann, 2018; Neumann et al., 2012; Skibbe et al., 2013).

Skibbe et al. (2013) also tried to assess parents' mediation while writing a pretend party invitation. They examined the nature and amount of support parents provided and the change in support over a year. Participants in the longitudinal study included 77 parents (3 fathers and 74 mothers) and their preschoolers, who were an average of 4.62 years old. The researchers gave the invitation to parent-child dyads. It consisted of five blank sections: "TO, FOR, DATE, TIME, and PLACE" (p. 391). Results showed that parents were less likely to use sounds to help their children connect to letters. However, when parents were assessed at the second time point, they provided higher grapho-phonemic support.

Neumann et al. (2012) identified that only a small number of mothers used letter sounds to help children connect to letters they wanted to write, and the practice was not sustained as they "immediately dictated the required letter name" (p. 1357). This corroborates the findings of Neumann (2018). Neumann found that only 13% of mothers encouraged their preschool children (mean age 3.43 years) to write a word by sounding the letters. Of the 13%, 2% provided this support while the child used paper and pencil, and 11% provided support while the child used the iPad.

Similarly, it has been shown that teachers do not always encourage children to sound or name letters to aid their writing (Gerde et al., 2015). When validating a new measure called *Writing Resources and Interactions in Teaching Environments* (WRITE), Gerde and colleagues examined how preschool teachers supported writing in their

classrooms. Only 26.6% of 68 lead teachers encouraged children's writing. It was unclear how many teachers of the 26.6% encouraged using sound-to-letter correspondence.

From the studies reviewed (Bindman et al., 2014; Neumann, 2018; Neumann et al., 2012; Skibbe et al., 2013), grapho-phonemic support positively correlated with children's fine motor skills, phonological awareness, and print concepts. Neumann (2018) and Skibbe et al. (2013) suggested that educating parents on sound-to-letter correspondence may be beneficial to support children's writing and literacy development.

### ***Composing***

Preschool children can compose their ideas and thoughts with the support of caregivers. Composing can be supported by oral dictation of children's ideas or engaging children in interactive writing. Of the studies reviewed on supporting preschool children's emergent writing, only one study discussed this support. Gerde et al. (2015) found that 40% of classrooms supported children's composing by writing what children dictated. Composing was often seen in large groups when teachers wrote during calendar time, free play, or "morning message" (p. 41). In addition, interactive writing, which involved teachers sharing the pen with children, was offered in only 11.6% of classrooms.

Children often need to see composing modeled before understanding how to form their ideas and thoughts for writing (Rowe, 2018). However, Gerde et al. (2015) found that modeling was not common practice in the classroom. On average, teachers modeled how to compose only 1.13% of the time throughout the day. Although composing is important, this was not fully explored in the studies reviewed. This aligns with Quinn et



al.'s (2021) assertion that "attention to composing in both the research literature and instruction is neglected." (p. 102).

### **The Environment**

Although the role of the caregiver is crucial in supporting preschool children's early writing, the environment is equally important and can support children's early writing. Teachers and parents must ensure that children's surroundings are rich with environmental print and implements to foster exploration by preschool children. Studies reviewed showed better opportunities for growth in early writing behaviors when caregivers model and guide young children to use environmental print and writing implements as a resource.

### ***Environmental Print***

Research indicated that adults use environmental print to support children's writing (Gerde et al., 2019; Neumann et al., 2012; Neumann & Neumann, 2010). For instance, in a grocery store play setting, Neumann et al. (2012) required parents to assist their children in writing a shopping list. Parents were given five minutes to work with their children to write the words lollipop and ice cream. The study showed that only four mothers supported their children's writing using environmental print in the room. Although they found no difference between parents who mediated with environmental print and those who did not, this could have occurred because parents used other strategies effectively.

Conversely, Neumann and Neumann (2010) showed how a mother's use of environmental print to support letter formation supported the child's literacy

development. Over time, the child became independent in using and exploring environmental print, naming letters in the environment, and participating in authentic writing activities (e.g., writing a shopping list). At the beginning of this case study, the child who was the object of study was at the pre-alphabetic stage (Gentry & Gillet, 1993), and by the end of the study, she was at the semi-phonetic stage. The child was able to write all the letters in her name without any support and independently write, spell, and read simple words like “dad” and “cat” (p. 86).

Teachers also used environmental print in the classroom setting but in a limited capacity (Gerde et al., 2019). In this study, Gerde and others examined teachers’ pedagogical beliefs about early writing and investigated how these beliefs influenced teachers’ early writing practices in the classroom. The researchers interviewed 32 teachers and observed their classrooms to triangulate data. Teachers also completed a demographics questionnaire. The WRITE scale developed by Gerde et al. (2015) was used to examine observed and self-reported practices. By observing the classroom and analyzing teachers’ self-reported questionnaires, Gerde et al. (2019) found that teachers’ practices were limited to making available only a variety of environmental supports. In their interviews, teachers described an environment rich in print (i.e., books, signs, labels) as a support for children’s writing. From observation, 96.8% of classrooms included print in the environment. During observations, Gerde et al. (2019) found “that only 6.2% of 32 teachers used environmental print to support children’s writing” (p 335). This result is similar to Neumann and Neumann's (2010) study, which found that only four out of 35 mothers scaffolded writing with environmental print available in the rich play setting.

### ***Writing Implements***

Writing implements are typically tools children use to participate in writing (i.e., crayons and pencils). Gerde et al. (2015) found that 95.6% of teachers made writing tools available for children. Although children may explore the writing implements provided, they are more likely to benefit when adults model their use (Gerde et al., 2022; Rich, 1985; Teale & Sulzby, 1986). A study by Rowe and Neitzel (2010) indicated that in certain situations, especially in the classroom, children are often provided with writing implements but little writing support. While gathering baseline data in their research, Rowe and Neitzel (2010) observed that there were writing implements in the classroom. Still, teachers hardly brought up the writing center in their conversations with the children. The lack of conversations impacted children's choices when deciding which areas to play in and what materials to interact with. The researchers had to work alongside the teachers to prioritize using available materials when supporting children's literacy learning.

Furthermore, studies showed more writing implements in the writing center than in other centers (Gerde et al., 2015, 2019). Bennett-Armistead et al. (2005) suggested that writing implements should not be limited to the writing center alone because preschoolers need to see that print is indispensable and can be found everywhere. Gerde et al. (2019) found that 21.6% of teachers reported making writing materials available in other classroom areas apart from the writing center (science area – 25.6%, dramatic play area– 31.2%, and block area – 6.3%). Gerde et al. (2015) found that 30% of classrooms had

writing implements in the dramatic play area, 23.3% in the science areas, and 15.3% in the block area.

Preschool children need adults' support as they emerge as writers. Support can be provided to these preschool children in areas of letter formation, grapho-phonemic awareness, and composing. Writing can also be encouraged by providing an enabling environment for children to write. An enabling environment may include environmental prints and writing implements. Such an environment must also include adults who model writing for children and provide opportunities for them to write in all centers.

### **Gaps in the Literature**

This section discusses the gaps in the literature. Studies examining adults' support of preschool children's early writing focus on parents or teachers rather than the collaborative efforts of both stakeholders. This study adds to the literature by exploring how both stakeholders can jointly support children's early writing behaviors. Teale and Sulzby (1986) identified that emergent writers benefit from modeling by adults, "particularly their parents" (p. xviii). One possible reason for this could be that children are more comfortable exploring with their parents, and parents may instinctively know what their child can do and vary support for their child. However, children may benefit more if parents and teachers collaborate to support children's early writing. By working together, parents and teachers can learn about what works in support of children and encourage emergent writing behaviors in both environments.

In addition, the studies that examined parents' or teachers' support in early writing mainly employed an observational study design that observed the kind of support parents

and teachers used to assist preschool children's writing behavior. A methodological approach that provides insight into each child's writing level and the adults' decision-making process regarding the kind of support deemed appropriate for that child based on their level will contribute to the existing literature in early writing research. With this approach, caregivers will closely observe each child and document the effective or ineffective support. Furthermore, a design-based method that focuses on collaborating with parents and teachers to refine an intervention to support each child's early writing behavior will contribute to the literature. This will provide insight into what strategies support and inhibit individual preschool children's early writing behavior.

### **Parent and Teacher Collaboration in Preschools**

When parents and teachers collaborate to support children's development, there is a better chance of success. However, if there is no collaboration between stakeholders, it could negatively affect children's development. When collaboration is lacking, there may also be a mismatch between parents' and teachers' beliefs, expectations, and practices and, therefore, no consolidation of effort to support specific aspects of a child's development (Litkowski & Kruger, 2017). This section provides an overview of empirical studies investigating the types of parental involvement and engagement, how this supports children's development, and the teachers' role in parental involvement.

### ***Defining Parental Involvement and Engagement***

Parental involvement and engagement are fluid concepts often interchangeable with family involvement and family engagement. LaRocque et al. (2011) defined family involvement as "parents' or caregivers' investment in the education of their children" (p.

116). A seminal piece by Epstein and Salinas (2004) identified six ways families can be involved in their children's education: volunteering, collaboration with the community, communication, learning at home, parenting, and decision-making. These categories suggest that the involvement of families in their children's education occurs in both the home and school settings (Fantuzzo et al., 2013). Parents can volunteer in their children's classrooms or other school-related activities in the school setting. They can be involved in decision-making, communicate, and collaborate with their child's teacher to coordinate resources. Parents can support children as they learn at home and do their homework in the home setting. Parental involvement, either in the home or school setting, has proven to be beneficial to children's academic and social development (Castro et al., 2004; Fantuzzo et al., 2013; Hindman & Morrison, 2011; Hindman et al., 2013; Lee & Rispoli, 2019; Marcon, 1999; Sheridan et al., 2010).

### ***Ways in Which Parents are Involved***

This section discusses how parents can be involved in their children's education. From the studies reviewed, parents are involved in the school setting (school-based parental involvement) and the home (home-based parental involvement).

**School-Based Involvement.** School-based involvement (SBI) requires parents to participate in activities within the school or the school's community (Fantuzzo et al., 2013; Hindman & Morrison, 2011; Lee & Rispoli, 2019; Marcon, 1999). Hindman and Morrison (2011) found that the average family with children in Head Start was differently involved in school-related activities. These ways include observing their children's classrooms, preparing newsletters, volunteering, and attending conferences.

The most frequently reported activities were classroom observations and volunteering. The least reported was helping to prepare newsletters. The study also showed that families were involved at least once per year in six different ways.

Other researchers focused on specific aspects of SBI. For instance, Marcon (1999) investigated involvement that considered the relationships between parents and their children's classroom teachers while excluding aspects that involved parents collaborating with the community and participating in school decision-making. Marcon (1999) explored how teachers rated the extent of parent involvement in their four-year-old children's learning. The children ( $n = 708$ ) attended Head Start programs and were identified as having low-income backgrounds. Marcon (1999) grouped parent involvement into high and low and active and passive based on the teachers' ratings.

Active parent involvement included activities like volunteering, class visits, and support, while passive parental involvement included parent-teacher conferences and other communication-related activities directed by the teacher. The findings revealed that many parents (73%) participated in at least one form of active school involvement, while 27% had participated in only passive activities. Specifically, Marcon found that the percentage varied across different types of school-based parental involvement. For instance, 79% of parents attended parent-teacher conferences, 55% attended class visits, 48% helped with class activity, and 14% welcomed teachers at their homes. Further analyses showed that the teachers had no contact with 10% of parents. Out of the four categories of parent involvement activities, only 7% of the parents ( $n = 48$ ) participated in all identified involvement, while 29% participated in three.

Lee and Rispoli (2019) examined the impact of Head Start on the school-based involvement of fathers. They found that the opportunities for school-based involvement included volunteering at school events and attending school meetings and teacher conferences. Descriptive analyses showed that 68.4% of fathers with children in Head Start were more likely to participate in activities. Castro et al. (2004) investigated the extent and types of parental involvement in Head Start events and the relationship of parent contribution to teacher, family, and classroom attributes. A total of 59 teachers and 1131 parents participated. Concerning SBI, they found that the most frequent type of involvement was parents offering assistance in the classroom (35%), followed by parent-teacher meetings (24%), and volunteering in school (i.e., supporting on field trips; 14%). Other parents (15%) volunteered in various activities, including fundraising and helping at special events.

To better understand SBI, Fantuzzo et al. (2013) developed and validated an abridged preschool version of the family involvement questionnaire. The original version, a 42-item questionnaire, was reduced to 21 items. Findings from the abridged version of the 21-item family involvement questionnaire revealed that school-based parental involvement correlated with teacher contact experiences ( $r = .30, p < .001$ ), classroom contact experiences ( $r = .38, p < .002$ ), and school contact experiences ( $r = .36, p < .001$ ). Further, they found that parents were more satisfied when involved in their children's school, as indicated by the high correlation between parents' satisfaction with classroom contact and school contact experiences.



School-based involvement helps parents understand the school culture and expectations and support their children's development. Volunteering at school events was the most popular form of school-based participation in the studies reviewed (Castro et al., 2004; Hindman & Morrison, 2011; Lee & Rispoli, 2019; Marcon, 1999), followed by attending parent-teacher conferences (Hindman & Morrison, 2011; Lee & Rispoli, 2019; Marcon, 1999), and parent-teacher meetings (Castro et al., 2004; Marcon, 1999).

**Home-Based Involvement.** Home-based involvement (HBI) centers around how teachers involve parents in supporting their children at home. This support entails helping their children learn at home and parenting duties (Epstein & Salinas, 2004).

Unfortunately, research in this area is scant, especially for preschool children. Because this review aimed to examine studies investigating how parents are involved or engaged with their children's preschool teachers, this review is limited to studies that focused on parent involvement and engagement in partnership with a preschool. Additionally, studies that examined perceptions and attitudes about the nature of parent involvement and engagement were excluded. From the studies reviewed, only two studies (Fantuzzo et al., 2013; Hindman & Morrison, 2011) examined home-based parental involvement.

Hindman and Morrison (2011) examined HBI activities. In addition to other vital components like teacher and school outreach, they categorized HBI activities into less and most frequently reported. Parents' most commonly reported activities were home-based reading, talking, playing together, and discussing letters and words. Early writing activities were not mentioned. The less frequently reported activities were telling stories, doing crafts, and playing sports. Home-based reading occurred about three to six times

weekly in the fall and spring of their yearlong investigation. However, Hindman and Morrison (2011) noted that these results varied across families.

Fantuzzo et al. (2013) found that parents from homes where the primary communication language was English participated in significantly more HBI activities than parents from non-English speaking families. This may be because English language speakers are more comfortable participating in English-related activities like reading books written in English. In addition, HBI correlated with school contact experiences ( $r = .24, p < .002$ ), class contact experiences ( $r = .29, p < .001$ ), and teacher contact experiences ( $r = .32, p < .001$ ). Home-based involvement was associated most highly with the satisfaction of teacher contact experience. This finding indicated that the suggestions and feedback of teachers might support what families do in the home and contribute to children's learning in the classroom.

There is scant literature focusing on home-based parental involvement for children in preschool. Also, the literacy-related activities discussed in these studies do not include writing. The literacy-related activities addressed in the studies reviewed include reading, discussing letters and words, and telling stories.

### ***Impact of Parental Involvement on Preschool Children***

Parental involvement supports preschool children's socio-emotional skills (Marcon, 1999; Sheridan et al., 2010) and academic achievement (Fantuzzo et al., 2013; Hindman et al., 2013; Lee & Rispoli, 2019). For example, Marcon (1999) found that active and school-based parent involvement was associated with preschool children's early basic skills assessment performance. Marcon assessed children's domestic skills,

play and leisure, gross motor skills, and expressive language using the Vineland assessment. Children had greater command of basic skills in all subject areas except motor development. Marcon noted that children who performed higher on the different components of the Vineland assessment had parents who were highly involved in school-based activities like class visits, helping with class activities, and attending parent-teacher conferences (Marcon, 1999).

Additionally, a study by Sheridan et al. (2010) indicated that preschool children who participated in the Getting Ready intervention, focused on engaging parents to boost their children's socio-emotional outcomes, had higher gains in socio-emotional behaviors. Over time, teachers' reports indicated a change in specific interpersonal abilities (i.e., anxiety/withdrawal, initiative, and attachment). These changes were significantly different among the control and experimental group. Children in the experimental group exhibited significantly improved gains in their attachment behavior with adults. Over time, there was a significant reduction in withdrawal and anxiety-related behaviors.

Hindman et al. (2013) found that teacher outreach is directly connected to children's academic development. For instance, there were positive associations between teachers' invitation of parents to volunteer in the classroom and children's math development. This may result from parents observing teachers' classroom techniques and adopting them at home. Workshops for parents coordinated and presented by teachers also positively correlated with children's vocabulary learning after controlling for child, family, and teacher factors. On the other hand, calling families on the phone was not

related ( $\beta = -1.67, p = .020$ ) to children's mathematics development and vocabulary. In addition, children taught by more experienced teachers ( $\beta = 0.72, p = .039$ ), teachers with a Bachelor's degree ( $\beta = -5.96, p = .016$ ), and in full-day classrooms ( $\beta = 7.06, p = .001$ ) had stronger mathematics skills. Parents' opportunities to volunteer in the class positively correlated with mathematics skills ( $\beta = 1.77, p = .004$ ). Furthermore, Fantuzzo et al. (2013) assessed the correlation between specific academic outcomes on parental involvement. These outcomes were vocabulary, math, alphabet knowledge, and listening comprehension. The findings from these data showed that the home-based involvement section of the questionnaire significantly correlated, albeit low, to mathematics ( $r = .16, p = <.01$ ), knowledge of the alphabet ( $r = .23, p = .001$ ), and vocabulary ( $r = .21, p = .001$ ).

In an earlier investigation, Hindman and Morrison (2011) examined how specific involvement and outreach practices are associated with children's outcomes. Results showed that children who engaged in more home involvement activities, particularly letter and word instruction showed more substantial decoding gains during preschool ( $\beta = 1.30, p = .045$ ). Parents who read more often to their children had children with good vocabulary knowledge ( $\beta = .25, p = .002$ ), and families who volunteered more in the classroom had children with stronger vocabulary. Other family involvement strategies which supported children's development included interacting with children ( $\beta = 0.14, p = -.004$ ) and playing games that involved counting ( $\beta = 0.21, p = -.001$ ). Furthermore, families who allowed educators to visit their homes showed positive approaches to learning ( $\beta = .12, p = .003$ ). Lee and Rispoli (2019) found that being enrolled in Head

Start and being engaged as a father in school-based involvement did not correlate with children's developmental outcomes when they reached kindergarten age.

Parental involvement benefits the preschool child's socio-emotional and academic development. However, the reviewed studies indicated that only certain parental involvement activities correlate to socio-emotional development, while others contribute to educational development. For instance, Marcon (1999) found an improvement in children's play and expressive language when their parents visited the classroom, attended parent-teacher conferences, and helped with a class activity. For academic development, Hindman and Morrison (2011) found that home-involvement activities like letter and word instruction supported children's decoding.

### ***Teachers' Role in Parental Involvement***

Research indicated that parents' involvement in the school or the home depends on teachers and the school. This section focuses on teachers and how they encourage parents to be involved. For example, teachers can encourage parents to be involved through home visits (Sheridan et al., 2010), phone calls, writing notes, parent-teacher conferences, newsletters, workshops, and inviting parents to volunteer in the classroom (Hindman et al., 2013).

Sheridan et al. (2010) evaluated the effectiveness of the Getting Ready Intervention. This program trained teachers to engage with parents through home visits. The teachers were observed using the intervention strategies during the home visits. Parents in the experimental groups interacted with their children 66.3% of the time, approximately 40 minutes of a 60-minute home visit. This interaction was significantly

higher than parents in the control group, who interacted with their preschool children for about 26 minutes.

Hindman et al. (2013) investigated teachers' outreach to families in three different school settings (preschool, kindergarten, and first grade) and the relationship with children's literacy, language, and mathematics development. Sixty-two teachers and 210 children participated in the study. The results showed teachers called a child's family on average three times yearly, sent emails or personal notes monthly, newsletters bi-weekly, and held parent-teacher conferences twice yearly. Teachers invited parents to volunteer twice a month, and workshops were held approximately once a year. Performances and other social events occurred nearly twice or thrice a year.

Through the data analyses, Hindman et al. (2013) observed variance in teacher engagement across school settings. For instance, preschool teachers did not send newsletters to parents as frequently as kindergarten or first-grade teachers. Also, preschool teachers sent home activities less regularly when compared to kindergarten and first-grade teachers. In addition, volunteers were not invited into preschool as often as kindergarten and first-grade classrooms. Social events and performances were the only types of engagement in which preschool teachers did not differ from kindergarten and first-grade teachers. Hindman et al. (2013) also found that only one Head Start teacher engaged in visiting parents at home and performed this activity twice yearly for each family.

## **Gaps in the Literature**

Parental involvement is integral to children's academic and social development. School-based and home-based parental involvement are connected to children's educational development when parents are involved in academic-related parental involvement. These types of involvement include visiting the classroom (Marcon, 1999), volunteering to help with class activities (Hindman & Morrison, 2011; Marcon, 1999), supporting children's literacy at home (Hindman & Morrison, 2011), attending parent-teacher conferences (Marcon, 1999), and participating in workshops (Hindman et al., 2013). According to Hindman et al. (2013), volunteering in class is correlated with math development, and participating in workshops is correlated with vocabulary development. With the advent of COVID-19, more restrictions have hindered parents from being involved in activities that require their physical presence. Therefore, more literature on parental involvement that does not require a presence in the classroom or school is needed.

Concerning home-based involvement, Hindman and Morrison (2011) found that reading more often is connected to good vocabulary and letter and word instruction supported decoding in preschool. Findings from Fantuzzo et al. (2013) showed that the home-based involvement section of their questionnaire significantly correlated, albeit low, to mathematics, knowledge of alphabets, and vocabulary. However, none of the studies on parent involvement and engagement examined how parental home-based involvement could support preschool children's early writing skills. Preschool children will likely benefit when parents and teachers work together to support early writing.

Also, most studies reviewed focused on families in Head Start centers, indicating a need for more research focusing on community-based preschools.

The reviewed studies have shown how parent and teacher collaboration and adults' support of children's writing impact a child's development. It is essential to understand how theory supports and informs these key constructs. The following section discusses the theoretical framework for this paper.

### **Theoretical Framework**

This section provides a rationale and theoretical framework for this dissertation. The theories used help to explain, predict, and understand the following key constructs: (a) early writing, (b) adults' support of early writing, (c) the environment, and (d) parent and teacher collaboration. The theories, including Vygotsky's (1978) Zone of Proximal Development and Bronfenbrenner's (1979) Ecological Systems, will also serve as a springboard to challenge and extend existing knowledge within these theoretical assumptions (Torraco, 1997).

#### ***Zone of Proximal Development and Scaffolding***

Vygotsky's discussion on the Zone of Proximal Development posited that a child's learning has already begun before formal schooling. This suggests that preschool children are well capable of learning. Although Vygotsky (1978) noted that the way concepts are taught to children when they start formal school differs, children already have a history connected to these concepts. For instance, in elementary school, children may be introduced to writing elements, including grammar, punctuation, central idea, and organization. However, in preschool, children know that ideas are communicated through



various writing forms, including scribbling, drawing, and writing. Through their interaction with an adult, they learn the elements of writing informally, paving the way for later formal learning.

Vygotsky (1978) also recognized that what preschool children learn is a function of their interaction with their environment. As children interact with adults in a rich environment, their learning evolves. For example, in writing, preschool children may see an adult think aloud about the idea they want to share and then see them communicate it through writing. When the adult reads the writing aloud, making changes and corrections as needed, preschool children begin to see the writing process unfold without necessarily knowing the formalized name of each element. The skills children acquire at this level serve as a foundation that teachers can build upon in elementary school. Early writing demonstrates why Vygotsky (1978) argued that only myopic psychologists would ignore the previous learning that children bring to formal school.

Every child's previous learning differs. Vygotsky discussed the concept of the *zone of proximal development* in the context of the individual child's developmental level. For example, the zone of proximal development of a 4-year-old child may differ from that of another 4-year-old child. Vygotsky (1978) explained, therefore, that "learning should be matched in some manner with the child's developmental level" (p. 85). He further noted that the actual and potential developmental level must be recognized in order to match learning to each individual child.

The actual development level signifies what a child can do independently without support. For same-age children, this may mean that some are scribbling while others are

writing letters. Vygotsky (1978) identified that a “battery of tests” with varying degrees of difficulty provides us with information on what the child has mastered (p. 85) and assists in understanding the actual developmental level. Therefore, this study used specific writing tests, including evaluating children’s writing samples, to ascertain what each child controls in writing. These include assessing concepts about print, letter identification, letter writing, and name writing.

The potential developmental level signifies what a child can do with the support of an adult. Bodrova and Leong (1998) described a child who is ready to learn skills as on the “edge of emergence” (p. 2). According to Vygotsky (1978), an adult’s support could include showing the child how to solve a problem or offering leading questions to support the child’s solving. In some cases, the adult must solve the problem. This means that without the “more knowledgeable other,” the child would be unable to solve the problem (Vygotsky, 1978). The *Zone of Proximal Development* is the “distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers” (p. 86), and this theoretical construct was relevant to this work.

Related to the Zone of Proximal Development is the concept of *scaffolding*. According to Wood et al. (1976), “scaffolding is a process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts” (p. 90). Scaffolding occurs when an adult controls the task’s difficulty level to enable the child to focus on what he can gradually learn or complete without

becoming frustrated (Wood et al., 1976). Wood and colleagues described how tutors varied the assistance for children between the ages of three and five as they built a pyramid from blocks of different shapes and sizes. The varied support provided allowed learners to function at the advanced level of their zone of proximal development. The tutor permitted each child to do as much as he could for himself while trying to build blocks. The tutor only intervened directly when the child failed to follow oral instructions. “The child’s success or failure at any point in time, thus, determined the tutor’s next level of instruction” (Wood et al., 1976, p. 92).

In the context of this research, an adult who is trying to scaffold a child’s writing of the words c-a-t and f-i-sh may slowly articulate the word /k/ /a/ /t/ to emphasize each phoneme or use directional language to guide the letter formation as a child writes fish saying, “F for fish goes down, across, and across.” As an adult uses this language for letter formation, they may also draw this in the air connecting the verbal and motor pathways with the visual pathway for the child.

Vygotsky referred to the use of verbal or visual cues as *signs*. Further, he referred to children’s use of signs as *mediated learning*. Signs help children recall what they are expected to write and how to write. Vygotsky (1978) described signs as a “means of internal activity aimed at mastering oneself; the sign is internally oriented” (p. 55). For instance, the child may speak to or direct himself using the directional language he has been taught when forming a letter. After the child has internalized the skill he is learning, the verbal and visual signs will no longer be necessary. The choice of a particular sign

depends on what the adult knows about the child and what that child has mastered at their actual developmental level.

According to Vygotsky (1978), it is crucial to consider a child's developmental level when mediating learning with a sign. For instance, in a study designed to investigate mediation, Morozova provided children with "auxiliary pictures" that served as "mediators" (Vygotsky, 1978, p. 46). Morozova found that the auxiliary pictures were still alien to preschoolers. Therefore, adults need to know what each child controls and needs and provide appropriate signs for the child. For instance, if the teacher emphasizes letter-sound connections, the teacher may prompt the child to say a word slowly because she knows the child can connect the sound to the letter. Likewise, the teacher needs to know the next level of instruction when the child succeeds or fails.

When each child is assisted within their Zone of Proximal Development, Vygotsky (1978) opined that what they can do varies. For instance, a four-year-old may be able to complete the writing of a sentence with a parent providing grapho-phonemic support, while another child may only be able to write their name. As the child becomes capable of doing more independently, the level of assistance gradually decreases to the point where the learner no longer needs the scaffolds to support the task completion (Bodrova & Leong, 1998).

However, it is essential to note that at any given time, there will still be tasks outside a child's Zone of Proximal Development "such that no amount of assistance will facilitate learning" (Bodrova & Leong, 1998, p. 3). For instance, a child who is scribbling to form some letter shapes with the help of a parent using directional language is not

likely to write an entire story. This would clearly be outside this child's Zone of Proximal Development (Bodrova & Leong, 1998). Vygotsky (1978) contended that each child's zone of proximal development could be studied to identify what skills have developed and those currently in progress. In this study, the methods used made it possible to examine each child's writing samples in cycles to understand what writing behaviors and skills each child had developed and what scaffolds were needed to help them progress in each cycle. Vygotsky (1978) argued that understanding what children can do with support at a certain age provides information through which we can predict their skill set provided they are exposed to the same conditions that encourage development. Vygotsky (1978) suggested that we consider what children can do with and without support because psychologists have proven that a child can only produce "that which is within her developmental level" (p. 88). This presents an overall depiction of a child's developmental level and helps us provide optimal learning to advance a child's development (Vygotsky, 1978).

In this research, I prioritized what children could do with the support of parents and teachers and what they could do on their own during the post-test. Additionally, what children can do with the support of their parents and teachers was used to predict what they could do at the start of the following school year if parents and teachers continue to work together after completing this research. The Zone of Proximal Development and scaffolding helped provide a useful framework for how adults can better support children's writing within their developmental level. Examining how the child's environment influences their development is also vital.

### *Ecological Systems Theory*

The ecological systems theory propounded by Bronfenbrenner (1979) focused on how the environment and interaction with it influence the developing child.

Bronfenbrenner stated that the ecological system is like a “set of nested structures, each inside the next, like a set of Russian dolls” (p. 3). Bronfenbrenner (1979, 1992) described five ecological systems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

The innermost ecological system is the *microsystem*, the developing child’s immediate surroundings. For this study, the microsystem is the home and the preschool classroom. Bronfenbrenner highlighted the importance of what takes place in a child’s immediate environment; the activities a child sees occurring or those the child is involved in can cause development “in the form of a newly acquired *molar activity*” (p. 6). In the current study, this meant providing children with a rich literacy environment where their primary caregivers communicated through writing stories, songs, day-to-day experiences, and other relevant activities. This also involved modeling writing for children in different centers in the classroom and encouraging their participation. A three-year-old is more likely to join in writing-related activities if they see an adult engaged in writing and are invited to write with the adult.

The next level, *the mesosystem*, refers to the interaction between the child’s various settings. Bronfenbrenner (1979) emphasized that there must be a symbiotic relationship between the adult and other individuals that may influence a child’s development. Otherwise, the system will likely break down if these individuals are absent

or play disruptive rather than supporting roles. In this study, a child's ability to write is partly a function of how he is taught, the existence and nature of writing opportunities, and the connection of these opportunities between school and home. Therefore, teachers and parents were encouraged to collaborate to support their children's emergent writing development.

The *exosystem* is the third level. This level refers to events in a setting a child is not part of, which may indirectly influence the child's development. Bronfenbrenner (1979) suggested that this could be a parent's workplace. For instance, a parent who is also a kindergarten teacher may provide more opportunities for her child in the home than a parent who works in the textile industry. A parent with multiple jobs may be constrained in her ability to spend time with her child and support the child's emergent writing development. For the classroom teacher, this could mean they cannot encourage certain literacy activities due to the curriculum chosen by the school district or preschool. Not being able to promote certain literacy activities because they are not in the curriculum may limit opportunities that could contribute to a children's literacy development. For instance, if a curriculum encourages teachers to focus on a letter per week, it may prevent the teacher from tailoring instruction and working with each child based on what that child knows.

The fourth level is the *macrosystem*. Bronfenbrenner asserted that there are distinct cultural differences in the "settings at all three levels of the ecological environment" that precede the macrosystem. Cultural differences can result from ethnicity, geographic location, or socioeconomic status. Saracho (2004) noted that one

factor influencing the variations in preschool children's writing abilities is their cultural experiences. For example, teachers may set up their classrooms and encourage certain practices that are culturally driven. This could include teaching children using a particular set of standards provided by policymakers. In addition, parents may also have different practices based on their ethnicity or education, which in turn may influence how they interact with their children. If parents come from a tradition of storytelling as a means of communicating, they may place less emphasis on writing with their children.

The final level is referred to as the *chronosystem*. This system highlights changes that can occur in cultural values. Bronfenbrenner suggested that the cultural "blueprint can be changed," and as a result, how the settings are structured "can become markedly altered and produce corresponding changes in behavior and development" (p. 4). In this research, this change may stem from the information parents and teachers glean from educational materials, meetings, and the collaborative efforts of the two groups. This may lead to adjusting practices that support a child's emergent writing behavior and development.

Bronfenbrenner (1979) identified that often, when research is conducted on a child, data only comes from that child and not from the sources that influence him, for instance, the parent and teacher. He stated that when interactions between the child and the primary caregiver are examined, the developmental changes in children are better understood. The present study considered this point and used Bronfenbrenner's Ecological Systems theoretical framework to underpin and guide methodological decisions. For instance, parents and teachers were interviewed at the beginning of the



research to determine how they viewed the role of collaborative practices relative to preschool children's emergent writing development. Accounting for all sources that influence the child, such as parents, teachers, and the environment, in addition to the pre and post-test measures collected on each child, deepened the understanding of the children's literacy learning. During the iterative cycles, parents, teachers, and the researcher met to discuss what they were doing to support preschool children's emergent writing development, ultimately leading to changes in parents' and teachers' collaborative practices over time. This transcended into changes that supported each child's emergent writing progress. Development in a child can be influenced when there is an interaction among the systems Bronfenbrenner described with the common goal of supporting the child. This study is designed so that the findings may provide information on how the micro-, meso-, macro-, exo-, and chrono-systems influenced the child's development.

This chapter reviewed studies in early writing. It also reviewed how teachers' and parents' support and collaborative practices may enhance children's emergent writing development. The literature covered in this section indicates a need for additional research investigating children's individual growth in early writing through the supportive and collaborative efforts of parents and teachers. The theoretical framework supported this research study and shaped the methods used in this study. The next chapter describes the specific methodology used in this research study.

## CHAPTER THREE

### Methods

The goal of this research was to support preschool children's writing through a collaborative communication mechanism between parents and teachers. To address this goal, design-based research methods were used. Wang and Hannafin (2005) defined design-based research (DBR) as "a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories" (p. 6). In addition, DBR embraces varied methodological approaches and welcomes confounding variables as beneficial in understanding the local context.

DBR was relevant for this study because it allowed the refining of an intervention prototype to move it toward a valued pedagogical goal (Barab & Squire, 2004). The design also allowed the researcher to collaborate with key stakeholders in a local context as they made meaningful changes to promote early writing development to honor the contributions of both school and home.

For this research, the pedagogical goal was *to enhance preschool children's emergent writing skills*, and the intervention was built around a collaborative communication mechanism between teachers and parents. Therefore, while the pedagogical goal focused on student writing, an ancillary goal of how the intervention would influence parent/teacher communication was also explored. The intervention,

conducted by parents and teachers in collaboration with the researcher, was iteratively and systematically refined through cycles of implementation and revision in the direction of the pedagogical goal. This allowed the intervention to suit the participants' context and needs.

### **Preliminary Study**

In the fall of 2019, a preliminary study was conducted in the same school to understand teachers' and parents' beliefs, knowledge, and practices regarding early literacy, emphasizing early writing. For parents' and teachers' knowledge and practices related to preschool children's writing, the results of the interviews suggested that many parents focused more on alphabet recognition and name writing. In addition, the lead teachers in the three- and four-year-old classrooms provided opportunities for children to write; however, both teachers had different practices.

In the three-year-old class, the lead teacher, Ms. Belinda, focused on activities she deemed developmentally appropriate for children. These included singing, alphabet recognition, and tracing. There was more emphasis on activities around children's names, alphabet recognition, and direct writing assistance. As part of the interview, there was a discussion on how the teacher used what parents did at home to support class practices. Ms. Belinda did not draw upon children's literacy experiences at home to work with children in the classroom, which suggested a lack of parent-teacher collaboration.

In the four-year-old class, the former lead teacher, Ms. Claire, focused on activities encouraging children to see writing as conceptual (writing is for a purpose) and generative (writing carries meaning; Byington & Kim, 2017). For generative writing, the

teacher discussed incorporating children's dictation so children could see their ideas written on paper; however, children were not encouraged to write independently. Parents of the four-year-olds mainly talked about supporting children in alphabet recognition. It is important to note that in both classrooms, children had a lot of free independent writing opportunities during center time but not as much writing practice. Although children had ample time to play in centers, which could have been an opportunity for explicit writing instruction, this was not observed. The results of the preliminary study motivated the guiding research questions for this present study.

1. How can intervention activities be refined to enhance children's emergent writing skills?
2. How can intervention activities encourage parent-teacher collaboration?

### **Context of the Study**

Parent-child dyads and preschool teachers were recruited from a local child development center. The school serves a diverse socio-economic, international, and ethnic population. Some of the parents are lecturers or postgraduate students and originate from many countries, including Saudi Arabia, Poland, China, Japan, India, the Philippines, Libya, and Romania. Many of the students are also eligible for free school meals.

The classrooms included one lead and one assistant teacher. The focal classrooms for this study were the three- and four-year-old classrooms. This context was appropriate to the purpose of the research as three- and four-year-old students are at the emergent writing stage of development. In addition, access to parents and teachers was possible.

## **The Classroom Environment**

Prior to the intervention, both the 3K and 4K classroom environments were observed. The 3K classroom consisted of different centers, including the science, writing, reading, dramatic play area, block, and housekeeping center (see Appendix A). Each center was partitioned to create a dedicated space and included different items. For example, the science center wall had a big blue board. On this board were a paper tree, a brown paper basket, and fruits cut out by hand. The center also contained foam numbers and puzzles. The writing center had a table and three chairs for the children. On the table was an assortment of crayons. In the reading area, there was a sitting area for children and open shelves with baskets of books.

Along one wall of the classroom were the children's cubbies. Each cubby was individually labeled with a child's name. Different parts of the 3K classroom had open and closed storage places to store supplies. The supplies included but were not limited to colored cardstock, paper of various sizes, books, scissors, watercolors, pencil sharpeners, assorted stamps, play dough, and modeling clay. Additionally, there was a carpet area where the teacher and children gathered for group time. The carpet area had an exit door leading to the playground. Beside the door were a board with a monthly calendar and a wheel for children to select the current weather. To the right of the door, there was also a Zoo-phonics® poster on display.

The 4K classroom also consisted of a carpet area and different centers, including the writing center, library center, science center, gross motor center, and housekeeping center (See Appendix B). In the housekeeping center, there was a round table with two

blue chairs. This center also included toys for the children to use during play. The housekeeping center partition had six white posters listing the children's first names. There were some pictures of the child near the posters, and these pictures had the children's full names. The block center was close to the housekeeping center and contained wooden blocks for building and play. There were six white posters on the block center wall with the children's first names listed. This center also had pictures of the children and their families. The writing center had a blue table and toys. At the time of initial observation, there were a variety of colored toy monkeys in a clear container and an assortment of crayons in a clear box.

In the carpet area, a green door led to the playground. To the right, there was a colorful A-Z poster on the wall. There was also a board in this area. The name of each student was written on the board alongside their photograph. The 4K classroom also included open and closed storage for supplies such as cardstock, colored paper, pencils, and crayons. Both the 3k and 4K classrooms had a rich environment.

## **Participants**

A total of two lead teachers from the 3K and 4K classrooms and 11 parent-child dyads volunteered to participate in this study. This number of participants provided sufficient data to address the research questions. The demographics of the teachers are presented in Table 2. The lead teachers in this study were white females with varying educational experiences and backgrounds. The three-year-old teacher earned a bachelor's degree in Early Childhood Education and was certified. She also had 28 years of experience teaching preschoolers. The four-year-old teacher earned her bachelor's degree

in Early Childhood Education and Family Studies with two years of experience teaching preschool children.

**Table 2**

*Demographics of Teachers*

<b>Name of teacher (Pseudonym)</b>	<b>Class</b>	<b>Ethnicity</b>	<b>Degree</b>	<b>Years of experience</b>
Ms. Belinda	3K	American	Bachelor's degree in Early Childhood Education and was a certified teacher	28 years
Ms. Trish	4K	American	Bachelor's degree in Early Childhood Education and Family Studies	2 years

As seen in Table 3, the children and parents who participated in this study were from different cultural backgrounds. Five cultures were represented. These are American, Chinese, Turkish, Latina, and Polish. All names used in this study are pseudonyms.

**Table 3***Demographics of 3K and 4K Participants*

<b>Class</b>	<b>Name of child</b>	<b>Gender</b>	<b>Ethnicity</b>	<b>Age</b>
3K	Stefan	Male	Polish	46 months
3K	Eva	Female	American	45 months
3K	Piper	Female	American	44 months
3K	Rosie	Female	American	38 months
3K	Lucy	Female	Chinese	45 months
3K	Anabel	Female	American	42 months
4K	Ethan	Male	Turkish	60 months
4K	Hollie	Female	Chinese	49 months
4K	Linda	Female	Chinese	49 months
4K	Eden	Female	Latina	56 months
4K	Stan	Male	American	57 months
4K	Chad	Male	American	50 months

*Note.* Data were collected for six children in the 3K and 4K classrooms. Ages are reported from birth to the beginning of the study (September 2021). All names are pseudonyms.

***Researcher-Participant Relationship***

In the fall of 2019, when the preliminary study was conducted, the researcher observed the classroom of the 3K teacher, Ms. Belinda, and conducted a semi-structured interview with her. Stefan's mother and Hollie and Linda's mother were also interviewed



during this preliminary study. At that time, all three children were in the two-year-old classroom. These existing relationships were helpful as they increased the participants' trust and interest in the design-based study. The mothers of Stefan and Hollie and Linda encouraged other parents they knew to volunteer for the study.

### ***Procedures for Participant Recruitment***

**Contact With the School Director.** The researcher met face-to-face with the school director to discuss further research to enhance preschool children's literacy skills to build on findings from the preliminary study which investigated teachers' and parents' beliefs, knowledge, and practices about early literacy. This meeting was followed up with an email from the researcher to the director detailing the purpose and goal of the research. The researcher included the recruitment letters for the director, parents, and teachers in the email so the director could review, understand the research requirements, and ask any questions. The recruitment letters can be found in Appendices C, D, and E. After reviewing the information provided, the director agreed to allow the researcher to conduct research at the center and recruit parents, teachers, and children who would participate. The director also provided a letter of support that the researcher added to the Institutional Review Board Application. This letter of support/site letter was required for IRB approval.

**Institutional Review Board Approval and Participant Recruitment.** After the Institutional Review Board (IRB) approval, teachers and parents were invited to participate through recruitment letters and consent documents. These documents provided a summary and the purpose of the intervention. Parents were also provided with a

permission document for their children. The letters of information, consent, and permission documents were given to the school director, who then gave the lead teachers a hard copy of the letters of information and consent documents. The lead teachers sent a hard copy of the letter of information, consent, and permission documents to all the parents in the 3K and 4K classrooms. The documents were given to each child as they went home. Interested parents signed the permission document, consenting to the use of their child's educational products for research purposes, and this document was submitted to the director.

Eleven parents consented to their children participating in this study. These eleven parents and their twelve children were recruited to the study. One of the parents had her twin daughters participate in this study. The lead teachers were also recruited to participate in the study.

**Participant Follow-Up and Initial Interview.** After these permission forms were submitted to the school, the school director sent an email to the researcher providing emails of those parents who had submitted signed consent forms for their children. Emails of the lead teachers were also sent to the researcher after they agreed to participate in the study. The researcher collected all the permission forms from the school director before the study began. After the permission documents were collected, the researcher sent a follow-up email to parents and teachers to set up a semi-structured interview before the interview. In the email, parents and teachers were required to choose times and dates that were convenient for them through Youcanbook.me application. I provided dates and times in September so that all initial interviews were completed

before the classroom observations. During this initial interview, the consent documents were reviewed with each parent and teacher to ensure they consented before beginning the interview. The two lead teachers and ten parents were available for this initial interview. During the post-interview, only the two lead teachers and eight parents were available.

**Sampling Technique.** Convenience sampling was used to select the teachers and parents. The sampling technique involved selecting participants who agreed to participate in the study and consented to allow their children to participate. Therefore, if a parent was not consistently participating throughout the study, their child was still observed, and this child's data provided insight into how a parent's limited participation might correlate with a child's writing development.

### **Initial Intervention**

In DBR, the initial instructional plan is not overly detailed, so stakeholders can make intentional changes when necessary (Wang & Hannafin, 2005). Rather, the initial version of the intervention is stripped down to its essential elements to be refined to best approach the desired outcomes. In this way, DBR encourages stakeholders to consider the complexities of their local context and make changes that suit the context (Barab & Squire, 2004). This is crucial because stakeholders know their local context well enough to understand the contributing variables. In this study, the stakeholders were the parents and teachers, who knew each preschool child better than the researcher. The researcher was an active participant/observer in the study and collaborated with the parents and teachers as they honored the key elements.

These elements of the initial intervention that were considered to be essential were taken from literacy theory and the research literature and are as follows:

### ***Ideas for Teacher Instruction***

The ideas for teacher instruction are developmentally appropriate and grounded in literature. The lead teachers were provided with practitioner articles that suggested best practices for emergent writing development to review at different times during the study. A list of practitioner articles is presented in Appendix F. During the implementation meeting with the researcher, the lead teachers established a database of activities they wanted to implement in their classrooms.

### ***Literacy Tips for Parents***

The literacy tips for parents were sent home with the writing notebooks at different times during the study as suggestions of activities they might try with their child at home. A copy of the literacy tips was also emailed to the parents (see Appendices G, H, I, J and K).

### ***A Writing Notebook***

The researcher provided writing notebooks students could use in class and at home. In this notebook, teachers were expected to date/write activities that children engaged in at school; parents were expected to date/write activities that children engaged in at home; and ideally, students would write in this notebook daily.

This notebook served as a communication tool and instruction guide for teachers and parents because it went from home to school daily so that both stakeholders were aware of the writing explorations of the preschool children in both locations.

In addition, the notebook ensured communication between the teachers and parents, especially where communication had been limited due to COVID-19. The notebook also served as a primary research-gathering tool to record activities at school and home and helped the researcher to track students' writing progress and note parent-teacher communications regarding writing activities.

### ***Ideas for Differentiating Instruction***

Ideas for differentiating instruction were considered so that teachers and parents could meet students at their point of need. As the intervention progressed, the researcher met with each class, including the lead teacher and parents, bi-weekly to discuss child-specific ideas for supporting each child where they were as emerging writers.

The above essential elements were enhanced throughout the intervention to refine the model toward the pedagogical goal of enhancing children's early writing skills.

### **Pre-Intervention Timeline**

Before the initial version of the intervention, the following were completed: interviews, classroom observations, and assessments of students. A detailed description of activities conducted before the initial intervention is presented in Table 4.

**Table 4***Activities Completed Before Initial Intervention*

Class	Date	Activity	Class	Date	Activity
<b>3K classroom</b>	Sept. 20- Sept. 28	Pre-intervention semi-structured interviews and collection of writing samples	<b>4K classroom</b>	Sept. 21- Sept. 29	Pre-intervention semi-structured interviews and collection of writing samples
	Oct. 13 (Class closed the week of Oct. 4-8 due to COVID-19)	Pre-intervention Classroom observation		Oct. 1	Pre-intervention Classroom observation
	Oct. 14 & 15	Assessment of students		Oct. 5, 6, & 7	Assessment of students
	Oct. 18	Implementation meeting with the lead teacher (after reading the practitioner article)		Oct. 6	Implementation meeting with the lead teacher (after reading the practitioner article)
	Oct. 19	Writing notebooks sent home		Oct. 8	Writing notebooks sent home

*Note.* Pre-intervention classroom observation and other activities after this observation

started later in the 3K classroom due to the closure of the classroom during the pandemic.

## **Initial Intervention**

At the start of the initial intervention, an implementation meeting was held with teachers. The first practitioner article had been sent to them days beforehand to give them time to review it. After completing this meeting, the researcher placed the writing notebooks into the participants' cubbies. The writing notebooks were put in a complimentary book bag for ease of carriage for the children. The teachers told the children to take their book bags home. A different type of notebook was provided to the lead teachers in the 3K and 4K classrooms for children who were not participants in the study so they would not feel excluded. The researcher obtained the first set of books and the book bags as a donation from faculty members at the university.

## ***The Iterative Cycle***

In design-based research, an intervention is systematically refined through cycles of implementation and data analysis. A revised and improved version of the intervention is put in place for the next cycle at the end of each cycle. The cycles of intervention for this research occurred bi-weekly in the home and the classroom.

The timeline of the cycles is presented in Table 5. There were four cycles in total, and each cycle lasted two weeks.

**Table 5***Timeline of Cycles*

3K Classroom		4K Classroom	
Cycles	Weeks	Cycles	Weeks
Cycle 1	October 19-22 (Week 1)	Cycle 1	October 8-16 (Week 1)
	October 25-29 (Week 2)		October 17-22 (Week 2)
Cycle 2	November 1- 6 (Week 3)	Cycle 2	October 23-29 (Week 3)
	November 7-12 (Week 4)		November 1-6 (Week 4)
Cycle 3	November 14-20 (Week 5)	Cycle 3	November 7-12 (Week 5)
	November 21-27 (Week 6)		November 14 - 20 (Week 6)
Cycle 4	November 28- December 3 (Week 7)	Cycle 4	November 21-27 (Week 7)
	December 5 - 11 (Week 8)		November 28- December 3 (Week 8)

*Note.* Each iterative cycle lasted two weeks in the 3K and 4K classrooms.

During each week, parents were encouraged to write with their children in the notebook for 10 minutes a day and to send the writing notebook to school daily. Classroom observations were conducted once a week for the whole day except during lunch breaks and nap times. During this classroom observation, the researcher observed participants' literacy practices, reviewed children's writing notebooks, and scanned the pages. The researcher also briefly discussed with the teachers about the use of the writing notebook and children's progress in the writing notebook and the classroom.

At the end of each two-week cycle, an implementation meeting was held with each teacher via Zoom. The implementation meetings with the teachers ranged from 20-



40 minutes. At this meeting, the researcher and teacher discussed what they had observed was inhibiting or supporting children's writing, then collaborated on ways to better support children in the classroom and at home. The teacher and researcher highlighted what would be discussed with the parents during the bi-weekly meeting to keep moving children toward the pedagogical goal of enhancing their early writing skills. The researcher worked collaboratively with the classroom teachers to choose a convenient time. The implementation meetings with the teachers were usually held when the children were napping. On two occasions, implementation meetings were held in the evening to accommodate the teacher and researcher's schedule. Table 6 shows the implementation meetings schedule.

**Table 6***Implementation Meetings Schedule*

Cycle	Implementation meetings in the 3K classroom	Implementation meetings in the 4K classroom
Start of intervention	Oct 18 1:29 pm	Oct 6 12:30 pm
Cycle 1	October 29 1:03 pm	Oct 21 1:02 pm
Cycle 2	November 12 12:59 pm	November 5 1:01 pm
Cycle 3	November 23 5:32 pm	November 22 5:30 pm
Cycle 4	December 9 5:37 pm	December 3 5:36 pm

*Note.* The researcher and the lead teacher of each classroom engaged during this meeting.

Regarding the bi-weekly parent meeting, the researcher worked collaboratively with the teachers and parents to determine convenient days for a Zoom meeting. The bi-weekly meetings were usually scheduled in the evenings at 6 pm to allow the teachers and parents time to arrive home and settle in (see Table 7). Due to unavoidable circumstances, not everyone was able to attend all meetings.

During the bi-weekly parent meetings held via Zoom, the researcher, lead teachers, and parents discussed factors that inhibited or supported children's writing and

collaborated on modifications to implement during the next cycle. The bi-weekly meetings with parents and teachers ranged from 20-60 minutes.

**The Initial Cycle.** After the completion of the pre-intervention semi-structured interview with parents and teacher, classroom observations, and pre-assessment of children, the first cycle began. The cycle's commencement was marked by teachers sending home the writing notebook with the children. This notebook included literacy tips parents could attempt with their children during writing time. An email was sent letting parents know the book was coming home that day.

**Table 7**

*Bi-Weekly Parent Meeting Schedule*

Cycle	Dates of bi-weekly meetings in the 3K classroom	Dates of bi-weekly meetings in the 4K classroom
Cycle 1	November 1 5:55 pm	October 22 6 pm
		October 25 (rescheduled for parents who could not make it on October 22) 6:04 pm
Cycle 2	November 10 5:58 pm	November 5 6 pm
Cycle 3	November 23 6 pm	November 22 6 pm
Cycle 4	December 9 6:02 pm	December 3 6 pm

In addition, an implementation meeting with teachers took place. Before this implementation meeting, the practitioner article titled “*Promoting Preschoolers’ Emergent Writing*” was shared with each teacher. The article choice was based on observations during the pre-intervention classroom observation and the semi-structured interview with the lead teachers. For instance, during the class observation of the 4K classroom and the interview, it was observed that the 4K teacher emphasized the writing of names with no emphasis on writing to communicate ideas and thoughts. Appendix L provides a detailed justification for the choice of this article in Cycle 1 for the 4K classroom.

During the implementation meeting, the researcher and the lead teachers discussed the article's components. Finally, teachers established a database of activities they would like to do with children in their classrooms based on ideas from the article. This database of activities was written up as an implementation note. The teachers submitted this implementation plan to the researcher before implementing the activities in the first cycle. Also, at these initial meetings, the researcher discussed with the lead teachers the need to use the writing notebook for all the children’s writing at home and in school, highlighting the importance of sending the journal home and back to school daily.

**Activities in the Following Cycles.** During each cycle, parents and teachers provided writing opportunities for preschoolers. Parents wrote with children in their notebooks and left comments in the notebooks for the teacher. This gave the teacher insight into the activities that led to writing and the strategies used to support children’s

writing. Teachers provided feedback in the notebook when they were able to do so.

Occasionally, the notebook was used in the classroom.

Teachers kept anecdotal notes during the study, and the researcher collected the anecdotal notes bi-weekly. In addition, the researcher came into the classroom to observe once each week, which was twice during each cycle. The researcher scanned students' notebooks, teachers' anecdotal notes, and writing samples each week with the school's scanner.

### **Data Collection**

Data were collected to measure the pedagogical goal of enhancing preschool children's emergent writing skills. Some measures helped evaluate the intervention's progress throughout the study as it was continually refined to approach the pedagogical goal.

#### ***Measuring the Pedagogical Goal - Emergent Writing Skills***

The pedagogical goal was to enhance preschool children's emergent writing. For this research, emergent writing skills are defined as using symbols, letters, and written representations based on an awareness of writing conventions and emerging skills to communicate ideas and attitudes (Hall et al., 2015).

At the beginning of the intervention, the researcher administered a series of pre-assessment measures to all participants. The pre-test was conducted to provide baseline information about each child's unaided performance (Bodrova & Leong, 1998). At the end of the intervention, a post-test was conducted to determine the change in each child's writing over time. The researcher completed the pre- and post-test assessments in the

school library or the teachers' lounge. These rooms were unoccupied during the assessments, and the researcher was allowed to put a "Do Not Disturb sign" outside the library or lounge while she assessed each child.

These measures included assessing writing samples and concepts about print, letter identification, letter writing, and name writing. The concepts of print, letter identification, and name-writing measures were from Clay's (2005) Observational Survey. Although the observational survey was developed for first graders and not validated on preschool learners, the use here with younger students provided important information about what they knew and added to the literature regarding the use of the instrument for this age group.

**Student Writing Samples.** Students' writing samples were evaluated qualitatively and helped corroborate findings from the quantitatively analyzed measures. The writing samples the teachers and parents provided at the beginning, during, and end of the intervention gave insight into how children progressed toward the pedagogical goal.

**Concepts about Print.** The Concepts about Print (CAP) instrument, developed by Clay (2005), measures children's understanding of print concepts. The researcher individually administered this instrument. The researcher read the storybook titled "Stones" by Marie Clay. As the researcher read the book, the children were asked questions about parts of the book to assess their knowledge of how books and texts are structured and how printed words are read.

These questions required children to demonstrate their understanding of where the front of the book is, where the researcher will start to read (left to right directionality and top to bottom), where the story lies—in the picture or words—as well as pointing to first and last letters in words, upper- and lower-case letters, and so forth (Bennett-Armistead et al., 2005). Student responses were rated as scores that ranged from 0 to 24. Each question carried one mark. However, for a question with two elements embedded, if the child got only one part of the question right, a half mark was given to show what the child knew. For instance, question 19 said, “locate t and b.” To capture change over time, a half mark was given if a child got ‘t’ right and not ‘b.’ Students’ scores were entered into a spreadsheet and later transferred to SPSS software to describe the data and to demonstrate change over time.

**Letter Identification Test.** This test is also included in Clay (2005)’s observational survey. It measures young children’s knowledge of letters. Children were asked to demonstrate their knowledge by providing the letter name, sound, or a word that begins with the letter. Cards that included the 26 upper case and 26 lower case letters with variations between ‘a’ and ‘g’ were held up for the child to see one after the other in random order. One point was given when a child provided either the letter name, sound, or word that begins with the letter for the uppercase (maximum =26) and lowercase letter (maximum = 28). Each child’s score from 0-54 was first entered on an Excel spreadsheet and later transferred to SPSS software with a column for letter recognition. Descriptive statistics were conducted to note changes in letter knowledge over time.

**Letter Writing and Name Writing.** Children were prompted to write their names and then 26 letters of the alphabet that the researcher randomly dictated. Children were given a pencil and a sheet of paper to complete this task. In line with past research, the researcher did not offer assistance or scaffolding during this test (Neumann, 2018). If children hesitated to re-write a letter they had written in their name, children were not required to repeat the writing of this letter. The letters in their name were counted towards the 26 letters, and a letter was counted once.

The maximum score for letter writing was 26. Children were given credit if they produced an upper- or lower-case letter. They were also given credit if they wrote a letter in a reversed way. According to Clay (2005), this is acceptable. Each child's score from 0 - 26 was first entered on an excel spreadsheet and later transferred to SPSS software with a column for letter writing. Descriptive statistics were conducted to determine change over time.

The maximum score for name writing was nine, and the minimum score was 0. Bingham et al. 's (2017) scale was used to score the name writing of the preschoolers because it was more appropriate for their level. For instance, if the child refused to write their name, this was scored 0. If the child scribbled, a total of one point was given. Two points were given for drawing as writing, three points were given for scribble writing, four points were given for letter-like shapes, five points were given for letter and letter-like shapes, six points were given for partial word/name, seven points were given for all letters in name if written in an incorrect order, eight points were given for correct spelling of word/name, and nine points were given for correct spelling of more than one name or



word. The scores were first entered on an Excel spreadsheet and later transferred to SPSS software with a column for name writing. Descriptive statistics were conducted to determine change over time.

### ***Refining the Intervention***

Various data were collected to provide information that helped improve the instruction across cycles and measure the effectiveness of the intervention in approaching the pedagogical goal of improving emergent writing skills. The researcher documented enhancing and inhibiting factors, the adaptations made, and the effectiveness of these adaptations in mitigating the inhibiting factors.

Specifically, *classroom observations*, *children's writing notebooks/writing samples*, and *researchers' field notes* helped ascertain instructional moves that enhanced or inhibited preschoolers' writing progress. In addition, *parents' and teachers' written messages in children's notebooks* and *notes from regular meetings with parents and teachers* clarified how the collaboration mechanism supported or inhibited children's writing progression. When anything was noted as hindering children's emergent writing progress, the teachers, parents, and the researcher agreed on modifications to ameliorate these obstacles. Furthermore, a semi-structured interview was conducted at the beginning and end of the intervention to ascertain how parent-teacher collaboration evolved to support children's emergent writing.

**Classroom Observations.** Classroom observations were conducted weekly during the intervention (eight times per classroom). Table 8 shows the classroom observation schedule for the 3K and 4K classrooms.

**Table 8***Classroom Observation Schedule*

3K Classroom		4K Classroom	
Observation	Specific Day	Observation	Specific Day
Cycle 1: Week 1	October 21	Cycle 1: Week 1	October 14
Cycle 1: Week 2	October 27	Cycle 1: Week 2	October 20
Cycle 2: Week 3	November 4	Cycle 1: Week 3	October 28
Cycle 2: Week 4	November 10	Cycle 2: Week 4	November 3
Cycle 3: Week 5	November 18	Cycle 2: Week 5	November 11
Cycle 3: Week 6	November 22	Cycle 3: Week 6	November 17
Cycle 4: Week 7	December 2	Cycle 3: Week 7	November 23
Cycle 4: Week 8	December 9	Cycle 4: Week 8	December 1

*Note.* Each classroom was observed once a week during the intervention.

The observation lasted the entire school day except during lunch, naps, and after school. The researcher observed the classroom environment, the teachers' and students' activities, the writing support provided to children, and early writing behaviors. The researcher also noted the practices that enhanced or inhibited progress toward this goal, identified areas that needed modification, and informally met with the teachers to discuss participants' progress and notebook use. A researcher-developed observation guide was used to record this observation. This observation guide is provided in Appendix M.

**Writing Notebook.** The writing notebook the researcher designed for this research was expected to be used at home and in the classroom. Parents were asked to

send the writing notebook back to the classroom with their children every day and leave a comment in the notebook when their child wrote at home. Additionally, parents were requested to fill other sections out in the notebook, such as the time and date of the writing activity and the home literacy activity that led to writing. Furthermore, they were to state who did the writing—the child, the parent, or the child and parent collaboratively—and add additional comments.

After reviewing each child's notebook, the teachers were requested to write a comment to parents. On the information letter provided to teachers, they were asked to comment once a week in the notebook for each child who participated in the study. The proper analysis of the data in the writing notebook depended on the parents and teachers adequately filling the notebooks.

The writing notebook was mostly used at home and sparingly in the classroom. At home, children used the notebook during independent writing and adult-supervised writing activities. Occasionally, in the classroom, children used the notebooks during independent writing or when encouraged to write in them by their teacher. The researcher and teachers conferred to agree on modifications related to using the writing notebook based on children's writing progression. Factors that enhanced or inhibited children's writing because of how the notebooks were used were discussed with the teachers during classroom observations or implementation meetings and collaboratively discussed with parents during bi-weekly meetings. The researcher scanned the notebook weekly when she was in the school for classroom observations. The notebooks were scanned using the school's scanner and reviewed by the researcher afterward.

**Children's Writing Samples.** In addition to the writing notebooks, children's writing samples were collected before, during, and at the end of each cycle. These samples included written messages that children had not included in their notebooks. For instance, earlier in the research, the researcher found out that children in the 4K classroom seemed to prefer to write on colored cardboard papers while in the classroom. The researcher scanned or took pictures of these writing samples. Other samples were collected from teachers and sometimes from parents. These samples were qualitatively analyzed to determine whether the intervention was moving toward the pedagogical goal and provided trend data of writing progress across the study. During this analysis, the researcher examined whether children's writing output evolved from scribbling to writing identifiable letters or words.

**Teachers' Anecdotal Notes.** Teachers were invited to take notes on the writing instruction in their classrooms and any additional notes on specific interactions with students or observations of their writing behavior. The researcher collected these notes bi-weekly, reviewed them, and used them to inform discussions during the biweekly meetings.

**Researcher Notes.** Information from interviews and meetings with parents and teachers, children's writing notebooks/samples, teachers' anecdotal notes, and occasional observations in the classroom were the basis on which these research notes were formed. Meetings with teachers and parents were bi-weekly and held via Zoom. During this bi-weekly meeting, the researcher, teachers, and parents discussed findings about children's writing progression and possible modifications. Researcher notes with dates included

were analyzed chronologically and qualitatively (Glaser & Strauss, 1967) to examine factors that enhanced and inhibited writing in the home and classroom.

**Pre- and Post- Semi-Structured Interviews.** In addition to measuring the pedagogical goal and progress of the intervention, a pre-and post-intervention parent/teacher interview was conducted. These data addressed research question two: “How can intervention activities encourage parent-teacher collaboration?” The pre- and post-intervention interview questions for teachers and parents followed a semi-structured format and were adapted from the instrument designed by the researcher in the preliminary study (Appendices N, O, P, and Q).

The pre-intervention interview protocol for parents consisted of Part A, B, C, D, and E. Part A provided information on child demographics. Part B focused on literacy practices in the home. Part C focused on questions about the child’s writing development, part D focused on Parent-Teacher Communication for Literacy Development, and part E focused on parents’ demographics.

The pre-intervention interview protocol for teachers consisted of Parts A, B, C, D, E, F, and G. Part A provided information on classroom environment and literacy practices, Part B provided information on centers and class activities, Part C provided information on curriculum, Part D provided information on strategies, Part E focused on children’s writing development, Part F focused on teacher-parent communication for literacy development, and Part G provided information on demographics.

The questions in Part D (Parent-Teacher Communication for Literacy Development) in the pre-intervention interview for parents and part F (Teacher-Parent

communication for Literacy Development) led to data that provided insight into what parent-teacher collaboration looked like before the intervention. For example, parents were asked how they work with their child's teacher to improve their child's literacy development, the literacy activities they think their children do at school, what expectations they have for their children's teachers, and how often teachers communicate with them about their child's progress. On the other hand, teachers were asked how they work with parents to support children's literacy development, whether they knew literacy activities parents involved their children in while at home, and how often they communicate with parents about their children's progress.

The rest of the data were gathered by asking the questions in Part A, B, C, and E in the parent's interview protocol. Parts A, B, C, D, E, and G were triangulated with data from children's pre- and post-assessments and classroom observations.

The post-instruction interview protocol consisted of 14 questions for parents and teachers. These questions were targeted at discovering the stakeholders' overall experience in the research study and exploring how the intervention activities encouraged parent-teacher collaboration. The post-intervention interviews took place after the cycles had ended. The interview schedule can be found in Table 9.

The interviews were recorded and automatically transcribed by the Zoom application for future analysis. The transcriptions were then reviewed and checked against the recording to ensure no errors. During the post-instruction interviews, responses from the parents and teachers were checked with "members of those stakeholding groups from whom the data were originally collected" (Lincoln & Guba,

1985, p. 314) to ensure the corrected transcripts were used for analysis. Member checking was instrumental in establishing credibility.

**Table 9**

*Semi-Structured Interview Schedule*

3K Classroom	Duration of interviews	4K Classroom	Duration of interviews
Pre-intervention interview	Sept. 20-28	Pre-semi- intervention interview	Sept. 21 - 29
Post- intervention interview	December 9 – 18	Post semi- structured interview	December 7 – 16

*Note.* In the 3K Classroom, five parents completed the pre- and post-intervention interview; in the 4K classroom, five parents completed the pre-intervention interview, and only three completed the post-intervention interview. Both lead teachers were available for the pre- and post-intervention interviews.

**Data Analysis**

This section describes how data for each research question were analyzed. This is described using the research questions as a guide.

***Research Question 1***

Research question one (RQ1) asks, “How can intervention activities be refined to enhance children’s emergent writing skills?” First, this was established by analyzing the

pre- and post-measures on concepts about print, letter identification, letter writing, and name writing to determine whether progress toward the pedagogical goal of emergent writing progress was made. Each child's score was first entered into an Excel spreadsheet with a column for each measure and then transferred to SPSS data analysis software for further analysis. Descriptive statistics such as means and standard deviations were conducted to ascertain how participants performed on all measures before and after the intervention. Finally, the pre-and post-test scores of children were compared using a paired t-test. This provided information on whether the pedagogical goal of improving emergent writing skills was achieved. Student writing samples were then qualitatively analyzed. They were used to qualitatively buttress the quantitative findings by showing how children progressed from scribbling to conventional writing.

**Analysis of Student Writing Samples.** Children's writing samples from parents and teachers were collected and analyzed qualitatively. These writing samples were used to see the pre- to post-test changes qualitatively. To detail how the intervention was refined across the study, data were analyzed from *classroom observations*, *children's writing notebooks/writing samples*, and *researchers' field notes*.

During the intervention, analyzing these data sources helped the researcher and teachers identify factors that enhanced and inhibited children's writing skills and determine what adjustments needed to be made during each cycle. The data sources were re-analyzed as a retrospective analysis (Gravemeijer & Cobb, 2006) to gather themes that emerged as important across the four cycles.



**Analysis of the Writing Notebook.** The children's writing notebooks, scanned during the cycles, were organized chronologically in folders. Children's entries according to weeks were counted to ascertain the total number of entries children created weekly. The researcher then reviewed each weekly entry multiple times to track adults' early writing support provided to children. This additional information regarding each entry was then gathered and grouped according to weeks and cycles. In vivo and descriptive codes were used to capture this early writing support (See Appendix R). In vivo codes came from parents' or teachers' comments in the notebook describing the support offered while the child wrote. Based on this analysis, the researcher chose one exemplar from each class to explain how support was refined across cycles for these specific children. Supplemental data that includes aspects of the pre- and post-semi-structured interview were used to triangulate the results from the notebook. These supplemental data gave insight into the nature of the refinement of the support across cycles and children's writing samples to indicate evidence of change.

**Analysis of the Classroom Observations.** The field notes of the classroom observation were read multiple times in chronological order according to the days of observation. Sections in the field note that described teachers' literacy support, including writing, were highlighted with a highlighter. Afterward, the researcher re-read the field notes, coded the highlighted support, and entered the codes on an Excel spreadsheet. Codes were entered on the spreadsheet each week the observation was conducted and the cycle under which it fell (See Appendix S). A priori and inductive coding processes (Saldana, 2015) were used to develop the code books, which were done iteratively. The

iterative analysis process involved reexamining “developing findings in light of continued data analysis” and refining the initial findings accordingly (American Psychological Association, 2020, p. 5). Organizing the codes chronologically helped the researcher note changes across cycles and linked these to supplemental data to triangulate results from the classroom observation. Supplementary data included aspects of the pre- and post-semi-structured interview and implementation notes and children’s writing samples.

### ***Research Question 2***

Research question two (RQ 2) asks, “How can intervention activities encourage parent-teacher collaboration?” The data derived from the pre- and post-semi-structured interviews and the data from parents’ and teachers’ comments in the notebook were qualitatively analyzed to answer this question.

**Data from the pre- and post-semi-structured interview.** These data from the pre- and post-semi-structured interviews were analyzed inductively. For the first level of coding, the researcher read through the pre-and post-intervention interview data focusing on aspects that highlighted parent-teacher collaboration to pull out comments or indications from teachers and parents about their interactions using a mix of the in vivo and descriptive codes. The in vivo codes drew upon the participants' own words for codes, while the descriptive codes assigned labels to data to provide a list of topics connected to the research question (Saldana, 2016). The second level of coding used pattern coding. At this level, the researcher grouped the codes from the first level under relevant themes and categories (Saldana, 2016). The entire data set was analyzed again,

considering the themes. The results are discussed under the relevant themes and categories. The data from parents' and teachers' comments in the notebook were used to buttress these themes and categories.

**Data from parents' and teachers' comments in the notebook.** The data from parents' and teachers' comments in the notebook were used to buttress these themes and categories. Early in the coding procedures, the researcher and two colleagues reviewed the developing code book and determined whether each coding category was clearly defined and distinct from others. Additionally, the invited reviewers were guided in determining whether the items in each category belonged there.

### **Chapter Summary**

The purpose of this study was to support preschool children's writing through a collaborative communication mechanism between parents and teachers. This chapter outlines how the Design Based Research method was used to refine an intervention targeted at a pedagogical goal. Both qualitative and quantitative methods were used in this study. The pedagogical goal was assessed at the beginning and end of the intervention using pre- and post-early literacy measures (quantitative). The implementation and fine-tuning of the intervention, which took place over two months, was monitored using qualitative data (Reinking & Watkins, 2000)

This study was designed to answer two research questions:

1. How can intervention activities be refined to enhance children's emergent writing skills?
2. How can intervention activities encourage parent-teacher collaboration?

## CHAPTER FOUR

### Research Findings

The purpose of this study was to enhance preschool children's emergent writing skills through the collaboration of parents and teachers. This chapter presents the findings from the data collected through a design-based study.

This chapter focuses specifically on the findings that connect to the research questions:

1. How can intervention activities be refined to enhance children's emergent writing skills?
2. How can intervention activities encourage parent-teacher collaboration?

#### **Research Question 1 (RQ 1): How can intervention activities be refined to enhance children's emergent writing skills?**

To determine whether emergent writing skills changed across the intervention period, *t*-tests using SPSS software were conducted using the grouped pre- and post-scores of concepts about print, letter identification, letter writing, and name writing for all twelve students (3K and 4K).

The quantitative analyses showed that children's emergent writing and other literacy skills supporting children's emergent writing were enhanced across two months. Results from the pre-test ( $M=35.00$ ,  $SD=24.2$ ) and post-test ( $M=52.58$ ,  $SD=29.21$ ) on children's literacy measures of concepts about print, letter identification, letter writing, and name writing indicated that children's writing skills improved after the intervention cycles: [PRE – POST]  $t(11) = -5.739$ ,  $p = <.001$ .

Further analyses were conducted to examine the literacy growth on all measures in the individual 3K and 4K classrooms. A paired-sample t-test was conducted to determine the effect of the intervention on children’s literacy growth in the 3K classroom (see Appendix T). As shown in Figure 3, results indicated a significant difference between scores before the intervention (M=27.58; SD=23.31) and scores after the intervention (M=47.25; SD=20.00); [PRE – POST]  $t(5) = -7.839, p = <.001$ ).

**Figure 3**

*Paired Samples Test Results for the 3K Classroom*

*Paired Samples Test*

		Paired Differences					Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pretest - Posttest	-19.6667	6.1455	2.5089	-26.1159	-13.2174	-7.839	5	<.001	<.001

A paired-sample t-test was also conducted to determine the effect of the intervention on children’s literacy growth in the 4K classroom (see Appendix U). As shown in Figure 4, the results indicated a significant difference between scores before the intervention (M=42.41; SD=24.77) and scores after the intervention (M=57.91; SD=37.53); [PRE – POST]  $t(5) = 2.687, p = <.043$ ).

**Figure 4**

*Paired Samples Test Results for the 4K Classroom*

Paired Samples Test

		Paired Differences					Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pretest - Posttest	-15.5000	14.1280	5.7677	-30.3264	-6.736	-2.687	5	.022	.043

This suggests that the intervention activities may correlate with emergent writing growth for 3K and 4K classrooms. The intervention activities refined to ensure that children's emergent writing was enhanced were: (1) The Writing Notebook, (2) support provided by parents to children, and (3) support provided by teachers to children.

**The Writing Notebook**

The writing notebook, a tool for this research, was refined to enhance children's emergent writing skills. Specifically, the writing notebook was refined in three areas: physical design, regularity of exchange, and frequency of use.

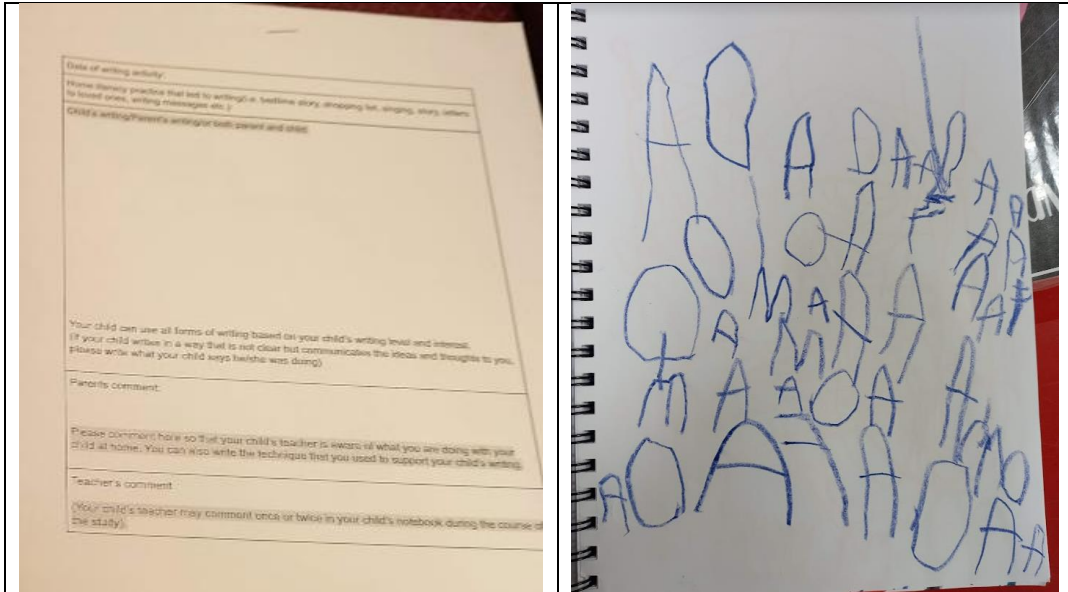
***Physical Design***

The intervention began in the 4K classroom one week earlier than in the 3K classroom. Therefore, at the initial stage, the notebook included blank sheets with a paper template stapled on the first page to explain to parents what should be included on the following blank sheets. During the first week of classroom observations in the 4K classroom, the researcher noted that important information was not included due to the lack of a template throughout the notebook pages. Although a template was provided on the first page, parents found it challenging to keep updating each page according to the

template. Figure 5 demonstrates how the notebook was being filled compared to how it should have been filled.

**Figure 5**

*Sample of the Paper Template vs. Improper Filling without Template*



*Note.* The left panel: A sample of the paper template attached to the first version of the notebook. Children were expected to write in the large space while parents were to comment and fill in other relevant sections. A section was provided for teachers to comment too.

The right panel: This is a sample of how some children wrote in their notebooks. Filling the notebook this way did not provide information that could help the researcher identify what support children received from adults.

For the researcher to understand the types of support parents were using to enhance children's emergent writing skills and to have more detailed information about the literacy practices that led to writing and how children progressed over time, the researcher "ruled" the notebook and hand wrote the essential sections as shown in Figure 6. That is, I manually updated the notebook with this template when I came into the

classroom each week for observation. This was done to ensure that essential information for understanding the parent and teacher contributions could be identified.

### Figure 6

#### *Sample of Manually Filled Template*

The image shows a handwritten template for a writing notebook. The template is on lined paper and includes sections for 'Date of writing activity', 'Time', 'Home literacy practice that led to writing', 'Child's writing / parent's writing / or both parent and child', 'Parent's comment', and 'Teacher's comment'. The word 'Butterfly' is written in red, blue, and orange markers, with a drawing of a butterfly next to it. The word 'Mariposa' is written in orange markers, with a drawing of a butterfly next to it. The word 'MOP' is written in blue markers, with a drawing of a butterfly next to it.

*Note.* The essential sections manually filled were the date of the writing activity, time, home literacy practice that led to writing, child's writing/parent's writing or both parent and child, parent's comment, and teacher's comment.

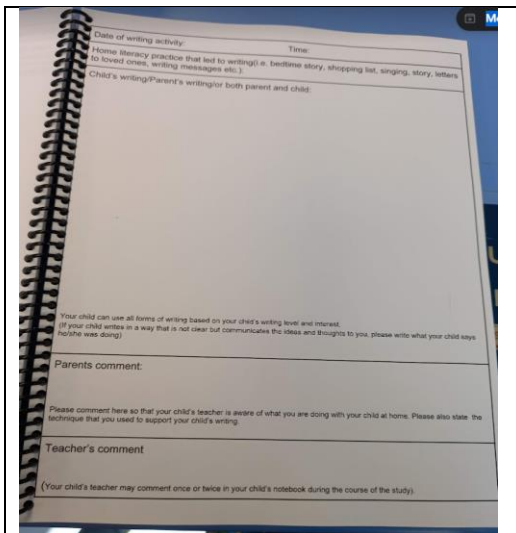
**Creation of a New Writing Notebook.** Recognizing the challenges with blank “unruled” pages in the notebook, the researcher printed a new writing notebook with all the information embedded on all pages. This notebook was printed for the 3K classroom and not for the 4K classroom because participants in the 4K classroom had already



developed an attachment to their writing notebooks. The researcher decided not to introduce this new book to the 4K classroom to avoid disrupting children's engagement with the current writing notebook. Since implementation did not begin in both classrooms simultaneously, the researcher took this opportunity to introduce a new notebook for the 3K classroom. (See Figure 7).

**Figure 7**

*The New Writing Notebook*



*Note.* The new notebook was copyrighted under the name T.C.P Writing Collaborative Notebook. T.C.P stands for Teacher, Child, Parent. This notebook consisted of 60 pages providing enough space for children to write within the intervention period.

In the 4K classroom, the researcher's manual filling of the notebook depended on who brought their notebooks to school on the day of classroom observation. Since the design layout had been printed on all pages for the 3K classroom, there was no need to rule the pages weekly.

### ***Regularity of Exchange***

This enhancement describes how the notebooks came back and forth from home to school. The notebook coming from home to school and back from school to the home daily was essential to allow the book to be used for the purpose for which it was created. This purpose was for children to write in the notebook at home and bring it back to school so the teacher could leave a comment. The goal was also to allow the children to use the notebook to write in school so that parents could learn more about their children's writing activities in the classroom. During the researcher's weekly class observations in the first cycle, she noted that some parents were not sending the books to school daily. Also, the School Administrator had indicated that not all parents were sending their children's book bags to school daily.

The researcher emailed parents to find out how things were going with the notebook and to reiterate the importance of sending the notebooks to school. The researcher explained to parents that the goal was to send the notebook to school so that children could use it and get feedback from their teachers. Following up with parents to remind them about sending the notebooks to school was done as often as possible during the two-month intervention. Sometimes, this was mentioned at the bi-weekly meetings. Some parents were more consistent in sending the writing notebooks to school than others. As shown in Table 10, the 3K parents sent children to school with their writing notebooks more often than the 4K parents.

**Table 10***Number of Children Who Brought Their Books to School Weekly*

Week	Date	3K Participants	Date	4K Participants
1	October 21, 2021	4 children (Piper, Lucy, Rosie, Eva)	October 14, 2021	1 child (Eden)
2	October 27, 2021	4 children (Piper, Eva, Rosie, Stefan)	October 20, 2021	3 children (Ethan, Stan, Eden)
3	November 4, 2021	4 children (Piper, Eva, Rosie, Stefan)	October 28, 2021	1 child (Ethan)
4	November 10, 2021	4 children (Piper, Eva, Rosie, Lucy)	November 3, 2021	2 children (Ethan and Eden)
5	November 18, 2021	5 children (Piper, Eva, Rosie, Stefan, and Lucy)	November 11, 2021	4 children (Ethan, Eden, Hollie, Linda)
6	November 22, 2021	3 children (Piper, Eva, Rosie)	November 17, 2021	3 children (Ethan, Hollie, Linda)
7	December 2, 2021	3 children (Piper, Eva, Rosie)	November 23, 2021	3 children (Ethan, Hollie, Linda)
8	December 9, 2021	5 children (Piper, Eva, Rosie, Stefan, and Lucy)	December 1, 2021	2 children (Ethan and Eden)
		TOTAL	TOTAL	
		Piper – 8 times	Ethan – 7 times	
		Rosie – 8 times	Eden- 5 times	
		Eva- 8 times	Hollie – 3 times	
		Stefan – 4 times	Linda – 3 times	
		Lucy – 4 times	Stan – once	
		Anabel – 0 times	Chad – 0 times	

*Note.* This table shows the number of children who brought their books to school when the researcher came in for observation.

The researcher scanned the notebooks once each week.

The “TOTAL” section shows the number of times each child brought their books during the eight times the researcher was in the classroom to observe.

### ***Frequency of Use with Adult Support***

Another integral part of how the writing notebook was refined to enhance children’s emergent writing skills was through its frequent use by children with the support of an adult. Support ranged from supervision and encouragement to other types

of literacy support, such as providing a line for each word that children say to help them hold ideas and thoughts in their minds. Support also included ABC writing practice to help with letter identification and providing letters, words, and sentences in dotted lines to allow for tracing.

Parents were encouraged to use the notebook with their children as often as possible. Using the notebook, especially with parental support, could enhance children's emergent writing skills. With the literacy tips the researcher provided to parents at the beginning of the intervention and at different times during the study, parents could change their support and increase the level of scaffolding based on their children's needs. Teachers were also encouraged to provide feedback in the writing notebook so that parents were encouraged to keep working with their children. Table 11 displays the number of entries where children received support from an adult, whether parent or teacher. Table 12 groups these entries as frequency ranges.

**Table 11***Number of Children Entries with Adult Support Weekly*

Week	3K Participants/No of entries	4K Participants/No of entries
1	Piper – 5 Eva-1 Rosie-8 Stefan-0 Lucy – 1	Ethan- 5 Eden – 4 Hollie-4 Linda-4 Stan-2
2	Piper -5 Eva - 2 Rosie-4 Stefan -4	Ethan - 2 Stan -0 Eden- 5 Hollie-3 Linda-2
3	Piper -6 Eva - 2 Rosie - 7 Stefan -9	Ethan – 2 Eden – 3 Hollie – 5 Linda-2
4	Piper -7 Eva - 4 Rosie - 5 Lucy-0 Stefan- 3	Ethan - 2 Eden – 1 Hollie-2 Linda – 1
5	Piper -5 Eva-5 Rosie -6 Stefan-7 Lucy-0	Ethan- 3 Eden - 3 Hollie -1 Linda – 3
6	Piper -4 Eva-2 Rosie – 0 Stefan-6	Ethan - 0 Hollie - 1 Linda – 2
7	Piper -7 Eva-6	Ethan - 0 Hollie-0

8	Rosie – 3	Linda-2
	Stefan - 5	
	Piper - 3	
	Eva-6	
	Rosie - 2	Ethan - 0
	Stefan - 3	Eden – 4
	Lucy - 0	
	TOTAL	TOTAL
	Piper – 42	Ethan-14
	Eva- 28	Eden-20
	Rosie-35	Hollie-16
	Stefan - 37	Linda-16
	Lucy – 1	Stan-2
	Anabel - 0	Chad-0

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*Note.* In general, the 3K participants received more support from adults while using the writing notebook than the 4K participants.

Based on the results of the number of children’s entries with adult support weekly, I created ranges to help understand the frequency of use across both classes. For example, children grouped into the 0-5 range included Lucy in the 3K classroom, who used the notebook once with adult support; Stan in the 4K classroom, who used the notebook twice with adult support; Anabel in the 3K classroom; and Chad in the 4K classroom, who did not use the writing notebook. By making these ranges into three groups, I conducted further statistical analyses to understand the mean growth on outcome measures. Firstly, I entered the range of children’s entries with adult support onto SPSS. Then, I used SPSS to calculate the growth mean of each literacy measure using the transform compute variable feature.

**Table 12***Grouping of Participants According to Class and Range of Entries with Adult Support*

Range of entries	0-5 times	11-25 times	26-45 times
Names of participants	Lucy (3K) Anabel (3K) Chad (4K) Stan (4K)	Ethan (4K) Eden (4K) Hollie (4K) Linda (4K)	Piper (3K) Eva (3K) Rosie (3K) Stefan (3K)

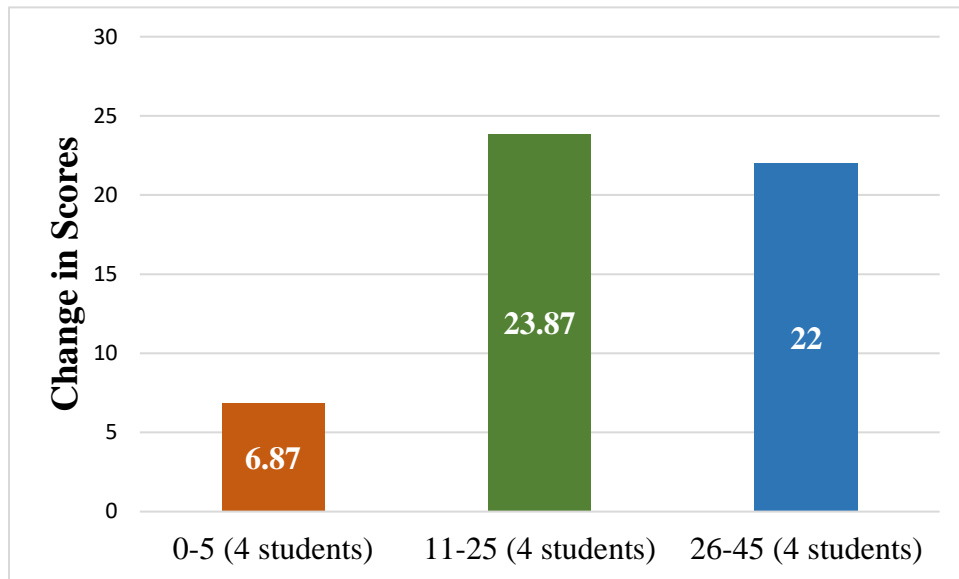
*Note.* Entries, whereby children who received adult support are grouped into three categories. For instance, children who received support from an adult five times or less were grouped under the second column.

Finally, descriptive analyses were conducted to correlate the range of adult support with growth means on outcome measures. Appendix V shows the SPSS output. The mean growth scores were then used to plot a bar chart using Microsoft Excel. These mean growth scores are displayed in the bar chart in Figure 8. The mean scores indicate that children who used the notebook with adult support significantly improved during the intervention. The growth means of children who used the notebook five times or less was 6.87, while the growth means of children who used the notebook 11-25 times with adult support was 23.87. The growth means of children who used the notebook 26-45 times was 22. The growth means of children who used the notebook 11-25 times were higher than those of children who used the notebook 26-45 times. According to Table 12, those who used the notebook 11-25 times were participants in the 4K classroom, and these

children were more advanced in the component skills. For instance, they had more developed motor skills than the 3K participants.

**Figure 8**

*Children's Literacy Growth by Use of Notebook with Parent Support*



*Note.* Growth mean scores are indicated on the vertical axis. These growth mean scores include the mean scores of concepts about print, letter identification, letter writing, and name writing.

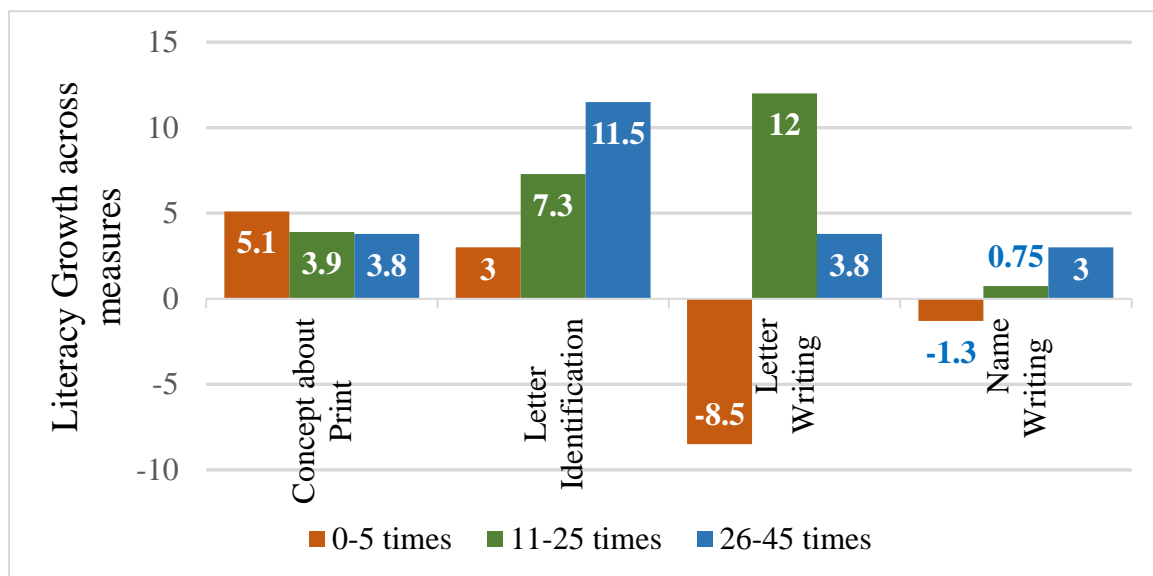
Figure 9 displays the growth mean scores of children on all four literacy measures of concepts about print, letter identification, letter writing, and name writing, according to the use of the notebook with parental support. Children who used the notebook fewer than five times did not have an increased gain across the assessed areas, letter identification (3), letter writing (-8.5), and name writing (-1.3), except for concepts about print (5.1). Children who used the notebook 11-25 times had an increased mean score on



all measures than those who used the notebook 0-5 times; concept about print (3.9), letter identification (7.3), letter writing (12), and name writing (0.75). Furthermore, children who used the notebook 26-45 times demonstrated an increased mean score on all measures; concept about print (3.8), letter identification (11.5), letter writing (3.8), and name writing (3).

**Figure 9**

*Children's Literacy Growth on Each Measure by Use of Notebook with Parent Support*



*Note.* This literacy growth combines data from both 3K and 4K participants.

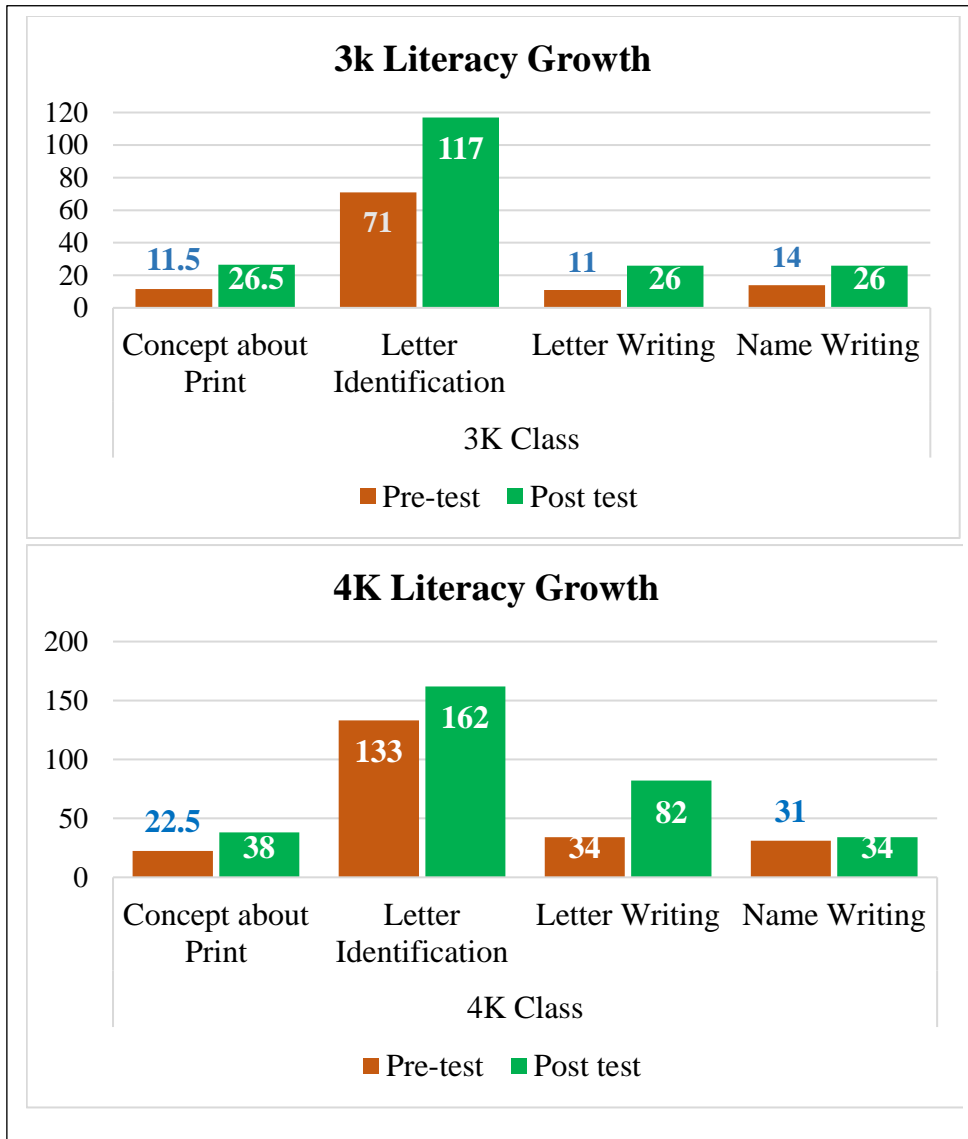
The raw literacy pre-test and post-test scores on each child's measure were added according to class. The top panel of Figure 10 shows the sum of children's literacy scores who used the notebook with parental support 26–45 times. According to Table 12, these children, Piper, Eva, Rosie, and Stefan, showed growth in the post-test as the difference between the pre-and post-test is 15 in concept about print, 46 for letter identification, 13

for letter writing, and 12 in name writing. These children had the highest growth in letter identification.

The bottom panel of Figure 10 shows the sum of children's literacy scores who used the notebook with parental support 11 times or more. According to Table 12, these children, Ethan, Eden, Hollie, and Linda, showed growth in the posttest. The difference between the pre-and post-test was 15.5 in concept about print, 29 for letter identification, 48 for letter writing, and 3 for name writing. Notably, their starting point was higher on all measures than the 3K participants. The 4K participants had the highest letter-writing growth than any other measure. Although the notebook was an integral part of the intervention, parents also needed to give their children adequate support to see progress using the notebook.

**Figure 10**

*Children's Literacy Growth on Each Measure According to Class*



*Note.* This figure provides data on children's total scores for each measure for children who used the notebook frequently. The top panel shows data for the 3K Classroom who used the notebook 26-45 times. The bottom panel shows data for the 4K Classroom who used the notebook 11-25 times.

### **Support Provided to Children by Parents**

Parents' support was continuously refined during the two-month intervention to move children towards the pedagogical goal. Children who consistently used the writing notebook under an adult's supervision, whose parents changed and lifted their scaffold support based on the understanding of their child's actual and potential development level, had more literacy gains. Through the literacy tips provided by the researcher at different points of the intervention (see Appendix G, H, I, J, and K), the bi-weekly meetings, and the teacher's comments in the writing notebook, parents could choose the literacy activities to try with their children.

The researcher constantly reviewed children's writing progress in the notebook and observed their literacy involvement in the classroom. When children were not moving toward the pedagogical goal, the researcher and lead teachers discussed this with parents at the bi-weekly meeting. During these meetings, parents were given more ideas on adjusting their support to ensure their children progressed appropriately. Parents considered their child's literacy level and experiences and decided on the best strategy to meet their child's literacy needs. See Table 13 for examples of parents' support in Cycle 1.

**Table 13***Example of Parents' Support in Cycle 1*

Early Writing Support	In vivo and Descriptive Codes
Oral conversation. Supervising child's writing.	I: "We talked about how to spell her name" "We talked about how to spell Eva, but she mostly wanted to practice just the first E."  (Eva's parent) 3K  Entry: 10/20
Hand-over-hand support.	I: "We practiced shapes and the letter L. Then we wrote the letter "R" with my hand over Rosie's. Rosie likes to scribble and draw lines."  (Rosie's parent) 3K  Entry: 10/21
Spelling help.	I: "Ethan wanted to draw and write shapes. We spelled; he wrote."  (Ethan's parent), 4K  Entry: 10/19
Providing dotted lines for tracing.	D: The parent wrote a series of words in dotted lines for the child to trace. These words include CAT, HAT, BAT, and FAT.  (Hollie's parent), 4K  Entry: 10/11
Spelling help and writing for the child to copy.	I: "Name spelling game" "Eden asked me to spell her name, so I wrote it, and then she took a crayon and tried to mimic what I did."  (Eden's parent), 4K  Entry 10/13

*Note.* **I** stand for In vivo, and **D** stands for descriptive. The entry refers to the day children did the writing in their writing notebooks. 3K or 4K refers to the child's class.

By contrast, Table 14 provides evidence of changes in the depth of support in Cycle 4. In Cycle 1, most parents focused on name-writing and letter-formation activities. In Cycle 4, parents allowed children to share more of their authentic experiences by either writing children’s ideas for them to copy, providing dotted lines with those ideas, and allowing children to trace them or taking children’s dictation. Following the tables, examples of Piper and Linda demonstrate how parental support changed across cycles.

**Table 14**

*Example of Parents’ Support in Cycle 4*

Early Writing Support	In vivo and Descriptive Codes
Connecting writing to the authentic experience. Writing for the child to copy.	D: The parent wrote “ring, big ring, small ring,” and the child copied ring, bri, and i.  I: “Playing with costume jewelry” “Had to practice with lowercase g some. She was excited to try after I showed her how I make one.”  (Eva’s parent) 3K  Entry: 12/2
Taking dictation. Supervising child’s writing.	D: The parent writes the child’s idea and then draws to depict Hilda riding a unicorn and Rosie riding a unicorn. The child also practices writing the letters R, n, and i.  I: “Hilda rides the unicorn too!” “Rosie rides a unicorn!”  (Rosie’s parent) 3K  Entry: 11/30
Connecting writing to an authentic experience. Providing dotted lines for tracing.	D & I: Parent wrote “SANTA PARADE” in dotted lines.  I: “Stefan saw the Ventura Santa Parade and wanted to write it.”  (Stefan’s parent) 3K  Entry: 12/2

Writing for the child to copy	D: Parent writes a, e, i, o, u for the child to copy.
Creating columns and rows for letter writing	(Eden's parent) 4K
Entry: Undated	

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*Note.* **I** stand for In vivo, and **D** stands for descriptive. The entry refers to the day children did the writing in their writing notebooks. 3K or 4K refers to the child's class. Examples are chosen from children who used the notebook more frequently with adult support. By the fourth cycle, Hollie and Ethan wrote in the notebook without adult support.

### ***Exemplar Cases***

The following two case studies, one of a three-year-old (Piper) and one of a four-year-old (Linda), serve as exemplar cases of students who received regular parental support in using and sharing the writing notebook across the four cycles. These cases demonstrate how the writing notebook's intended implementation might be associated with emergent literacy growth. Piper was selected because her adult support put her in the highest range (26-45), and Linda was selected because her adult support was in the highest range for 4K students (11-25).

#### ***Piper***

At the start of the study, Piper was 45 months (3 years nine months old).

**Piper's Immediate Home Environment.** Piper is the first child, and at the time of the interview with her mother, she had a younger sister who was three weeks old [9/20\_fieldnotes]. Her home language is English, and her parents speak and read to her in English [9/20\_Pre-interview\_with\_mother].

They had a reading culture in the home. Her mother mentioned that they read books often. She noted they "tried to implement reading three books at night, and so

we're engaged in some sort of play for about an hour or two" [9/20\_Pre-interview\_with\_mother].

Technological devices were used to support Piper's literacy. The reader tablet, Leapfrog Reader Pen, and Letter Factory program were tools that Piper was exposed to before the intervention. Her mother noted that the tablet came with eight books. With the Leapfrog Reader Pen, she indicated that you "press the pen on the word, and it will read it to her." The Letter Factory program supported her knowledge of letters and sounds [9/20\_fieldnotes].

When asked what strategies were used to build Piper's literacy, her mother noted that they pointed to the word as they read to her, which frustrated Piper. She also mentioned that they modeled literacy skills by reading things out loud to Piper and putting subtitles on all the shows they watch [9/20\_fieldnotes].

There was more emphasis on reading because Piper's mother wanted her to learn to read more easily and younger than she did. Her mother thought it was such a difficult skill for kids to get, so they made extra effort with it [9/20\_Pre-interview\_with\_mother]. However, when she was asked what they intentionally taught as it related to writing, her mother provided more insight.

We do have a Leapfrog Writer Pen thing that she can write the letters on top of the letters. She does really well with those with my husband. She doesn't really have the attention to do it with me. For some reason, he focuses a lot more, I think, on the writing part, like he wants her to color within lines when she's coloring [9/20\_Pre-interview\_with\_mother].



When asked how Piper was challenged during the learning process, her mother identified what Piper's father did to challenge her.

“So, I mean, like with the coloring and the lines, like he constantly is telling her, hey, did you see this line? Did you think about trying to color this one color within the space, and that's what these lines are, and you know, he like repeatedly tells her that, and then with the letters that you draw the letters on the leap letter maker thing, they literally, like, go through and draw all the letters in the shapes on this little thing. And it makes you start over if you don't get it right, so he doesn't let her stop like mid activity, they have to finish the letter before they can move to the next thing” [9/20\_Pre-interview\_with\_mother].

When asked what Piper made on paper when a pen or pencil was held, her mother noted that when she held a pen or pencil, Piper made “like those lines up and down” [9/20\_Pre-interview\_with\_mother]. Her mother also stated that “she does like to color almost every day; she likes to paint. But there's generally not any letters or numbers involved in that” [9/20\_Pre-interview\_with\_mother]. Even though she was not writing letters before the intervention, Piper already understood that her drawings could communicate meaning. Her mother noted that “sometimes she will draw something, and she will say this is like such and such's castle or this is for so and so, like, I drew this for you know her grandparents or something like that...” [9/20\_Pre-interview\_with\_mother].

**Piper in the Classroom.** Ms. Belinda also confirmed that Piper was not writing letters before the intervention. She mentioned that Piper was “very interested in coloring... She will just do a few little scribbles, and she's not into any formal writing or

anything yet, so she's just emerging right now" [10/04\_Pre-interview\_with\_Ms. Belinda]. Her teacher noted that Piper enjoyed coloring, and she "always asks, can I go color?" which corroborates her mother's statement about Piper's love for coloring [10/04\_Pre-interview\_with\_Ms.Belinda].

**End of the School Year Expectation.** Piper's mother was asked what she thinks Piper would have mastered in her current classroom at the end of the school year.

Um, I really don't know what's developmentally appropriate for a four-and-a-half-year-old. I would assume I want her to be able to know all of her letter sounds confidently. I would hope, maybe, by the end of the year, she could draw a couple of letters. I'm not sure if that's reasonable or not, but it seems to be because she's starting to be sent home with like the traceable letters [9/20\_Pre-interview\_with\_mother]

Even though Piper's mother was not sure of what was developmentally appropriate for her current three-and-nine months-old who would be four-and-a-half years old at the end of the school year, her expectations were in line with Piper's zone of proximal development, which was knowing her letter sounds and writing of a couple of letters. Piper's literacy environment at home and school was already preparing her to be ready to do both activities based on what she was currently exposed to.

**Pre-Assessment.** Before the intervention, Piper scored 2.5 points on the Concept of Print assessment. This meant she knew the front of the book and could identify the bottom of a picture. She was also able to identify a letter which was T.

Piper could identify 19 upper case letters and 11 lower case letters in the letter identification assessment. She had trouble identifying uppercase letters K, L, Q, G, R, V, and T and lower-case letters f, k, b, h, a, l, q, m, d, n, i, e, g, r, v, t, and g.

Concerning her letter-writing skills, she did not produce any letters. Instead, she scribbled. This aligns with what both the parent and teacher mentioned. When she was asked to write her name during the assessment, she scribbled and drew.

**Types of Support Across Cycles.** During the first two weeks of the intervention, Cycle 1, Piper's mother used various strategies to support Piper's writing.

**Cycle 1.** In Cycle 1, Piper had ten entries with adult support and one without adult support. All these entries involved Piper drawing. Her mother labeled her drawings for her to see, as seen in Figure 11 in the top left panel. Piper's mother continued to allow Piper to draw until she entered Cycle 2. Piper's mother changed her strategy after the first bi-weekly meeting on November 1st. At this meeting, strategies were shared for how to move Piper from drawing to writing.


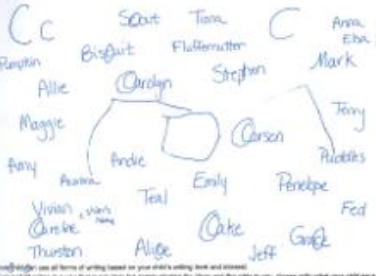


**Cycle 2.** By Cycle 2, Piper's mother began systematic and explicit instruction on letters. On November 2nd, she began to focus on a letter per day. She wrote capital and lowercase letters. As Piper's mother continued with this activity, she wrote names and words that had that target letter, talked about the letter, and allowed Piper to find this letter on the writing page of the notebook or in words and names. Then she invited Piper to write these letters. The top right panel of Figure 11 shows an example of an activity they did on letter C on November 4th.

**Cycle 3.** Piper's mother continued this strategy in Cycle 3. She wrote names and words and then sentences. Then, she omitted target letters within those words, names, and sentences and replaced this with a blank so that Piper could fill it in. The bottom left panel of Figure 11 shows that Piper's mother had gotten to the letter R on November 22nd. In this activity, she wrote Ene\_gy and Tu\_key and created blanks for Piper to fill in the letter R. Piper's mother made these activities authentic for Piper. For instance, she wrote "turkey," which correlated to the thanksgiving celebration just three days after the writing activity.

**Cycle 4.** In Cycle 4, Piper's mother continued to work on the remaining letters by writing the capital and lowercase letters, words, and names and omitting target letters. She also provided a blank and had Piper fill in the blank (see Figure 11, bottom right panel). Piper's mother also wrote for Piper to trace over. By the time they got to Cycle 4, Piper's mother could mention a letter for Piper to fill in a blank space, and Piper could do that without looking at the letter.

**Figure 11**

*Example of Piper's Writing Across Four Cycles with Parental Support*

<p>Date of writing activity: 11/10/21 Time: 4:20 pm</p> <p>Home literacy practice that led to writing(s): bedtime story, shopping list, singing, story, letters to loved ones, writing messages etc.)</p> <p>Child's writing/Parent's writing/for both parent and child:</p>  <p>Parents comment: [redacted] wanted to see a story she wanted to continue to the next entry, we responded to the book page.</p> <p>Please comment here so that your child's teacher is aware of what you are doing with your child at home. Please also note the technique that you used to support your child's writing.</p>	<p>Date of writing activity: 11/10/21 Time: 5:10 pm</p> <p>Home literacy practice that led to writing(s): bedtime story, shopping list, singing, story, letters to loved ones, writing messages etc.)</p> <p>Child's writing/Parent's writing/for both parent and child:</p>  <p>Parents comment: When we did 'C' and she found out she wrote her daughter's name on the top right. We wrote family members names to be for C.</p> <p>Please comment here so that your child's teacher is aware of what you are doing with your child at home. Please also note the technique that you used to support your child's writing.</p>
<p>Sample from Writing Notebook- Cycle 1</p>	<p>Sample from Writing Notebook – Cycle 2</p>
<p>Date of writing activity: 11/10/21 Time: 5:36 pm</p> <p>Home literacy practice that led to writing(s): bedtime story, shopping list, singing, story, letters to loved ones, writing messages etc.)</p> <p>Child's writing/Parent's writing/for both parent and child:</p>  <p>Parents comment: Writing to try like R in the center.</p> <p>Please comment here so that your child's teacher is aware of what you are doing with your child at home. Please also note the technique that you used to support your child's writing.</p>	<p>Date of writing activity: 11/10/21 Time: 4:50 pm</p> <p>Home literacy practice that led to writing(s): bedtime story, shopping list, singing, story, letters to loved ones, writing messages etc.)</p> <p>Child's writing/Parent's writing/for both parent and child:</p>  <p>Parents comment: Thanks for letting me know that water is typical for us, we were the same. She showed much more willingness to participate.</p> <p>Please comment here so that your child's teacher is aware of what you are doing with your child at home. Please also note the technique that you used to support your child's writing.</p>
<p>Sample from Writing Notebook -Cycle 3</p>	<p>Sample from Writing Notebook - Cycle 4</p>

*Note.* This figure shows how Piper's mother's support changed during cycles.

**Resources that Helped with Parent's Support.** During the post-interview with Piper's mother, she confirmed that the literacy tips from the idea sheet helped her.

Well, so the idea sheets definitely got me to start holding her hand some when we were writing things, particularly when she says she can't do it. The ideas are

exactly what got me to do the whole alphabet, to begin with; otherwise, I wouldn't have done that. We then started to do the blanks and words, and so we initially started with just a single word, and now we're doing full sentences, and she has to do several blanks throughout the words. So, yeah, I mean, it gave me lots of ideas of different things to try [12/15\_Post\_interview\_with\_mother].

When asked what idea helped the most, Piper's mother identified that each idea had its benefit.

Well, I think if we're talking about, like, her learning that she's communicating like a concept, the blanks will probably be the best because, you know, we fill in all of the blanks, we read the word as we are filling in the blanks. And then we read the whole sentence, and so the sentence has something to do with what we've done that day, and so she's getting the concept that she's sharing part of her day with Ms. Belinda every day when she goes to school the next day.

[12/15\_Post\_interview\_with\_mother].

This comment provided more insight into the authentic writing experience provided to Piper. Piper's mother modeled the concept of composition for Piper. With her mother's help, Piper could share her thoughts and ideas. Piper also learned to read words and sentences as she wrote with her mother's help.

Piper's mother continued to comment on the value of each literacy tip.

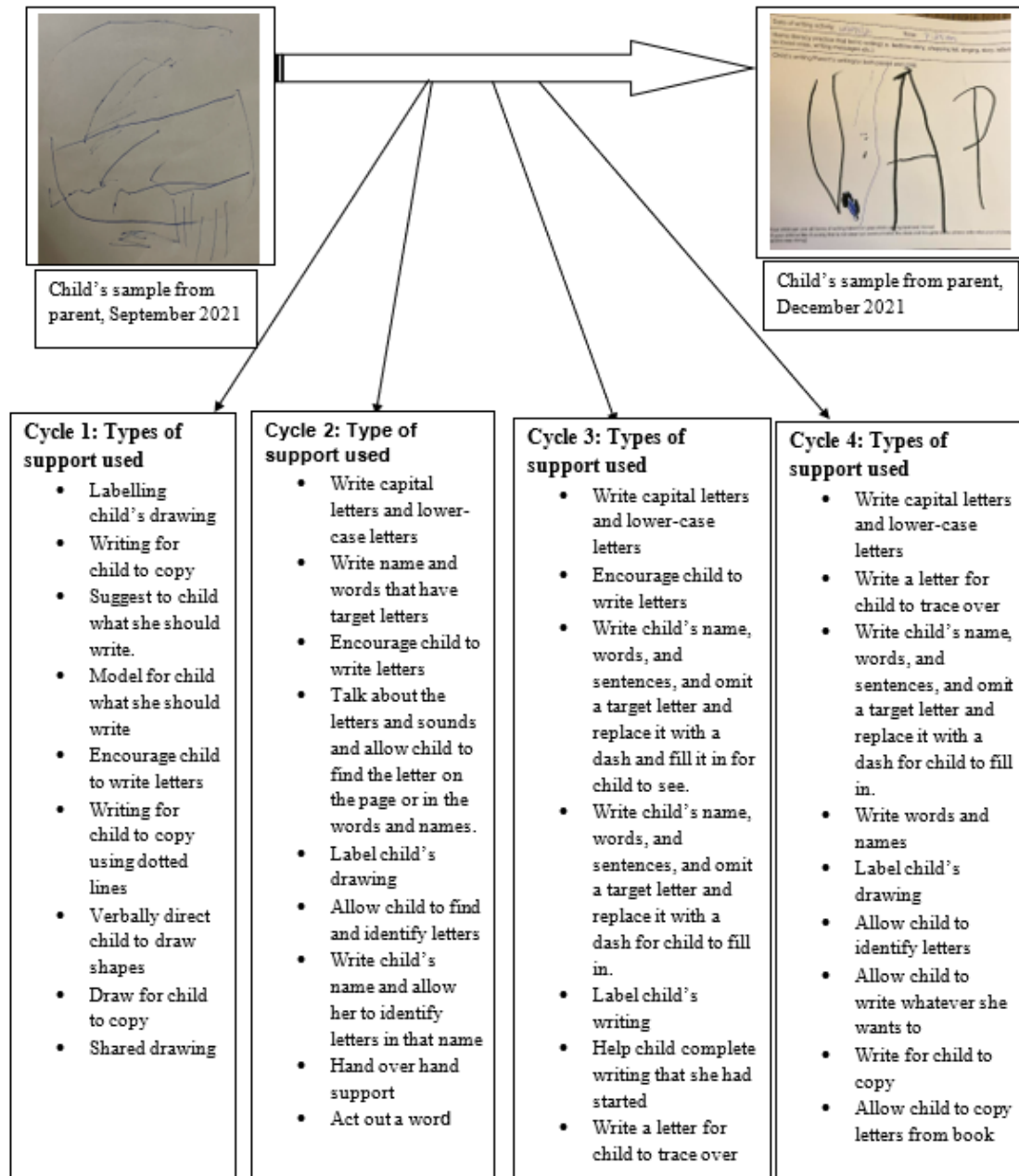
But like the sheer mechanics of it, I mean maybe putting my hand over her hand was the thing that helped the most or, you know, focusing on one letter, you know, because now she can identify the letters from her memory and be like okay

well here's the "e" mom and she can draw it. And so, I think it just depends on the stage that she was in, to what was most helpful. If we continued, I'm sure there would be some other skill that you would suggest that would then be the most helpful. [12/15\_Post\_interview\_with\_mother]

Here, Piper's mother discussed the importance of offering some direct assistance with the hand over hand support and the explicit and systematic instruction of focusing on a letter at a time. These scaffolds used for Piper continued to be adjusted across cycles as Piper progressed in acquiring skills. Figure 12 shows Piper's writing before and after intervention and captures all the strategies Piper's mother used to support her in getting to literacy learning.

**Figure 12**

*Piper's Writing Before and After Intervention and Parental Support Offered*



*Note.* This figure highlights strategies used to support Piper throughout cycles. The writing sample provided by her parent is included to show change over time.



**Post-Assessment Results.** During the post-assessment, Piper scored four points on the Concept of Print assessment; this was a 1.5-point growth compared to the pre-test, where she scored 2.5. In the post-test, Piper could still demonstrate understanding of the front of the book, the bottom of a picture, and the uppercase letter T. In addition, she now knew the lowercase s and could identify the lowercase letters t and b.

In the letter identification assessment, Piper could identify 23 upper and 14 lower case letters. During the pre-test, Piper only knew 19 upper and 11 lower case letters. Her post-test scores indicated she knew four more uppercase and three lowercase letters. In the post-test, she had trouble identifying uppercase letters K, C, and L. Her post-test result showed that she now knew lowercase letters a, f, b, h, a, l, q, m, d, i, g, r, t, and g.

In the letter writing assessment, Piper wrote letters P, O, Y, F, H, backward C, and capital letters V and n. When asked to write her name, she wrote the first letter. Piper significantly improved in her writing from the pre- to post-test. During the pre-test, Piper was scribbling; in the post-test, she could write eight letters.

Comparing Piper's performance to Piper's mother's expectation for her by the end of the school year, Piper exceeded this expectation, particularly in writing. Her mother had hoped that by the end of the school year, Piper could write a couple of letters. By the end of a 2-month instruction, Piper could write eight letters.

### ***Linda***

At the start of the study, Linda was 50 months old (4 years and two months). Linda is a twin, and her mother often talked about both children; however, Linda was the focal point for this section. Hollie is Linda's twin and was also a participant in this study.

**Linda's Home Environment.** Linda and her twin sister, Hollie, are the “first two” children with no other siblings [9/21\_Pre-interview\_with\_mother]. Their home language is Chinese. Linda's father and mother speak and read to them in Chinese.

I read stories to them, I read books to them, my husband also read books to them, and they also like to play with block, and they like to play the “pretend to play” games with a baby doll and their plates and the spoons like that [9/21\_Pre-interview\_with\_mother].

According to their mother, the children prefer to listen to books read in Chinese. Even when an English book was borrowed from the library, the kids preferred their mother to translate it into Chinese [9/21\_Pre-interview\_with\_mother].

When asked what literacy tools they had at home, Linda's mother said the children could access different tools, including coloring sheets, pens, crayons, play dough, and magic clay [9/21\_fieldnotes]. When asked if Linda had access to technological devices at home, her mother said, “...we only have TV. So, they are allowed to watch like Peppa Pig. So far, the only two series they watch are Peppa Pig and Dinosaur Train by PBS....” [9/21\_Pre-interview\_with\_mother]. In Linda's household, the parents control the programs their children watch and the frequency of TV viewing.

So, we only allow them to watch the TV occasionally during the week so, like the Friday or Saturday and normally from Monday to Friday, they don't have time to watch because we have other things to do, and they have to go to bed early and on Saturday normally Saturday or Sunday, they can watch them [9/21\_Pre-interview\_with\_mother].

Concerning the different strategies used to support Linda's literacy, Linda's mother described how she supported Linda's literacy in both Chinese and English. For instance, she mentioned that "I read to them. When they read Chinese, I point the character to them, so they also like to use their little finger to point to the word..." In addition, children are taught "the 26 letters, the English letters." When asked how she did that, Linda's mother stated:

When we read the book, we have the letters—alphabetical book—so we can use that to learn the letters. We also have the magnet letter, so we put the magnetic letter on the whiteboard so they can use their fingers, something to just point to the letters. They also like to sing the letter songs. So, from that, they learn the letters. [9/21\_Pre-interview\_with\_mother].

When asked how she supported her children's writing, she said, "I really don't do anything to develop their interest." Then after thinking about it deeply, she mentioned that she writes for her children to see, and her children sometimes want to copy what she did.

I have a notebook. I write in my notebook. Maybe that's the only thing. Yeah, I write in my own notebook. Yeah, that's right, whenever I write, whenever I have the notebook, I have my pen, they always want to take my pen, they always want to have another notebook to write on a notebook.

When Linda's mother was asked what her literacy goal was for Linda, she stated that "... I really hope they can do better in their English because I feel at their age, their Chinese

is almost like the level of the same-aged children in China.” She provided more insight into why she wanted Linda and her sister to improve in English. She said, “there's only one year left before they go to elementary school in kindergarten, so I hope in this one year they can have great development in their English” [9/21\_Pre-interview\_with\_mother]. Later in the interview, she reinstated that “...their English ability is not that high. I may want to focus on English in the next one year” [9/21\_Pre-interview\_with\_mother].

Linda’s mother was concerned about Linda and Hollie’s English development and felt participating in this study would help them.

When asked what Linda made on paper when she held a pen or pencil, her mother stated that “Linda can write her name,” she stated further:

She likes to write her name, write the letter L since she was young. Like, I couldn't forget what age it is, maybe early three, so she has been practicing the L for many, many months or even a year, and now she can write her name, and she also draws some random things. She draws the things; she draws a little kid, like a round head, two legs and no body, and two arms like that. She also draws things like puzzles [9/21\_Pre-interview\_with\_mother].

From the above quote, Linda was only comfortable writing her name.

**Linda in the Classroom.** During the pre-interview, Ms. Trish mentioned that she could not get Hollie and Linda to do any other type of writing except their names. She said they “love writing their names. I can't really get them to do anything else. They love writing their names.” Ms. Trish made this comment concerning the sample that she

collected. This corroborates Linda's mother's comment on Linda's affinity for writing her name.

**End of the School Year Expectation.** Linda's mother was asked what Linda should have mastered in her current classroom at the end of the school year. She started to answer the question by stating what both Linda and her sister could do first. By doing this, Linda's mother was aware of her children's zone of proximal development. She stated, "they know how to write their names, and also, they already know the 26 letters." About what they should have mastered by the end of the school year, Linda's mother mentioned that she hoped "they can recognize some simple words like the words of a color and the words of some objects like fruits, like vegetables and some commonly used words" [9/21\_Pre-interview\_with\_mother].

Later in the interview, she provided more information about this expectation. "...I hope they can know how to read the commonly used letters (corrects herself) commonly used words. Some of the commonly used words like a cup /c/ /u/ /p/, like a cat /c/ /a/ /t/, like a hat /h/ /a/ /t/ so like that" [9/21\_Pre-interview\_with\_mother].

**Pre-Assessment.** Before the intervention, Linda scored 3.5 points on the Concept of Print assessment out of 24. This meant she knew the front of the book and could identify the bottom of a picture and a letter (letter d). She was also able to identify a capital letter (letter T).

In the letter identification assessment, Linda identified 23 upper case letters and 15 lower case letters. She had trouble identifying upper-case letters U, G, and V and

lower-case letters *a, f, p, u, a, l, q, n, e, r, v, t, and g*. Concerning her letter-writing skills, she wrote her name and four other letters.

**Type of Support across Cycles.** Linda's mother used different strategies to support Linda during each cycle. These strategies were learned from the literacy tips provided and reinforced at bi-weekly meetings.

**Cycle 1.** In Cycle 1, Linda had six entries in her notebook with adult support and two without adult support. Of the six entries with adult support, five were with the help of her mother, while one was done in the classroom. All five entries with her mother's support included Linda receiving support to write words, names, and sentences using dotted lines. For example, as shown in the top left panel of Figure 13, Linda's mother wrote words like CAT, BAT, and FAT using dotted lines so that Linda could trace these words.

**Cycle 2.** In Cycle 2, Linda continued to practice using dotted lines but writing with dotted lines was now focused more on sentences. There were only three entries with parental support in this cycle. In this cycle, Linda's mother connected reading activities to writing. For instance, Linda's mother read a book with Linda titled "Polar Bear, Polar Bear. What do you hear?" Then she wrote a paragraph from the book and read this paragraph with Linda. While they read it together, she allowed Linda to choose words she wanted to rewrite. After that, she asked Linda to circle these words from the paragraph. Linda chose "flamingo," "hear," "zebra," "boa constrictor," and "elephant," and her mother circled these words. Her mother then wrote these words in upper case letters using dotted lines. Afterward, Linda traced it.

Furthermore, her mother circled letters that were properly traced. In the comment section, she said, “Linda knows which letters she wrote looked good.” See the top right panel of Figure 13 for this writing sample. With this activity, Linda could see the connection between reading and writing.

***Cycle 3.*** Linda’s mother continued to allow Linda to share her ideas and thoughts about what was of interest to her. Linda had five entries with parental support in this cycle. These entries included writing a story Linda dictated about her toys (see Figure 13, bottom left panel), writing about what Linda did for the day, and writing about her time at school and what food she loves to eat and misses. During this writing activity, Linda’s mother would write Linda’s ideas and thoughts and then allow Linda to re-write what she had written. She also provided hand-over-hand support and dictated letters for Linda to write. In addition, Linda’s mother lined the notebook so that Linda could practice writing her letters on lines. In this cycle, Linda developed more control in writing and did not need dotted lines for support. From her mother’s comment in the notebook, Linda could write letters just by her mother dictating the letters to her.

***Cycle 4.*** By cycle 4, Linda continued to share her ideas and thoughts with her mother’s help. For instance, in her last entry, Linda’s mother helped Linda write her thoughts regarding her play day with friends (see Figure 13, bottom right panel). After that, Linda attempted to write this sentence in her handwriting. By the end of the intervention, Linda had gained much control over her handwriting and could write more letters.

### *Example of Linda's Writing Across Four Cycles with Parental Support*

Sample from Writing Notebook – Cycle 1

Sample from Writing Notebook –  
Cycle 2

Sample from Writing Notebook – Cycle 3

Sample from Writing Notebook –  
Cycle 4



**Resources that helped with Parent's Support.** During the post-interview with Linda's mother, she identified that the idea sheets provided by the researcher and the bi-weekly meetings helped provide strategies that she used in supporting Linda and her twin sister. Concerning the idea sheets, she said:

Now that's very useful for us. We used many ways that you have introduced to us. So, like, I tried tracing. I tried holding their hands, I tried saying something that they have interest in, then I write sentences for them, and then we read it together, and then when I am reading, they point to the words they want to write. So, like, I can circle the word that they want to write. I mean Linda...Linda can write the words down. Write the words down, but she didn't recognize every letter at that time, so I just spell the letter, pronounce the letter, and then she copied the word. And then, later, I write the sentence. Linda can now copy the whole sentence. I speak every letter, and then Linda copy down every letter. [12/16\_ post-interview\_with\_mother].

Before the intervention, Linda's mother only knew about the tracing strategy and did not know how to appropriately interact with her twin daughters about writing. The literacy tips and bi-weekly meetings supported her work with Linda. About the bi-weekly meeting, Linda's mother said, "I don't know how to interact with them in terms of writing, so I just let them write, and also in the beginning, I only know tracing, but in the past bi-weekly meeting, I learned other ways of writing" [12/16\_ post-interview\_with\_mother].

Linda's mother confirmed in the post-interview that the only strategy she knew that could support Linda's writing was tracing. However, from the literacy tips and information learned in the bi-weekly meeting, she discovered other helpful methods for her daughter. Linda's mother provided explicit instruction for her daughters. She allowed Linda to see what she was writing and drew Linda's attention to the letter by calling it out and pronouncing it before Linda wrote the letter, word, or sentence. By the end of the intervention, Linda had grown from just writing the letters in her name and four other letters to writing the letters in her name and 20 more letters.

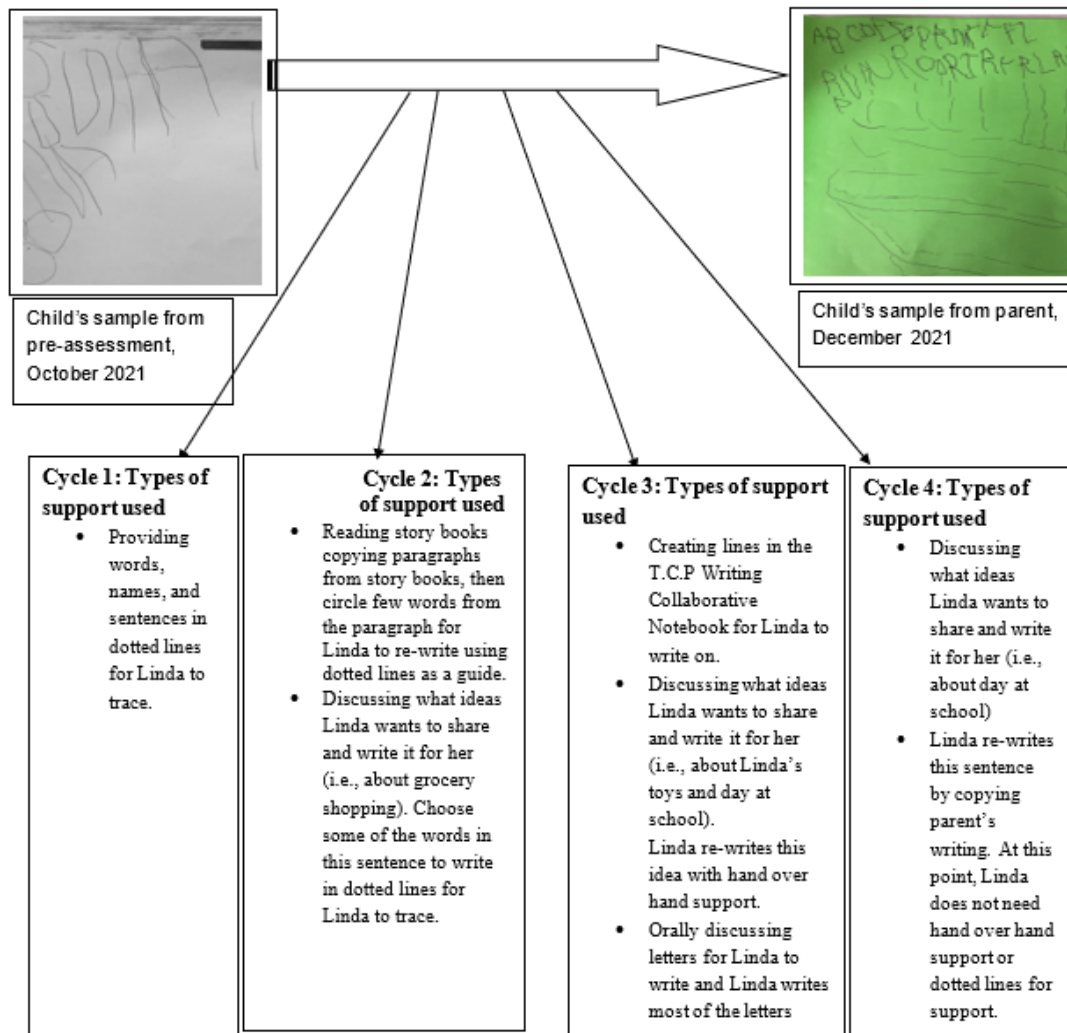
**Post-Assessment Results.** During the post-assessment, Linda scored 11 points on the Concept of Print assessment, a 7.5-point growth compared to her pre-test score of 3.5. In the pre-assessment, she could only identify the front of the book, the bottom of a picture, and the letter d. In the post-assessment result, Linda could still locate the front of the book and the bottom of the picture. In addition, she now understood that the print contained the message. She knew where to start to read, which way to go, and return sweep to the left. She also understood the first and last concepts. She understood that you read from left to right. She could locate I, lowercase letters t, b, and point out two more letters.

In the letter identification assessment, she could now identify 25 upper and 22 lower case letters. Compared to her pre-test scores of identifying 23 upper case letters and 15 lower case letters, Linda now knew two more upper case letters and seven lower case letters. She had trouble identifying the capital letter W and lowercase f, k, w, b, u, and the second variation of g.

In the letter writing assessment, she wrote 22 letters A, B, C, D, E, F, H, I, K, L, M, N, O, P, Q, R, S, T, U, V, W, X Y, and backward Z. These letters included the letters in her name. This was a vast difference from her pre-test, where she wrote only eight letters that had the letters in her name. This means she wrote 14 more letters in her post-test.

**Figure 14**

*Linda's Writing Before and After Intervention and Parental Support Offered*



*Note.* This figure highlights strategies used to support Linda throughout the cycles. At the top left corner is Linda's pre-assessment sample. Part of her name and some letters have been cut out. The sample from her parent was not used because Linda wrote her name only.

Linda and Piper's examples showed how parents' support helped children progress from Cycle 1 to Cycle 4. Based on the literacy tips and feedback they received at bi-weekly meetings, parents could adjust their strategies to benefit their children. The following section discusses how teachers' support helped children progress.

### **Support Provided to Children by Teachers**

The support provided to children by teachers was also continuously refined during the two-month intervention to move children toward the pedagogical goal of enhancing preschool children's emergent writing skills. Teachers provided early writing support in the classroom and through the writing notebook. In this section, I describe Ms. Belinda's support to help understand how writing was supported in the classroom and through the writing notebook.

Ms. Belinda's Class is used as an exemplar case rather than Ms. Trish's Class because no specific curriculum was used in Ms. Belinda's Class that could restrict her integration of new ideas. Ms. Trish had to work around integrating new ideas while not disrupting the class activities, which aligned with the creative curriculum. In her post-interview, Ms. Trish confirmed that she had not changed much in her classroom due to restrictions on the creative curriculum. "... I mean, with the curriculum that we follow, it's very much play based... So, I mean, as I came in, my classroom was completely set up for me, so I didn't really change much." [12/10\_Post-interview\_with\_Ms.Trish]

When Ms. Trish was asked whether she encountered any challenges that did not fully allow her to participate in the ways she wanted, she restated that the curriculum was a restriction.

I mean, 4K and creative curriculum is very much they say jump, me and Katie say how high. Most of my lesson plan is already made out for me, and I have to do all the documentation, all the notes....so it was kind of hard to. I kind of just stuck my ground; I'm going to do it regardless of whether you want me to do it or not, so I kind of veered off on my own path, but that was definitely a limitation for sure. [12/10\_Post-interview\_with\_Ms.Trish]

Therefore, the exemplar case of Ms. Belinda's Class demonstrates how the unrestricted implementation of literacy activities might be associated with children's emergent literacy growth.

### ***Ms. Belinda's Class***

Ms. Belinda is the lead teacher in the 3K classroom, and at the time of the pre-semi-structured interview, she and the assistant teacher supported 12 children in the class. All 12 children were three years old, except one who was turning four.

Right now, all of them are three. Let's see, by the end of October, I have one turning four, so I've got some young threes that have just turned three around July and some that's going to be turning four, so a wide range [10/04\_Pre-interview\_with\_Ms.Belinda]

**The Immediate Classroom Environment.** The classroom environment was rich with literacy tools. Ms. Belinda provided insight into the types of literacy tools in the classroom, some of which were seen during the pre-intervention observation.

We have marker boards, magnetic boards, magnetic alphabet. We have a foam puzzle alphabet. We have charts; we have any kind of medium that you need,

crayons, the paper—some where they can trace and some where they can do things on their own. [10/04\_Pre-interview\_with\_Ms.Belinda]

There were also lots of books in the classroom. When asked whether literacy tools were provided in other centers apart from the writing center, she mentioned that they were not in other centers, but if children took something into another center, she was not going to say, “do not take it out, because they may be wanting to write a note or something, but we don't have it available in the other centers.” Although Ms. Belinda expressed that using literacy tools in the centers may not be appropriate for the age group, she gave a rationale.

They don't really sometimes understand that we can't write on everything, um.

Yeah, but I have had that in other classrooms before, so I do know that it is accessible. So, if they wanted to take something in there, then that's fine

[10/04\_Pre-interview\_with\_Ms. Belinda].

On reading, the lead teacher read books to the children during large group time. "Usually, If I get a couple of books in, and I may do that, they really enjoy the stories." From observation, children could also look through books independently during free choice time and while transitioning from lunch to small group [10/13\_Pre interventionobservation\_with\_Ms. Belinda].

**Classroom Schedule.** The classroom schedule shows children's activities across a planned schedule. Table 15 describes the schedule in detail. In the pre-intervention, Ms. Belinda shared that there was a reading time during group activity but no group time for writing. She also stated that children often participated in related activities supporting

motor control, like painting and coloring. Writing may have been excluded from the formal schedule because, according to Ms. Belinda, many children in the classroom were not ready for writing.

A lot of them are not ready for some of that. A few are, but as a whole, they're not really ready for more writing so we're doing a little bit more following directions. So, we're going to start doing a little bit more straight line from top to bottom from left to right things like that to help them get used to controlling the pen [10/04\_Pre-interview\_with\_Ms.Belinda].

The classroom schedule also included free play, during which children played in different centers. The free play centers had science, writing, manipulative, housekeeping, block, and reading center.

**Teacher's Approach to Children's Play.** While playing in centers, the play is uninterrupted by the teacher. In her pre-interview, she stated: "I sit back and watch them because you know I don't need to always interject into their play." Ms. Belinda thought it best to allow them to play freely because she finds out "kind of where they are, and they get to explore and develop their social skills by playing with some of the others." Ms. Belinda only got involved when there was "a little bit of a problem...."



**Table 15***Description of Classroom Schedule by Ms. Belinda*

Time of Activity	Program	Description of Activities as Described by Ms. Belinda
7:00 am	Center opens	
7:30 am	First child arrives	
7:30-8 am	Free play in centers	Children do a "lot of different things; they learn cooperation. They learn patience; if someone has a toy that they want, they do have to wait till it's available, imagination and language skills. A lot of math skills also when they're here, you hear them counting. Science, if they build a tower, see how high it goes before it falls over, so there's a lot of different things that they learn while they're doing free play, you don't even realize it."
8am - 8:30am	Breakfast	
8:30 am -10 am	Free play in the centers	Children play in different centers which include science, writing, and manipulative center. "They get to choose whatever they want to play. We've got a magnetic set that children really enjoy building with those and watching the little architecture come through what they do. Some really enjoy going to the block area building. I get to hear their imagination as they play like that."
10 am-11 am	Outside play. If there is no outside play, children have a different kind of activity in the classroom.	"We are outside with some activities, and we've got some new things on the playground too." "We have a little bit of guided activity out there also."
11am - 11:30am	Lunch	Some group time may happen while waiting for lunch to get ready. This could include doing the "calendar" or a "counting activity."
11:45 am - 12:30 pm	Group time	The teacher reads books, and the children listen to music.
	Small group time	Children are divided into small groups to do an activity. Other activities that children may do during this time include "painting," "cutting," "letter match to match letters of their name" "or numbers or recognizing numbers, or counting. Some writing, but a lot of the children are not there yet. Some coloring.
12:30 pm - 2:30 pm	Rest time	
2:30 - 3 pm	Snack	
3:00 pm	Lead teacher goes home	"Children either go back outside to play or go back to their learning centers if they are not going outside until dismissal."

*Note.* During the pre-intervention semi-structured interview, Ms. Belinda was asked to use time stamps to describe a typical day in her classroom from arrival to dismissal. The sentences in quotation marks are Ms. Belinda's direct words.

**Pre-intervention Class Writing Level.** According to Ms. Belinda, many children were still at the scribble stage. "...They're doing very well on recognizing some letters and numbers...". She mentioned that the children in her class were doing very well in these areas but were "just not ready for writing." [10/04\_Pre-interview\_with\_Ms. Belinda].

**Pre-intervention Writing Support.** From the pre-semi-structured observation, some children went to the writing center to color independently. Some of them showed their finished product to their teacher afterward. For instance, after Piper was done coloring, she went to show her teacher. Ms. Belinda said, "it's pretty," and asked, "did you write your name on it?" [10/13\_Pre-interventionobservation\_with\_Ms. Belinda]. Through this interaction, Ms. Belinda commended Piper's effort and encouraged her to write her name.

This observation corroborated her response to supporting children's writing during the pre-semi-structured interview.

Oh, I give them every opportunity to write. I like making little books for them to draw something; if they get in, I always try to get them after they do a picture to go write your name, and however they write, it is theirs. If they say I can't, then I'll write it and say okay, see if you can do it like this, but anytime they can write, I accept it for how it is, and they will learn from that [10/04\_Pre-interview\_with\_Ms. Belinda].

Ms. Belinda's approach was to praise every emergent writing attempt and not demand accuracy. She believed children's writing attempts helped them "gain control of the pencil, and their imagination comes through that way too." [10/04\_Pre-interview\_with\_Ms. Belinda]

**Classroom Curriculum.** There is no specific curriculum used in the 3K classroom. During the pre-semi-structured interview, Ms. Belinda mentioned using the creative curriculum. When asked what the creative curriculum's focus area was, she stated it was "pretty much...muddy waters" to her. From several years of working with preschool children, Ms. Belinda focused on what she thought children needed to learn and went about instruction in her class that way. During the interview, she mentioned using a similar approach to creative curriculum, stating that she had a "balance between child-initiated and teacher-initiated activity." When trying to compare the creative curriculum to her approach, she said that with the creative curriculum, "you do have some scheduled activities, and you do have some free choice activities for them to do, which is the working in the centers and then the scheduled activities that I have." From her experience, she also used:

    Their interests and their level of development and so I know they need to learn how to get along with others, they need to know how to hold a pencil, they need to know how to sound out words or how to count and recognize their number, so I just work on things like that [10/04\_Pre-interview\_with\_Ms. Belinda].

Before the intervention, Ms. Belinda used different resources to support her teaching. Ms. Belinda was focused on student learning and providing authentic experiences for children. Both personal and professional experiences guided her instruction.

When asked where she learned her instructional strategies, Ms. Belinda stated:

Just years of doing this, I guess, and experience with my own children. I get ideas from websites, from other teachers, from the children themselves, things that they do. I go, oh yeah, maybe we can do an activity based on that to help them learn some things. So, I have books and go online all the time to try to do something to help them learn everything they can and every different area." [10/04\_Pre-interview\_with\_Ms. Belinda]

**End of the School Year Expectation.** When asked what children should have mastered in her classroom at the end of the school year, Ms. Belinda mentioned numeracy, name recognition, and writing skills. Regarding literacy, Ms. Belinda said she wanted children to “recognize their name, trace, or write some of the letters, other names, or just other letters.” [10/04\_Pre-interview\_with\_Ms. Belinda]

She further stated that although she did not expect them to start writing until they were four, she still encouraged them.

I know a lot of that; they are not going to start doing until after they are four. I am not expecting any of them. I want to encourage them to do what they can and give them every opportunity to learn to do that, whether it's tracing because a lot of times, I will write their name and let them trace over their name with a marker or a crayon. [10/04\_Pre-interview\_with\_Ms. Belinda]

Her comment about tracing corroborates what Piper's mother noted as one of the activities Piper brought home. During the pre-intervention interview with Piper's mother, she mentioned that Piper was "starting to be sent home with like the traceable letters" [9/20\_Pre-interview\_with\_mother].

With letter recognition, Ms. Belinda mentioned she hoped the children would have mastered the most common letters of the alphabet.

Some recognition of the most, I guess the most common letters of the alphabet, the easier ones, of course, A because that's the first letter, B and P and T, those are easy letters for them to hear the different sounds so if they can recognize and distinguish those sounds. [10/04\_Pre-interview\_with\_Ms. Belinda]

**First Implementation Meeting.** After completing the pre-intervention interview and observation, the researcher reviewed the notes and wrote a summary of Ms. Belinda's practices and values. The central values captured in the notes were boosting children's social skills, encouraging children's interaction with each other and the teacher, reading time, and free-choice time. The researcher highlighted these and confirmed these values from Ms. Belinda during the first implementation meeting [10/18\_Implementation\_meeting\_with\_Ms.Belinda].

During the meeting, Ms. Belinda was assured by the researcher that "supporting children's early writing skills is not to put on the sideline other important skills that you value." Ms. Belinda was informed that through this study, collaborative interactions would highlight "how we can infuse early writing into the areas that she valued because

supporting children's early writing skills can enhance and enrich these other important skills" [10/18\_fieldnotes\_from\_implementation\_meeting].

**Ms. Belinda's Initial Literacy Plan.** Before the first implementation meeting, Ms. Belinda had been provided with a practitioner article to read. This article was titled "Promoting Preschoolers' Emergent Writing" by Byington and Kim (2017). This article was specifically chosen because of the information gathered during pre-intervention observation and interview. After Ms. Belinda had reviewed the practitioner article, we met for our first implementation meeting. At this meeting, we discussed the practitioner article, including the stages of emergent writing and other ways to support children other than name writing. The researcher employed an approach that encouraged Ms. Belinda to share ideas that she had gleaned from the article rather than telling Ms. Belinda what to do. Ms. Belinda was asked to kindly reflect and submit a written literacy plan of what she would like to try from the article in the next couple of weeks [10/18\_fieldnotes\_from\_implementation\_meeting].

In her initial literacy plan, which she provided one day after the implementation meeting, Ms. Belinda wrote the different literacy activities she planned to integrate into her classroom. These literacy activities are: "children's daily sign-in," "baskets with paper/pencil available in all areas of the classroom," "word cards (with pictures that students may copy)," "read daily to class," "letter recognition/letter sound/beginning sounds of words," "copy letters (trace)," and "fine motor activities such as writing, coloring, cutting with scissors, playdough." Her literacy plan noted that books were already available to children [10/19\_Ms. Belinda's literacy plan notes]. During the pre-

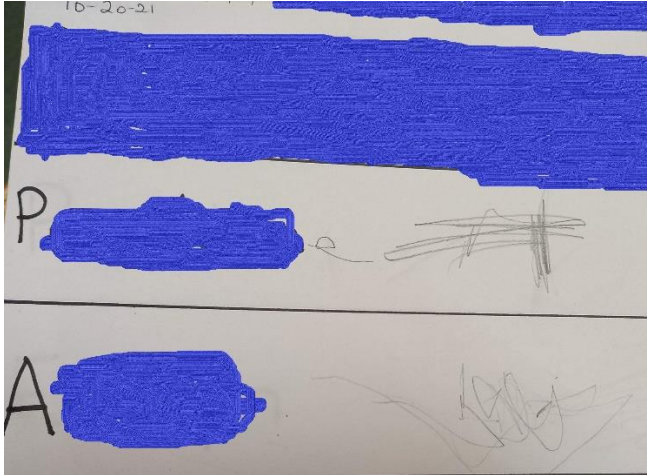
intervention observation, the researcher also noticed that books were available to children.

**Type of Writing Support in the Classroom across Cycles.** The writing support provided by Ms. Belinda will be discussed in this section using Piper and Anabel as examples. Piper and Anabel are used as exemplars because Piper used the writing notebook in the home while Anabel did not. These exemplars will show how Piper and Anabel progressed in their writing primarily because Anabel's writing was only supported in the classroom while Piper received support from both teacher and parents.

***Cycle 1.*** In Cycle 1, Ms. Belinda started the daily sign-in activity. The sign-in sheet, as shown in Figure 15, was designed by Ms. Belinda. It included children's names on the left and a space on the right. Children were asked to write their names on the right by copying a model written for them on the left. In the first couple of weeks, Ms. Belinda guided the children on where to write and told them what she expected of them: to attempt to write their names instead of color. She nudged them to continue when they wanted to give up and praised every writing attempt [10/21\_fieldnotesfromclassobservation].

**Figure 15**

*Sample of Daily Sign-in Sheet in the 3K Classroom in Cycle 1*



*Note.* The first name on the sign-in sheet has been concealed. Piper was the second on the list, followed by Anabel.

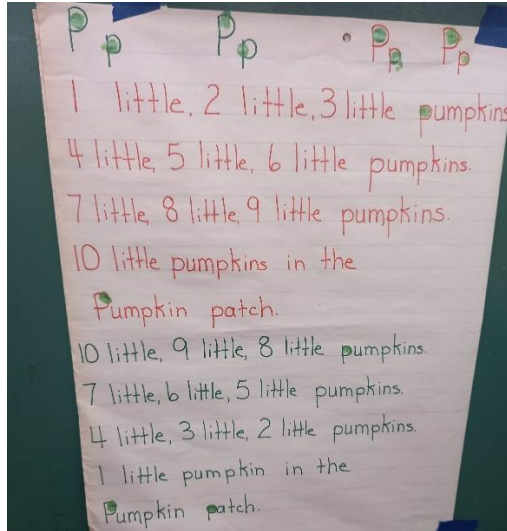
Ms. Belinda also encouraged other activities that would eventually support writing. These activities included letter and name identification, book reading, and cutting activities. To support children’s letter identification, she did a “letter finding activity” during circle time. First, she showed children the upper- and lower-case letters ‘Pp.’ She told them to look at it closely because she would ask them about the letter [10/21\_fieldnotesfromclassobservation]. Afterward, she gave each child a green marker and allowed each child to take a turn in finding a letter P on the sheet (See Figure 16). Ms. Belinda commended the children for their efforts. After this activity, Ms. Belinda read them a book and revisited the previous activity by showing them the letter P. She asked questions like “What letter is this?” and “What sound does it make?” Furthermore, she provided the sound and words starting with the letter P, like “pumpkin, popsicle, and



pizza” [10/21\_fieldnotesfromclassobservation]. She made this activity relevant by connecting the letter P to words children were familiar with.

### **Figure 16**

*Finding “P” Activity on Paper posted on the Door in the Carpet Area*

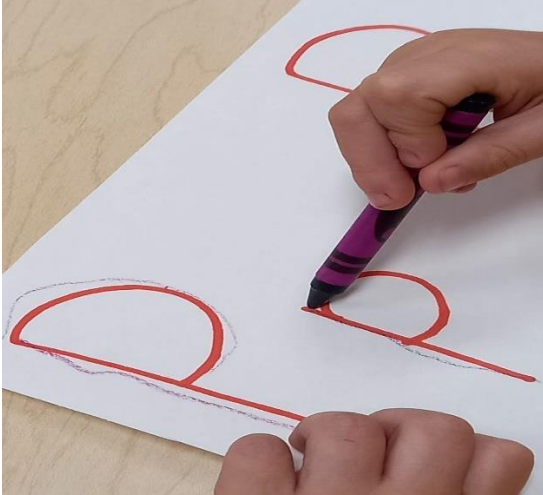


*Note.* Children were given a green marker and asked to use it to find a P on the paper.

After this activity, Ms. Belinda gave each child a piece of paper with the capital and lowercase letter P written on it. She told them she expected them to trace over the letter P (see Figure 17). She emphasized that “it’s not for coloring but for writing.” By telling them it was for writing and not for coloring, Ms. Belinda set an expectation for the children to have in mind as they did this activity. Some children even took it upon themselves to check on their peers and re-state that the teacher expected them to write instead of color.

**Figure 17**

*Letter Tracing Activity*



Note. Anabel pictured as she traced over the letter P.

Furthermore, Ms. Belinda involved the children in a name-recognition activity. During the pre-intervention observation, the researcher observed children participate in this activity. It served as a transition activity to lunchtime. Ms. Belinda had children's names written on cardboard and held them up individually, allowing children to recognize their names. When a child recognized their name, they were told to stand up and proceed to the sink, where they washed their hands and got ready for lunch. During the first observation in Cycle 1, Piper and Anabel recognized their names. When Anabel recognized her name, Ms. Belinda praised her, saying, "good job." No comment was made for Piper [10/21\_fieldnotesfromclassobservation].

In Cycle 1, Week 2, children also participated in a cutting activity under Ms. Belinda's supervision. Ms. Belinda was at her table cutting out capital and lower-case letter M printouts. She involved some children in cutting and told them, "You have to

gain control of your fingers” [10/27\_fieldnotesfromclassobservation]. During free play time, there was access to coloring sheets in the writing center (see Figure 18).

**Figure 18**

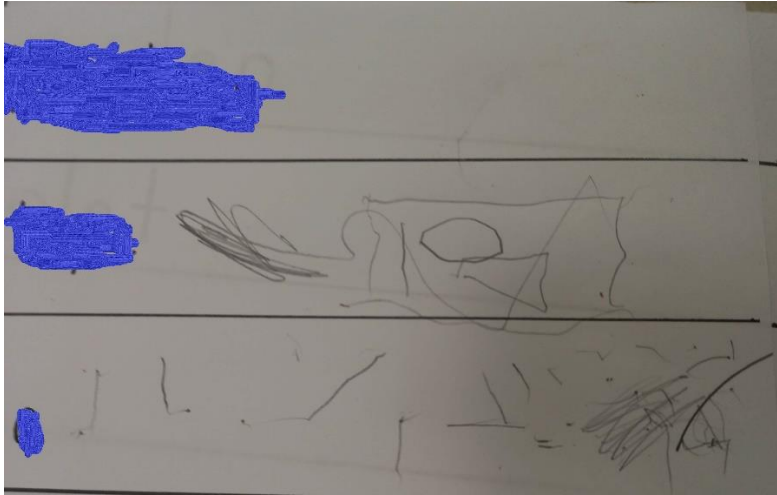
*Cupboard with Accessible Writing Tools in the Writing Center*



**Cycle 2.** In Cycle 2, Ms. Belinda continued to engage children in name recognition, sign-in, and letter identification activities, emphasizing initial sounds and words that begin with the letter. When children engaged in writing, Ms. Belinda kept providing clear directions, including directional language, and nudged children to continue writing. When she noticed they were about to give up, she praised them for their efforts. For example, during Week 3 of the intervention, Ms. Belinda provided support during sign-in for both Piper and Anabel (see Figure 19).

**Figure 19**

*Sample of Daily Sign-in Sheet in the 3K Classroom in Cycle 2*



*Note.* The first name in the sign-in sheet has been blotted out. Piper was the second on the list, followed by Anabel.

When it was Piper’s time to write her name, she did a square, which aligns with what she had been doing in her writing notebook at home during Cycle 1 and the beginning of Cycle 2. Ms. Belinda encouraged Piper to write an O and then draw a line. Her real name starts with P, so Ms. Belinda was trying to scaffold the writing of the letter P with a line and an O. Piper responded by drawing the line, O, and squares and afterward began to scribble [11/5\_fieldnotesfromclassobservation].

When Anabel began to attempt to write her name, Ms. Belinda said to her, “I want you to make lines and circles. Anabel responded, “all the letters?” Ms. Belinda responded by saying, “yes, that’s how you make letters—lines and circles.” Ms. Belinda used directional language that Anabel understood to scaffold writing for her. Anabel responded by making lines and dots and did not want to stop. Ms. Belinda told Anabel,

“If you want to keep writing your name, then go and get a paper.” Ms. Belinda encouraged Anabel to continue writing. As seen in Figure 20, Anabel proceeded to write on the easel.

**Figure 20**

*Anabel Draws on the Easel Board*



**Ms. Belinda’s Updated Literacy Plan.** Before the third cycle began, another implementation meeting was held. Before this meeting, two additional practitioner articles were provided to Ms. Belinda. These practitioner articles were discussed at the implementation meeting. They are titled “Integrating Writing into the Early Childhood Curriculum: A Framework for Intentional and Meaningful Writing Experiences” by Bingham et al. (2018), and the second was an excerpt from “Instructional Techniques for Emerging Writers and Special Needs Students at Kindergarten and Grade 1 levels” by Gentry (2005, pp. 130-133). The focus of the meeting was to discuss what was working and not working based on the literacy activities introduced. These included discussing children’s writing progress in the past cycle and ways to encourage composition in the

third cycle. After this meeting, Ms. Belinda shared her literacy plan for the next two cycles. She cited a portion of the article in her implementation notes, suggesting to “intentionally embed writing materials in various areas of the classroom to encourage writing (p. 610 of the article).” She also added that she wanted to do “one-on-one activities,” “Dictation—What did you do in centers today?” “Child writes a letter for what he/she did, played with.” In addition, she wrote “start story—each child dictates next part,” “Christmas cards,” and lastly, “small group to introduce materials, ideas, how to use, etc., before being placed in classroom areas” [11/12\_Ms.Belinda’simplementationplan].

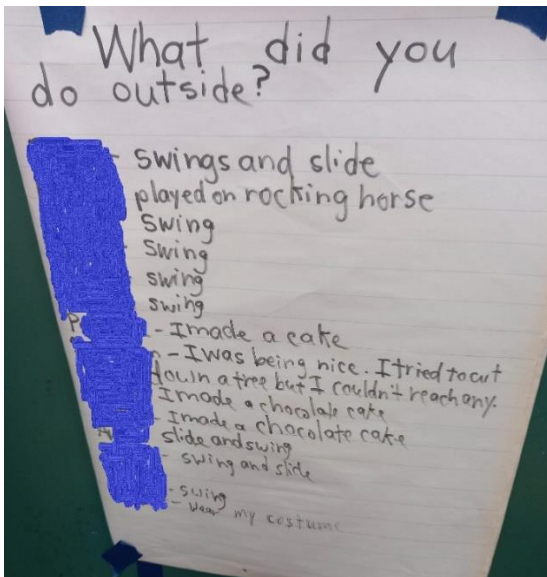
**Cycle 3.** In Cycle 3, children continued to write their names during sign-in and participated in letter identification activities. However, during this cycle, Ms. Belinda introduced a new activity that involved making notebooks for the children and encouraging them to use them for writing. This notebook-making activity took place in the morning. While creating these books, the teacher stapled white paper inside the colored paper, which served as the book's cover. Ms. Belinda asked each child what color paper they would like to see as the front cover. By asking this question, Ms. Belinda took into consideration children’s preferences.

The actual writing in the notebook took place during small group time. To proceed with the activity, Ms. Belinda asked the children, “What did you do outside?” during the big group time. Prior to this activity, she had pasted a big piece of paper on the door in the carpet area where children usually have their group time. She wrote the question for children to see as she interacted with them[11/18\_Observationfieldntoes].

She briefly mentioned the purpose of a question mark by saying, “This is a question. I put a little thing at the end to indicate it is a question,” referring to the question in the title [11/18\_observationfield notes]. She then proceeded to write what the children said. As seen in Figure 21, Piper (line 7) stated she made cake, while Anabel (line 12) stated, “slide and swing.” [11/18\_observationfield notes]

**Figure 21**

*Writing Activity During Group Time*



*Note.* After the outside play, Ms. Belinda asked the children to reflect on their outdoor activities. The names of all the children in the classroom are blurred except for the first letter of Piper and Anabel’s names.

After everyone had told Ms. Belinda what they had done outside, she told them, “This is what you did outside today,” pointing at the paper. She let them understand that she wrote down what they told her and connected this writing to their name writing. “Just like you can write your name, I wrote what you did outside” [11/18\_observationfield

notes]. She stated, “I did not have enough space to write what Rosie said. You will have to write this in your book.” She continued, “People write what they do, and they write a book....” [11/18\_observationfield notes].

Ms. Belinda then showed them a storybook as a sample. By doing this, she modeled to the children what she would like them to do. “You are going to have your own book,” and she showed them a sample of the book she had made. She said Jane’s (pseudonym) “book is empty. You are going to draw your picture and write your story.” She used this whole conversation to build them up for what she expected them to do and set the mood for the activity. [11/18\_observationfield notes]

In addition, Ms. Belinda provided them with literacy tools that could help them in this process. Apart from the crayons used, Ms. Belinda also provided them with a printed alphabet sheet, as seen in Figure 22. She informed children that they could use this to copy letters if they needed help. Ms. Belinda then provided each child with their books and the alphabet sheet, and they found a seat to write. Piper scribbled in her book while Anabel drew.



**Figure 22**

*Printed Alphabet Sheet*

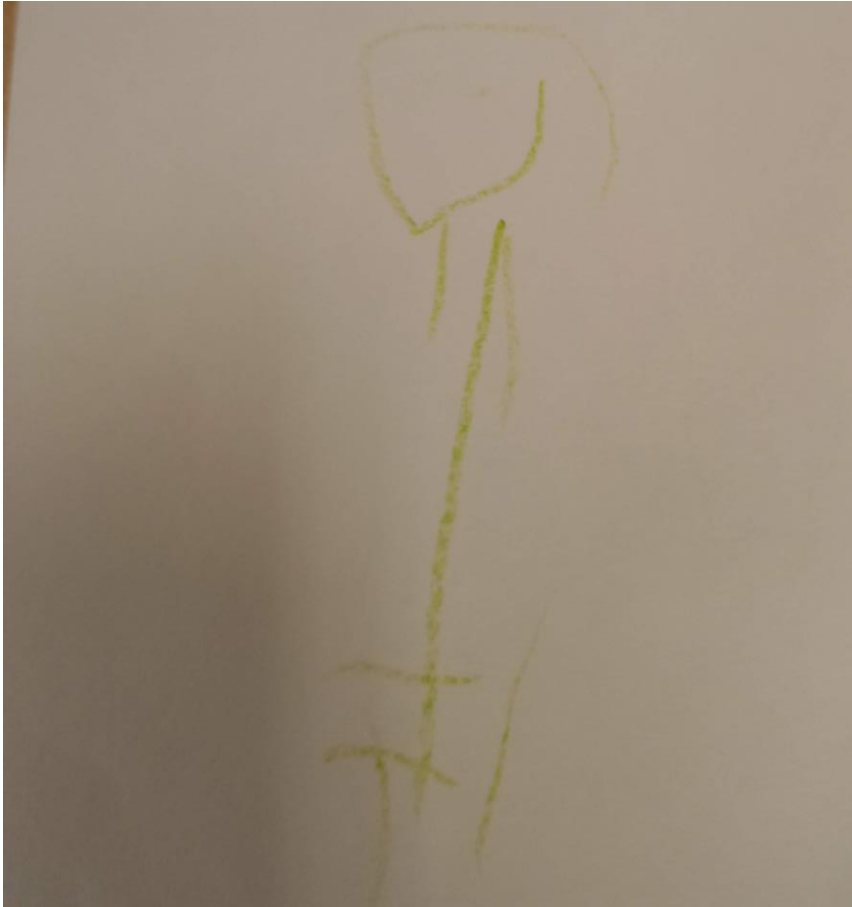


*Note.* This picture shows the alphabet sheet provided to children. Also, in this picture is Piper in the process of scribbling during the group time writing activity.

Ms. Belinda commended the children's efforts during this writing activity. For instance, after Anabel finished drawing, she went to show Ms. Belinda. The teacher responded, "I really like the legs, arms, and face you drew" [11/18\_observationfield notes]. Figure 23 shows Anabel's drawing.

**Figure 23**

*Anabel's Drawing During Group Time Writing Activity*



**Cycle 4.** In Cycle 4, Ms. Belinda continued to do activities that would help children in writing. These include letter identification, word recognition, and matching activities. For instance, Ms. Belinda organized a word recognition/matching activity during this cycle after group time (see Figure 24). She started by playing a Christmas song titled *Jingle Bells*. Before circle time, Ms. Belinda had written all the words to the song and pasted them on the door for the children to see. She introduced the sheet by

saying, “Those are the words to the song. People need to read the words to sing songs” [12/9\_Classroomobservationfieldnotes].

She told them, “I am going to give you a word, and you will match it to the word on the song.” She modeled what she required of them by doing one for them as they watched. Ms. Belinda then read the word she had matched: “Merry.” Anabel was given the word card “all” to correspond to the sheet on the door, and she found it, while Piper was given the word “Jingle,” which she found too.

### **Figure 24**

#### *Word Recognition/Matching Activity After Group Time*

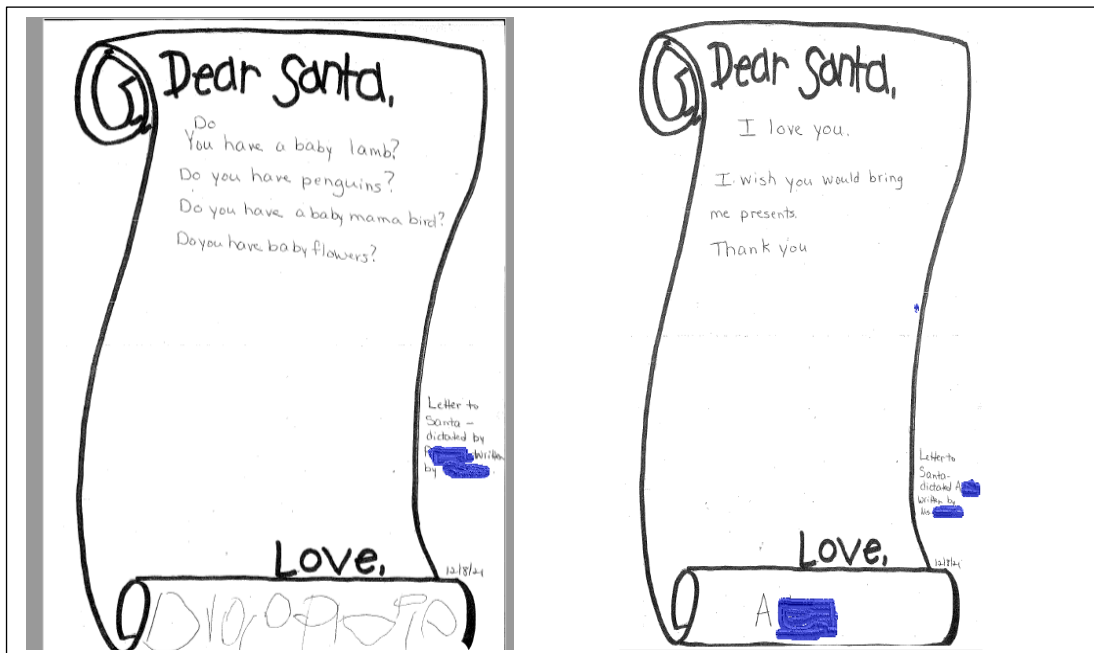


Ms. Belinda also supported the children’s transcription by having them continue to practice writing their names during sign-in. She also helped with children’s

composition by taking a dictation of their ideas and letting them write independently. For instance, Ms. Belinda told the children they would write a letter to Santa. She asked them to share what they would like to write to Santa. She did not give them any suggestions because “I wanted to see what they will write” [12/9\_Observationfieldnotes]. Figure 25 shows what Piper and Anabel shared during this activity. Ms. Belinda wrote children’s ideas as they dictated them to her. She encouraged them to write their names in the name section. Piper was one of the participants who attempted to write her name. This writing included readable letters like D, V, O, P, and E. Ms. Belinda wrote Anabel’s name for her.

**Figure 25**

*Letter to Santa Writing Activity*

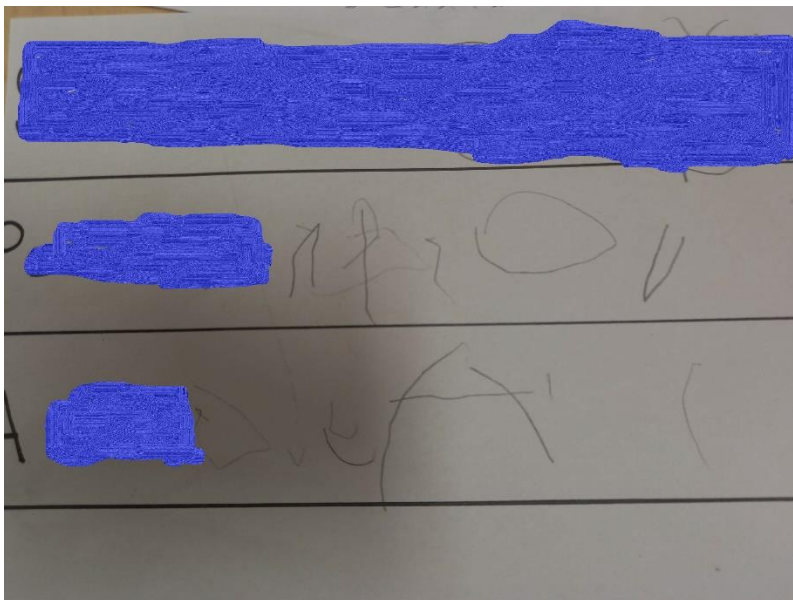


*Note.* Ms. Belinda took the dictation of Piper and Anabel’s messages to Santa. On the left panel is Piper’s letter, and this includes Piper’s attempt at writing her name. On the right panel is Anabel’s letter. Ms. Belinda wrote Anabel’s name for her.

In Cycle 4, the sign-in sheet (Figure 26) also showed how much both children had grown in their name writing.

**Figure 26**

*Sample of Daily Sign-in Sheet in the 3K Classroom in Cycle 4*



*Note.* The first name in the sign-in sheet has been concealed. Piper was the second on the list, followed by Anabel.

When Anabel wrote her name during sign-in, Ms. Belinda reminded her how to write A. Ms. Belinda said, “You start at the top” [12/9\_Observationfieldnotes]. Anabel remembered the directional language and said it under her breath as she continued forming the letter. Anabel was excited about her achievement and said to her teacher,

“Look at it; I did it.” Ms. Belinda said, “You did great.” Ms. Belinda reminded Anabel to practice at home and tell her parents to help her, too [12/9\_Observationfieldnotes].

**Anabel and Piper’s Results.** The writing output of Anabel and Piper in Cycle 4 showed that Piper’s writing had become more readable. In Cycle 4, Piper’s writing had more readable letters than Anabel’s. From her name-writing attempt in her letter to Santa, as shown in the left panel of Figure 25, identifiable letters like D, V, O, L, P, and E were seen. In this name-writing attempt, Piper wrote four letters in her real name. Anabel could not write her name in her letter to Santa. Although Anabel attempted to write four letters in her name (e, A, i, and l) during the sign-in time, as seen in Figure 26, she still needed Ms. Belinda to provide scaffolding using directional language. Piper could write P, L, O, V, and N. Four of these letters are in Piper’s real name.

In Piper’s assessments, she had a total of 2.5 on the pre-test concept of print and 4.0 on the post-test. While in the letter identification assessment, she could identify seven more letters on the post-test (37) compared to her pre-test score of 30. Similar to what was observed in the classroom, Piper could not write any letters during the pre-test but could write seven letters during the post-test (P, F, H, Y, O, an inverted C, and V). On her name writing assessment, she got a 2 on the pre-test for drawing as writing, and on the post-test, she got a 5 for producing a letter and letter-like shape.

On the other hand, Anabel had a 0 on the pre-test concept of print and a 7 on the post-test. On the post-test, Anabel could identify the front of the book and understood that the print contained a message. She also understood where to start, which way to go, and return sweep to the left but had not attained an understanding of word-by-word

matching. Furthermore, Anabel could identify the first and last concepts and could identify two letters.

On the letter identification pre-assessment, she could not identify any letters, but in the post-test, she identified four letters (capital letters A, X, and lowercase letters x and e).

Anabel could not write any letters on the pre-test, but during the post-test, she wrote A, i, and l. This writing production was similar to what she had done in class. The letters A, i, and l are in Anabel's real name. During this post-test, the researcher observed Anabel using her teacher's directional language to draw the letter A. On the name writing pre-assessment, she had a 3 for scribble writing and a 5 on the post-test for producing the letter and letter-like shapes.

This indicates that the adults' support provided to Piper and Anabel supported them in their writing and writing-related skills. However, Piper's growth was more than Anabel's. This could result from Piper receiving support through the writing notebook and other related writing activities from both home and school. The following section describes how Ms. Belinda offered Piper support through the writing notebook across the four cycles.

**Writing Notebook Related Support across Cycles.** At the beginning of the study, teachers were informed that the notebook would go from home to school daily. During Cycle 1, Ms. Belinda reinforced the use of the notebook among children and monitored children writing in it at home.

For instance, during the first week of intervention, Ms. Belinda told the children, “You are supposed to be writing with mom and dad and bringing it back to school.” She reinforced the importance of using the notebook because she noted that on the first day the books came to school, only one child had written in the notebook (10/21\_fieldnotesfromclassobservation). On this day of observation, the researcher noted that four children had brought their book bags.

Ms. Belinda continued to encourage the use of the writing notebook across all cycles. She interacted with the children about what they had written at home and commented in the notebook. Furthermore, Ms. Belinda continued to use the writing notebook as a tool for discussion. She had conversations with children about their writing in the notebook, inspiring them to continue practicing. Ms. Belinda also used children’s writing in the notebook as a resource to boost their confidence. For instance, Ms. Belinda informed me that she showed Piper how much she had progressed by showing her earliest entries to her most recent entries to buttress the point that before, she could not write any letters, and now, she was doing that. Ms. Belinda wanted “Piper to see how much she had grown from being unable to write to writing some letters” (12/2\_fieldnotesfromclassobservation).

By reinforcing the use of the notebook to children and showing interest in what they had written through a discussion with them on their writing entries, Ms. Belinda kept children interested in writing with their parents. She motivated children to keep bringing their books to school to show her their writing entries. From observation, Ms. Belinda genuinely showed interest in learning about what the participants were trying to



communicate through their writing entries. Ms. Belinda also made an extra effort to comment in the writing notebook.

***Ms. Belinda's Comments in the Writing Notebook.*** At the beginning of the study, the information letter provided to teachers stated that they were expected to comment in the writing notebook once a week for each participating child. However, during Cycle 1, Ms. Belinda noted that her consistent feedback in the notebook would ensure the books kept coming to school. For instance, during the first observation after the intervention had commenced, Ms. Belinda told me, "I am trying to give the feedback to keep the book going back and forth," she smiled, showing her excitement for the project (10/21\_fieldnotesfromclassobservation). During Cycle 2, when the researcher reviewed one of the participants' notebooks, she noticed Ms. Belinda continued communicating with parents through the writing notebook. Ms. Belinda mentioned that "parents need as much encouragement as the children so that they can encourage the children." She stated further that "they (parents) need to know that they are doing well..." [11/4\_fieldnotesfromclassobservation].

Ms. Belinda discussed the kind of encouragement she provided in the writing notebook during one of the classroom observations in Cycle 4. She mentioned that Piper's mother was worried that Piper kept writing V and W upside down. Ms. Belinda said she told Piper's mother that this was normal and that the letters would appear in the correct form later [12/2\_fieldnotesfromobservation]. Ms. Belinda provided consistent feedback in the notebook to encourage parents to keep writing with their children and

send the notebook back to school for more feedback. Ms. Belinda not only encouraged parents but also encouraged children so that both parties encouraged each other.

**Resources that Helped with Teacher's Support.** The practitioner articles and implementation meetings supported Ms. Belinda in introducing literacy opportunities that supported children's writing skills. During the post-interview, when asked how the resources supported her, Ms. Belinda mentioned that the articles reminded her that children,

All learn in different ways and at different speeds...the whole classroom is the learning experience, and the learning through play kind of thing is not always to sit down to do this, but all the different areas have something that you can do with literacy [12/17\_PostinterviewwithMs.Belinda].

In addition, Ms. Belinda identified that the implementation meetings helped to keep her on task and helped her to think of what resources she had to actualize the plans. It made her think of "different things that might work or might not work for each child." Interacting with the researcher during this period was also helpful for Ms. Belinda as she noted that she liked the feedback the researcher gave her on activities she was implementing [12/17\_PostinterviewwithMs.Belinda].

The practitioner articles and implementation meetings were resources Ms. Belinda noted helped her. The practitioner articles reminded Ms. Belinda that children are unique and therefore learn in different ways and at different paces. It also reminded her that every classroom area could be used to support children's literacy. The implementation meetings between Ms. Belinda and the researcher also motivated her. The meeting kept

her on task and helped her prepare to activate a literacy plan by reviewing the resources needed. This indicates that parents and children need encouragement and support, and the teacher also needs to be encouraged and motivated toward the pedagogical goal of improving children's writing.

**Research Question 2: How can intervention activities encourage parent-teacher collaboration?**

The post-semi-structured interviews of teachers and parents were used to answer this question. In the 3K classroom, Piper, Eva, Rosie, Stefan, and Lucy's parents participated in the post-interview. In the 4K classroom, Ethan, Eden, Hollie, and Linda's parents participated in the post-interview. These interviews were recorded and transcribed before analysis. All answers to the interview questions were read numerous times. During the multiple reading of these responses, the researcher took note of significant themes from the data related to this research question. The significant themes from this data revealed that the intervention activities, bi-weekly meetings, and notebook encouraged parents and teachers to collaborate to support children's writing development.

Six major themes emerged. These themes are: (1) The bi-weekly meeting bolstered parents' collaboration with teachers, (2) The bi-weekly meeting bolstered teachers' collaboration with parents, (3) The writing notebook bolstered parents' collaboration with teachers, (4) The writing notebook bolstered teachers' collaboration with parents, (5) Unique situations hindered parent-teacher collaboration, and (6) The impact of the intervention activities on Parent-Teacher Collaboration.

. To provide more insight, samples from the writing notebook were used to corroborate the findings.

### **The Bi-weekly Meeting Bolstered Parents' Collaboration with Teachers**

The bi-weekly meeting encouraged parents to collaborate with teachers because, through these bi-weekly meetings, parents learned about their children in the classroom and the classroom activities that engaged them.

#### ***Parents Learned About their Children and Classroom Activities***

Through the bi-weekly meetings, parents learned about their children and the classroom activities that engaged each child. For example, parents had a limited understanding of what went on in the 3K classroom before the intervention. "Previous to the study, I don't know if you remember, during our first conversation, I really had no idea what was going on in the classroom at all. So, I feel like I have a much better understanding of what's happening" [12/15\_Post-semi-structured\_interview with Piper's mother].

Stefan's mother also confirmed that she now knew what was happening in the classroom through the bi-weekly meetings. "During the biweekly meetings, we found out

what the children had been doing with her (Ms. Belinda)” [12/18\_Post-semi-structured\_interview with Stefan’s mother]. Stefan’s mother explained how the bi-weekly meeting helped her understand what the children were doing by telling us how “excited the kids are when they come to share their results and what they want to communicate with her (Ms. Belinda)” [12/18\_Post-semi-structured\_interview with Stefan’s mother]. Through the bi-weekly meetings, Stefan’s mother found that one of the activities that the children engaged in involved sharing their writing “results” with Ms. Belinda.

In the 4K classroom, Ethan’s father also learned about his child, that he loved writing in the classroom, and his activity, that he loved to spend time in the writing center. “I learned that he is also interested in writing himself; that he is not pushed to write or pushed to do activities related to writing and literacy. That he is doing that himself in the writing center” [12/10\_Post-semi-structured\_interview with Ethan’s parents].

When the researcher asked if they knew about Ethan’s interest in writing in the classroom before the intervention, Ethan’s mother said, “we didn’t know he is going there; he wants to go there all the time” [12/10\_Post-semi-structured\_interview with Ethan’s parents]. The bi-weekly meeting gave parents insight into their children’s activities. In Ethan’s case, his parents found that he engaged in independent writing activities in the classroom. By learning more about their children in the classroom and the activities they were engaged in, (a) parents learned how to improve children’s learning, (b) parents fostered in-depth conversations with their children, and (c) parents learned that their children had differing literacy levels, personalities, and interests.

**Parents Learned how to Improve Children's Learning.** During the intervention, parents in the 3K and 4K classrooms better understood what their children did in the classroom, and based on this knowledge, they learned how to improve learning at home. For example, Linda's mother mentioned that through one of the bi-weekly meetings, she learned from Ms. Trish that her children were learning about trees. "Ms. Trish shows like you can draw trees and label each portion of the trees and tell the kids what they are. I think that's a good way to learn. It's interactive" [12/16\_Postsemi-structured interview\_Linda's\_mother]. Through that bi-weekly meeting interaction, Linda's mother had noted how to go about a lesson on trees.

Stefan's mother, whose child was in the 3K classroom, also affirmed that the bi-weekly meetings gave her ideas on what to do with her child at home. She stated that:

Some of the ideas about the games that the children were playing with selling letters, I just liked it. She (Ms. Belinda) just gave me ideas of how to engage children because, for instance, at my home, I have play dates very often. So, this is, like, one of the games I will be happy to implement on a regular basis [12/18\_Post-semi-structured\_interview with Stefan's mother].

By learning about children's independent play in the classroom, Stefan's mother learned how to improve learning with her child and other children who may visit her child for a play date. In addition, parents could foster in-depth conversations with their children when they learned about their children and the classroom activities.

**Parents Fostered In-depth Conversations with Their Children.** From the bi-weekly meetings with teachers, some parents understood enough classroom activities to

ask their children the right questions. For instance, Piper's mother stated during the post-semi-structured interview:

...I do feel like the meetings help me know what to ask for and, like, what to kind of check in on. It encourages my conversation with Piper and helps her be more vocal about what they are doing because she has this thing that she will say, "oh no, Ms. Belinda wasn't there today," and I just know that's not true. So, if I know to ask what they've been doing, then she will tell me what they did [12/15\_post-semi-structured\_interview with Piper's mother].

Piper's mother felt better empowered to interact effectively with her child about school because she knew a bit about what went on in the classroom. The knowledge gained from biweekly meetings with Ms. Belinda enriched the conversations with her child.

Ethan's father in the 4K classroom had in-depth conversations with Ethan about his writing. He stated that his interaction with Ethan around writing changed from helping him spell to encouraging him to write about Ethan's authentic experiences.

We started telling him that, this time, he should write things himself instead of us spelling...we gave more clear instructions. "Okay, today you are going to write things by yourself, or we can help you or just write something about the activity we just made." I guess we did change the way we communicated at the start of the writing process [12/10\_Post-semi-structured interview with Ethan's parents].

Shortly after the intervention began, Ethan could write the names of his families from memory, copy words from environmental print or ask his teacher to spell for him [12/10\_field notes from post-semi-structured interview]. Therefore, it was within his zone

of proximal development for his parents to nudge him toward writing about activities he engaged in with little support from his parents as the weeks progressed. His father noted they were “pushing him to write more by himself by the sounds” [12/10\_Post-semi-structured interview with Ethan’s parents]. Ethan’s parents learned through the bi-weekly meetings that they could move him from spelling to sounding letters himself. Therefore, interacting with the researcher and teachers during the bi-weekly meetings helped some parents foster in-depth conversations with their children.

**Parents Learned About Their Child’s Differing Literacy Levels, Personalities, and Interests.** By interacting with teachers during the bi-weekly meetings, parents understood how their children differed in literacy levels, personalities, and interests through some class activities.

*Differing Literacy Level.* During the bi-weekly meetings, some parents gauged their child’s literacy level compared to other children whose parents attended the bi-weekly meeting. For instance, when Piper’s mother first interacted with other parents during the bi-weekly meeting, she felt Piper was behind, and this propelled her to keep working with Piper.

So, the first one, there were like four parents there. I was really intimidated, honestly, because all of the parents sounded like their children were writing lots of words already, and I felt like Piper was even more behind them. I do not know where I got that impression from, but over the course of the study, meeting with them more, I realized that maybe I misheard or misunderstood what was being said, and I no longer felt like Piper was behind. So, it was good to meet with other



parents to kind of get a gauge of where her peers are. But at the same time, that, like, gave me a serious reality check of okay, well, if she is behind, like, we have got to do a little something about it, and if she's not behind, then, you know, that's okay too, so that was a little intimidating for me...because I think the meetings continued to keep us focused and on task [12/15\_Post-semi-structured\_interview with Piper's mother].

Understanding that Piper could have been developmentally behind motivated Piper's mother to use a strategy that positively supported Piper. This approach involved working continuously with Piper so that she did not fall behind.

For the 4K parent-participants, some parents reported that they learned about their children's literacy level but found a considerable difference among children whose parents participated in the bi-weekly meeting. Linda's mother recollected one of the bi-weekly meetings she attended. She said, "...Ethan is older than Hollie and Linda. It's almost ten months or more. So, they are different" [12/15\_Post-semi-structured\_interview with Piper's mother]. By understanding that Ethan was older than Hollie and Linda, Linda's mother put the strategies Ethan's parents used into perspective. She figured that these strategies used by Ethan's parents might not work for her children since he was more advanced.

When parents listened to other parents discuss their strategies to support their preschool children, they could better sieve information that would work for their children's literacy level. Furthermore, by interacting with the lead teachers, the

researcher, and other parents at the bi-weekly meeting, parents learned about children's differing personalities and interests.

*Differing Personality and Interests.* In one of the bi-weekly meetings attended by Eden's mother, she noticed that her daughter and Ethan had varying personalities and interests. She said:

I remembered there was another parent of, I think, a boy, I don't remember his name, but I think he was very contrasting to Eden in the sense that he's very meticulous and structured, and he likes to sit down and do one thing, and he doesn't want to change anything until he is done. So, it is kind of the complete antithesis of Eden. Eden has many crazy distractions in color. So yeah, it was just interesting to know, like, oh, wow, how different they are. I think the strategies were very different also [12/7\_Post-semi\_structuredinterview\_Eden's mother].

Eden's mother noted that because of the difference in personality and interests between Ethan and Eden, the same strategies might not work for both Ethan and Eden. During the post-semi-structured interview with Ethan's father, he confirmed Ethan's personality type and interests, which was similar to Eden's mother's description of him.

He is kind of a dedicated person when he starts doing something like, okay, when we got the book (the writing notebook), he knew that we needed to do some writing....and this is not for drawing things. He did that for a long time, and after that, we knew (from the bi-weekly meeting) that he was at the writing center more and more. We told him, okay, you should go to other places or other centers as well [12/10\_Post-semi\_structuredinterview\_Ethan's father].

Ethan's father's redirection attempt worked because the researcher and the 4K teacher had noticed Ethan's sudden disinterest in writing during the intervention, but we did not know what had happened. Ms. Trish reported that "well, he started out writing, then moved into drawing" [12/10\_Post-semi structured interview with Ms. Trish].

When his father was asked whether he knew why Ethan might have lost interest, Ethan's father stated that "So I think that was what made him go to other places at school" [12/10\_Post-semi\_structuredinterview\_Ethan's father], referring to his statement about encouraging him to go to other centers. Ms. Trish said she tried encouraging Ethan to keep up with his writing.

So, what we have been doing lately is, we have been having him draw something and then pushing him to write something about it because, in his notebook, I saw a lot of drawings, so that was something that his parents were doing with him, that something that we pulled in." [12/10\_Post-semi structured interview with Ms. Trish]

Ms. Trish gave a concrete example of supporting Ethan's interests despite his focus on drawing.

...Even today, we did a small group activity where you got to draw, and we would write about it for those who did not want to write, but I asked him, I was like, "hey Ethan, do you want to write" or even when I got the examples. He almost seemed hesitant to write, and he had always been so adamant about it, I don't know what changed [12/10\_Post-semi structured interview with Ms. Trish].

Although Ms. Trish did not know why Ethan began to do more drawing than writing, she reported that she found ways to support his writing. Therefore, bi-weekly meetings helped parents collaborate with teachers. The next section discusses how bi-weekly meetings bolstered teachers' collaboration with parents.

### **The Bi-Weekly Meeting Bolstered Teachers' Collaboration with Parents**

The bi-weekly meeting encouraged teachers to collaborate with parents. Through these bi-weekly meetings, teachers learned that parents understood what their children could learn because they now had information about what children were doing at home. This information helped teachers improve children's learning in the classroom.

#### ***Teacher Learned that Parents Understood What Their Child was Capable of Learning***

The 3K teacher, Ms. Belinda, identified from the bi-weekly meeting that parents knew what their children could learn. She stated:

They have some idea of what to do with their child and what their child can learn, so all of them have gotten excited about doing some things with them, thinking of different activities to do with them. I think the more the children show them what they can do, that makes the parent want to do some more themselves, so I think it's a good cycle. So, I think they've gotten more and more involved in doing things [12/17\_Post-semi-structured\_interview with Ms. Belinda].

Ms. Belinda's comment showed that she had learned through the bi-weekly meeting that parents knew what their children could learn. Based on this knowledge and the information they received during the bi-weekly, parents knew what strategy may

support their children. The more children responded to this support by demonstrating what they could do, the more parents wanted to do more with their children. Ms. Belinda knew this information because parents shared their home literacy activities with their children at the bi-weekly meeting.

### ***Teachers Learned About Children and Their Home Literacy Activities***

From the bi-weekly meeting, the teachers learned about the different types of home literacy activities that parents engaged their children in, and it helped teachers improve their instruction. They reported that it helped them to know how to support children in the classroom. For example, Ms. Trish, the 4K teacher, noted that:

...It was good to see what they were doing at home, and it was helpful for us to integrate that back into our class. Like with Ethan and Hollie and Linda, I would see specifically what their parents were doing at home, how it was going for them, and even if something wasn't working, we could scratch that and move on to something that was working [12/10\_Post-semi-structured interview with Ms. Trish].

Ms. Trish's knowledge of what children did at home helped her improve classroom learning opportunities. A concrete example that Ms. Trish shared helped to drive home the point of how home literacy activities improved learning in the classroom for Hollie and Linda. She had learned that one of the home literacy activities they did at home involved writing on the "whiteboard." "... I remember Hollie and Linda; it was because their mom said they love the whiteboard at home, so that was a connection as to why they were using it at school" [12/10\_Post-semi-structured interview with Ms. Trish].

From this comment, it became apparent why Ms. Trish connected children's affinity to the whiteboard in the classroom because it was something they used at home. Making whiteboards accessible in the classroom allowed Hollie and Linda to continue to practice writing, which moved them toward the pedagogical goal of enhancing their emergent writing skills.

**Teachers Learned about Strategies and Approaches that Parents Used to Support Children.** Based on the interaction teachers had with parents during the bi-weekly meeting, teachers learned about certain strategies and approaches that parents used and understood why parents used these strategies and approaches. While talking about the benefits of the bi-weekly meeting, Ms. Belinda, the 3K teacher, stated:

It helped a little, just a little bit more here, because the comments they put in the notebook and the things that they do, let me know a lot of the things that go on, but for them to say (during the bi-weekly meeting), explain why they do something, or how they do something, that was a lot too, gives us, gives me insight on what they do as a family...[12/17\_Post-semi\_structured interview with Ms. Belinda].

By better understanding the strategies and approaches parents used and why they used them, Ms. Belinda was then able to know "how much to maybe encourage in one way and hold off in another way because... you want to kind of not be too different in how you do things, so you don't confuse the child" [12/17\_Post-semi\_structured interview with Ms. Belinda]. Ms. Belinda understood that the information she learned about each child's learning would help her to provide similar instruction to that child in

the classroom. She stated that "...if you do so totally different things, it might undo what the other ones are trying to do.... [12/17\_Post-semi\_structured interview with Ms. Belinda]. This indicates that she understood that parents and teachers must work collaboratively by using similar strategies and approaches for children at home and in the classroom.

In addition, Ms. Belinda also noted that parents employed different approaches in their respective homes when working with their children. For example, she stated that some parents used a "...more laid-back approach (referring to Rosie's family) or, like Piper's mom, that no matter what, we are going to write each day. So, Piper is getting into that space where they have homework. Piper calls it homework" [12/17\_Post-semi\_structured interview with Ms. Belinda].

Through her interaction with parents during the bi-weekly meeting, Ms. Belinda learned that certain approaches worked for different families. Rosie's family took a "laid-back approach," which seemed to work for them, and Piper's mom took a "homework approach." Ms. Belinda also noted that with Rosie, her family supported Rosie's writing in the notebook. She stated:

Rosie does it when her older sister does it (referring to writing in her notebook), so that makes her feel important and gives her time to do the stuff, too so; even though the parents are laid-back on the stuff, they still do an activity, and it seems to involve the whole family if you notice. Dad and the mom, and the siblings get involved in it. It also helps the older sibling, they get to embark, and sometimes

Rosie will listen to the older sibling more than she will the adult [12/17\_Post-semi\_structured interview with Ms. Belinda].

As Ms. Belinda noted, Rosie had older siblings that helped her, as well as her mom and dad. Rosie received support from more knowledgeable others that were not always her parents. Furthermore, the writing notebook was another intervention activity that bolstered parents' collaboration with teachers. It also bolstered teachers' collaboration with parents. These themes are discussed in the next sections.

### **The Writing Notebook Bolstered Parents' Collaboration with Teachers**

Another intervention activity that encouraged parents' collaboration with teachers was the writing notebook. The sub-themes under this key theme are: (i) through communication with teachers, parents learned about classroom activities, and (ii) through communication with teachers, parents learned about children's progress. The writing notebook layout was set up to encourage parents' and teachers' communication as they supported children's emergent writing.

#### ***Parents Communicated with Their Child's Teacher Through the Notebook***

Parents used two main sections of the writing notebook to communicate with teachers. These sections include the "home literacy practice that led to writing" and the "parent's comment." For some parents, how they used these sections to communicate evolved as they received feedback from the teachers. For example, at the initial stage, Piper's mother just provided information in the "parent's comment section" about what she and Piper did during the writing time. As time progressed, Piper's mother began to use the comment section to ask questions and provided more insight into strategies she





to a later one, it was helpful when teachers commented about children's progress in the teacher's comment section in the writing notebook.

**Through Communication with Teachers, Parents Learned About Their Children's Progress.** Parents learned about their children's progress from the teachers' feedback. Even though parents could tell their children were making progress by reviewing the old pages in the writing notebook compared to the new entries, it was appreciated when the teacher pointed out this change. For instance, in the comment below, Linda's mother noted that she had observed her children writing some words. She further stated that Ms. Trish had noted this progress and talked about it in the writing notebook.

Like the observation of mine and also of Ms. Trish, they are quite similar. So, like I noticed, Linda started to write some words. And Ms. Trish also noticed. She wrote down some comments (in the writing notebook). Also, the same thing for Hollie, so Ms. Trish also mentioned Hollie and Linda, both of them, they are writing more letters than their names [12/6\_Post\_interview\_with\_Linda's mother].

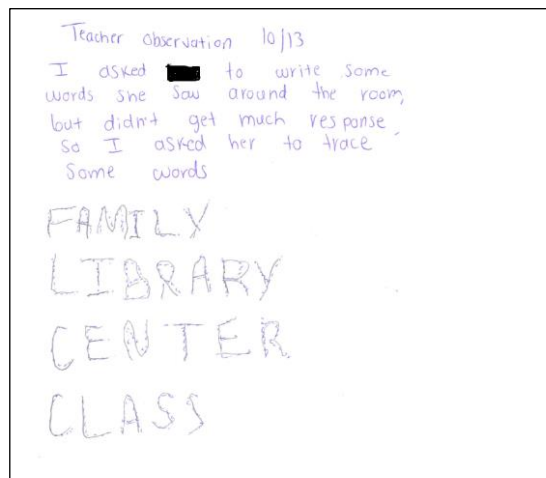
Ms. Trish's comments in the notebook helped Linda's mother confirm her children's literacy progress from name writing to writing other letters.

**Through Teachers' Communication in the Writing Notebook, Parents Learned About Classroom Activities.** Communication of the teachers through the writing notebook allowed parents to know what kind of literacy activities children did in the classroom. For instance, Linda and Hollie's mother mentioned during the post-semi-

structured interview that “In the beginning, Hollie traced some words at home,...and she also traced a few words in the classroom. [12/16\_Post\_interview\_with\_Linda’smother]. Linda and Hollie’s mother knew Hollie traced a few words in the classroom because she saw the activity and the teacher’s communication in the notebook (see Figure 28).

**Figure 28**

*Sample of Ms. Trish’s Communication with Hollie’s Mother*



Although Hollie’s mother mentioned that Hollie wrote in her notebook in class only about three times, using the notebook and the teacher’s comment in the notebook gave Linda and Hollie’s mother insight into what strategies were being used to support Hollie in the classroom. Furthermore, Linda’s mother could tell from the entries in the notebook that the notebook was not used often in the classroom. This lack of consistent use affected her motivation for sending the writing notebook to the classroom.

Yeah, the motivation for me to send the book to school is that I think they may write every day at school in the notebook. And then later on, I found out they told me they didn't write at school, so not just one day. It's most of the days; they don't

write at school, then I sometimes, I really don't think it's necessary to bring it to school [12/6\_Post\_interview\_with\_Linda's mother].

In contrast, Piper's mother's motivation for sending the notebook to school was different. She sent the notebook to school not because she thought her child would use the book in class but because she looked forward to reading Ms. Belinda's comments. Ms. Belinda's comments in the notebook encouraged Piper's mother to keep working with Piper at home. In addition, she sent the notebook to school daily because Piper could share with her teacher what she did at home using the notebook as a reference point during her interaction with her teacher.

...She got to take it to Ms. Belinda every day and be excited about what she did with me, you know. It showed her that there was a reason to do homework every day. It's not for the sake of homework, and then you know Ms. Belinda's comments back to me were then also encouraging to me, so it was almost like this feedback loop of positivity so that we kept doing it [12/15\_post-semi-structured\_interview with Piper's mother].

Piper's mother could see that the teacher served as an authentic audience eager to see what Piper had done at home. Therefore, through the teacher's communication in the writing notebook, parents learned about classroom activities which included writing in the classroom, the teacher's interaction with children about their writing in the notebook, and the frequency of use of the notebook in the class.

***Frequency of the Comments.*** The frequency of teachers' comments in the writing notebook may have influenced how parents collaborated with teachers. For instance,

Piper's mother considered Ms. Belinda's comments to be frequent, and this frequency was one of the things that made the notebook successful. "Belinda is the one that made it better, which was commenting every day" [12/15\_post-semi-structured\_interview with Piper's mother]. Stefan's mother also agreed that the writing notebook was the most effective mode of communication "just because of the frequency" [12/18\_Post-semi-structured\_interview with Stefan's mother].

The frequency of the teachers' comments was different across classrooms. Table 16 shows the total number of parents' and teachers' comments for each child that used the writing notebook in the 3K classroom. The comments counted for parents were those written in the "parent's comment" section and "home literacy practice that led to writing section." Only one comment in the "parent's comment" section or "home literacy practice" was counted under one entry. For example, if a parent commented under the parent's comment section and gave more insight under "home literacy practice that led to writing," this was counted as one comment under a particular entry. If a parent commented under home literacy practice that led to writing but did not comment under the "parent's comment" section, this was counted toward the parent's comment. Teachers' comments counted were those written in the "teacher's comment" section.

**Table 16***Total Number of Parents' and Teachers' Comments in the 3K Writing Notebooks*

3K children who used the Writing Notebook	Number of entries with parental support	Total number of Parents' Comments across all cycles	Total number of Teachers' Comments across all cycles
Piper	42	35	41
Stefan	37	35	19
Eva	28	12	14
Rosie	35	13	22
Lucy	1	1	8
TOTAL	143	96	104

From the results in Table 16, the 3K teacher consistently provided feedback for all parents. Ms. Belinda tried to encourage parents to comment by commenting more than parents did. For example, Lucy's mother only left one comment in the writing notebook, but Ms. Belinda continued to encourage Lucy to use the writing notebook and left a total of eight comments in the writing notebook despite only one comment from Lucy's mother. Stefan had less feedback than other children who used the notebook frequently. This may have been because his entries coincided with when Ms. Belinda had a lot going on in her home. Ms. Belinda noted in the post-semi-structured interview that "I've also

been busy, so there's some notebooks I haven't read for few days" [12/17\_Post-semi-structured\_interview with Ms. Belinda].

However, Ms. Belinda also stated during the post-semi-structured-interview that she had communicated with Stefan's mother about the delay in catching up with feedback in the writing notebook. She stated:

... I did get to see Stefan's mom today; they're going to be out of town. But she said, the notebook was going with them, they were going to be doing more writing, and I told her that I have got a lot of catching up to do from thanksgiving. I said there's a lot, and she said, don't worry, don't worry, so she's going to continue to do that, which is good, because she says he's doing so well and, so, still not much contact that way outside of notebook and the Zoom meetings [12/17\_Post-semi-structured\_interview with Ms. Belinda].

Ms. Belinda's ability to communicate with Stefan's mother about the reason for the delay in providing feedback in the writing notebook may have encouraged Stefan's parents to keep writing with their child in the writing notebook. His mother and father continued to work with Stefan when he was out of school. Stefan's mother noted that Ms. Belinda was commenting in Stefan's notebook on a "regular basis." Stefan's mother even felt guilty about Ms. Belinda's frequent feedback in the writing notebook.

I frankly feel guilty that we are putting so much pressure on the teacher that she had to do these individual notes, so in a way, I am thankful that not too many children participated because if she had to give these, like, individual notes, I think there was just too much pressure, being a teacher myself, I will think that this is like an

additional job in itself to make notes. [12/18\_Post-semi-structured\_interview with Stefan's mother].

Even though Ms. Belinda was behind on providing feedback in Stefan's notebook, Stefan's mother still considered Ms. Belinda's feedback consistent and felt guilty that she had to give feedback in the notebook. The frequency of the teacher's feedback in the 4K classroom was quite different from the 3K classroom. Ms. Belinda provided a total of 104 comments, while Ms. Trish provided a total of 52 comments. Table 17 shows the total number of parents' and teachers' comments for each child that used the writing notebook in the 4K classroom.

**Table 17**

*Total Number of Parents' and Teachers' Comments in the 4K Writing Notebooks*

4K children who used the Writing Notebook	Number of entries with parental support	Total number of Parents' Comments across all cycles	Total number of Teachers' Comments across all cycles
Stan	2	3	3
Ethan	14	15	16
Eden	20	5	9
Hollie	16	9	12
Linda	16	7	12
TOTAL	68	39	52



As seen in Table 17, Ms. Trish commented in the notebook more often most of the time. However, these comments were not always provided immediately after Ms. Trish reviewed the entries. During the post-interview, Ms. Trish provided further insight into how often she commented and why she did not provide feedback immediately.

I was trying to get at least two, three times a week, but a lot of the times, I would try and get them when they came in the door, so when they came in, I will try and flip through, but I mean some days were just so hectic I didn't get the chance. But I would try most of the time and follow up like, even if I didn't get it on that specific day, I would go through, and if I missed a couple of days, I will try and fill them in [12/10\_Post-semi\_structured interview with Ms. Trish].

Ms. Trish noted that her days were sometimes hectic, so she would miss a few days before returning to a comment. This may have discouraged parents from commenting in the notebook often. Not all parents commented as often when they provided support to their children while using the writing notebook. For example, Eden's mother supported Eden 20 times but only commented five times in the notebook. Ms. Trish tried to comment more often than Eden's mother, but this did not seem to influence Eden's mother's increase in commenting about what she was doing with Eden. This could be associated with the delay in commenting in the writing notebook, as some parents may not flip back to review old entries. Furthermore, the nature of teachers' comments may have affected the ways parents collaborated with teachers.

**Nature of the Comments.** Concerning the nature of the comments, parents seemed to prefer longer and more detailed comments from the teachers. They also wanted

comments not limited to encouraging words and connections between home and school literacy practice. For instance, Eden's mother in the 4K classroom identified that Ms. Trish's comment reiterated what parents already knew. This nature of comments may have been why Eden's mother was not motivated to comment in the notebook.

Yeah, the notes were very short, and so I think some of them were like, oh, for example, I will write a word in the notebook and ask Eden to try to write the same word, just kind of mimicking, and Ms. Trish will say something like oh, we are also doing that at school. What's the other one? I also did one that you (the researcher) suggested that could be good for Eden because she's so creative, which is kind of have her make up a story. I will write down the story as she says it to me, and then she will like make a drawing about this story, and then the next day, we will follow up with, like, what happens next with the story kind of thing. I think she (Ms. Trish) also wrote something like, " Oh yeah, that's something that we also do in the classroom" [12/7\_Post\_semi-structured interview with Eden's mother].

Eden's mother's comment showed that she considered Ms. Trish's notes too short and insufficient. She seemed to want suggestions rather than comments focused on home-school connections. Similarly, Linda's mother also wanted to read suggestions that could help her support Linda and Hollie.

I like to have some suggestions. Yeah, and I know Ms. Trish makes some encouragements, so that's also important, but I like to have some suggestions in

supporting me to supervise the kids in terms of writing. Yes, there are some positive things, so writing the positive things in the comments is good. That's encouragement, but that doesn't help me to change my strategies. Because I don't have experience in that and I need some suggestions

[12/6\_Post\_interview\_with\_Linda's mother].

Ethan's father also noted, "I saw the encouragement"

[12/10\_Post\_interview\_with\_Ethan's parents]. However, Ethan's father later added, "...We exchanged a couple of comments on the notebook but other than that, we didn't talk to her much about his literacy and his development in literacy"

[12/10\_Post\_interview\_with\_Ethan's parents]. Ethan's father and other 4K parents might have benefitted more if Ms. Trish's comments focused on how best to support children's literacy development.

Interestingly, parents' concerns about Ms. Trish's comments were also confirmed by Ms. Trish. During the post-interview, she indicated, "...A lot of the time, at first, I really didn't know how to approach it". Although parents wanted more detailed feedback and suggestions from Ms. Trish, her comments centered around connecting to home and class activities and commending children and parents' efforts. On the other hand, in the 3K classroom, Stefan's mother also noticed a limitation in Ms. Belinda's comments. She felt that Ms. Belinda's comments in the writing notebook were not based on the activities children did in the classroom but more on comments about children's writing in the notebook.

So, she was not really writing about the activities they were working on, so the way I learned about the activities they are engaged in is when Stefan is sent home with whatever materials they are working on that week.... [12/18\_Post-semi-structured\_interview with Stefan's mother]

Stefan's mother might have preferred reading about what Stefan was doing in the classroom, but since the writing notebook was not used frequently, Ms. Belinda's comments were mostly centered around feedback on what children had done in the home. Stefan's mother gave more insight into the nature of comments provided by Ms. Belinda in Stefan's notebook.

But more of the responses that I got from Ms. Belinda is about how she appreciates he's writing, what they have been working on, so I think that had its own kind of purpose in itself, which is separate from what they are engaging in class...

[12/18\_Post-semi-structured\_interview with Stefan's mother].

Stefan's mother stated that the nature of Ms. Belinda's comments included commendation, which is similar to findings from parents' comments in the 4K classroom. Ms. Belinda also shared what they were working on in class, which connected to what the children were doing at home. The nature and frequency of teachers' comments were critical to how effective collaboration was between teachers and parents.

### **The Writing Notebook Bolstered Teachers' Collaboration with Parents**

When parents communicated with teachers through the writing notebook, teachers learned about literacy-related activities in the home. For example, Ms. Belinda stated that

through the writing notebook, she could see different techniques parents used to support their children's writing.

A lot of drawing. I know some start with drawing, and in the drawing, they talk about things, and then that goes to the writing about what they have talked about. So, they connected that way to make it real to the child...some, they will do dictation and write down something, or they will, you know, they will let the child put in a couple of letters or sound out the beginning sounds and so they are thinking of a lot of different activities to do. Sometimes they initiated, sometimes, the child states with they want to do [12/17\_post-semi-structured\_interview with Ms. Belinda].

From Ms. Belinda's comment, she noted that some parents encouraged composing by allowing children to draw while they wrote the child's ideas. Some parents took children's dictation while others focused on providing blanks for children to fill in the letters. She also noted that some parents encouraged children to sound out the beginning letter of a word. Furthermore, it is noted from her comment that she had observed from the writing notebook that some entries were child initiated while others were parent initiated. Therefore, by reading through the parents' comments, Ms. Belinda understood the literacy activities at home.

Furthermore, Ms. Trish also noted that through the writing notebook, she was able to see from Eden's notebook, that her parents:

Had been focusing on individual letters, which was cool to see, so that was something that we pulled in. She was recognizing a lot more letters; like, I could

just say the letter, and she could write it, which was awesome [12/10\_Post semi-structured interview with Ms. Trish].

Ms. Trish learned through the writing notebook that Eden's parents supported her in letter identification activities. Armed with that information, Ms. Trish could integrate that into Eden's learning in the classroom. She also knew that asking Eden to identify letters was an appropriate assessment since she was learning that at home.

***Through Communication with Parents in the Writing Notebook, Teachers Learned about Children's Progress and Understood Children's Literacy Level***

Teachers noted that children were making progress, and they could track this progress by reviewing children's entries and reading their parents' comments. For example, Ms. Belinda stated that the notebook "helps us all to see the progress that they're doing, the child, the parent, me" [12/17\_Post\_interview\_with\_Ms. Belinda].

By communicating with parents through the writing notebook and seeing children's writing in the writing notebook, Ms. Trish understood children's literacy level. For instance, Ms. Trish stated that before the child participants began to use the writing notebook, she was unaware of theirs and the rest of the class's literacy level.

For sure, right now, it's kind of a hit and miss with a lot, I mean all of the students, that we have... I mean, at the beginning of the study, it was more so hit and miss because they had just moved in (referring to the 4K classroom), they had just started transitioning. I wasn't really sure where they were like with their writing, I mean even their letter recognition, but it was nice to have that concrete

evidence that they were doing it at home and they were doing it here. [12/10\_Post semi-structured interview with Ms. Trish]

By reviewing parents' comments in the writing notebook and children's entries, Ms. Trish could have "concrete evidence" of what children were doing at home.

In conclusion, the bi-weekly meeting and writing notebook encouraged parents to collaborate with teachers and vice versa. However, certain unique situations hindered parents' and teachers' collaboration.

### **Unique Situations Hindered Parent-Teacher Collaboration**

Unique situations may have influenced how parents and teachers collaborated. For instance, during the intervention, Ethan's family welcomed a new baby into their home. The demands of caring for a new baby could have impacted how they supported Ethan's writing development during that period. Ethan's father stated that "for some time, because of our family life events, we didn't write that much in the notebook honestly... which might just have discouraged Ethan a little bit from writing [12/10\_Post-semi-structured interview with Ethan's parents].

Ms. Trish was asked during the post-interview if she ever asked Chad's mother why she did not use the writing notebook with Chad or attend any bi-weekly meetings. Ms. Trish reported that Chad's mother would usually say, "I am so busy, and things get crazy, and life is crazy," and I am like, okay, I understand" [12/10\_Post semi-structured interview with Ms. Trish]. In the 3K classroom, Lucy's parent only supported Lucy once using the writing notebook throughout the study. Her response to the question, "Did you encounter any challenges that inhibited your ability to participate fully in this research?"

provided insight into why this was so. She stated, "I really did not do anything because I was busy and was in bad health" [12/29\_Post semi-structured interview with Lucy's mother].

Teachers also had valid reasons for not always collaborating effectively with parents all the time. Ms. Trish had mentioned during the post-interview that "some days were just so hectic" that she did not get the chance to leave comments in children's writing notebooks [12/10\_Post semi-structured interview with Ms. Trish]. In addition, during two of the bi-weekly meetings, Ms. Trish could not make it. Therefore, she could not interact with Eden's mother, who showed up during one of those meetings where Ms. Trish was absent. When asked if she learned anything about Eden during the bi-weekly meeting, Ms. Trish stated, "I don't think I was in that meeting; I think I was sick that week because I have never been in one with Eden's mom" [12/10\_Post semi-structured interview with Ms. Trish].

Similarly, Ms. Belinda also had a lot going on at some point. She noted that there were times she was busy and did not read the notebooks for a few days. These examples showed that some parents who did not frequently support their children using the notebook or who did not attend the bi-weekly meeting may have had valid reasons that might have hindered their participation and, ultimately, collaboration with their children's teachers. It also showed that teachers might have limitations in collaborating effectively with parents.



## **The Impact of the Intervention Activities on Parent-Teacher Collaboration**

Most of the parents who participated frequently using the writing notebook and attending the bi-weekly meetings collaborated with their children's teachers and other parents, and this interaction helped them improve their children's learning. Teachers could also use what they learned from parents in the writing notebook and bi-weekly meetings to support children. The study showed that the intervention positively impacted parent-teacher collaboration. Before the intervention, communication with parents in the 3K classroom was mostly one-sided. Ms. Belinda affirmed in the post-semi-structured interview that "the assessment we sent out was one-sided." She also noted that COVID-19 made it more difficult "with us not being able to see the parents and stuff, face-to-face that hurts, it does keep us from going over some things" [12/17\_Post-semi-structured interview with Ms. Belinda].

Ms. Belinda was particularly excited about the notebook because it allowed her to communicate frequently with the parents about her children's literacy progress. "But yeah that, that's why I like when they write the comments in the notebook, and I write comments back, that's all we can do right now" [12/17\_Post-semi-structured interview with Ms. Belinda]. There were other methods that teachers had tried to use to communicate with parents. Ms. Belinda and Ms. Trish used drop-off and pick-up opportunities to interact briefly with parents. For instance, Ms. Trish noted that:

...When I took them (children) to the door to talk to them (parents) when they leave, I didn't get much with Hollie and Linda, but I did get with Ethan. Chan, I would kind of checkup like, hey, how are things going? Is there anything you

need? We will kind of communicate through the notebook, and every time when I would send out my lesson plan on Fridays, I would always make sure, hey, how are things going, even if I didn't get anything back. I would try and make that contact [12/10\_Post semi-structured interview with Ms. Trish].

From this comment, Ms. Trish identified that she had also sent lesson plans to parents but hardly got any response. Therefore, this indicated that the bi-weekly meeting and notebook were effective interactive activities that allowed teachers and parents to communicate and collaborate. Children benefited from this parent-teacher collaboration as they moved toward the pedagogical goal of enhanced emergent writing skills.

The next chapter discusses the key findings from this study and provides a conclusion and recommendations.

## **CHAPTER FIVE**

### **Discussions, Conclusions, and Recommendations**

This design-based study investigated how preschool children's emergent writing skills could be enhanced through the collaboration of parents and teachers. Previous research that examined the support of preschool children's emergent writing skills considered either parental support (e.g., Bindman et al., 2014; Skibbe et al., 2013) or teacher's support (e.g., Bingham et al., 2017, 2022; Zhang et al., 2015), but not the collaborative efforts of the two. Earlier research also examined children's writing using specific timed writing tasks (e.g., Bindman et al., 2014; Skibbe et al., 2013). These types of timed tasks do not show change over time.

This study aimed to contribute to these lines of research by examining how parents and teachers could collaborate to support children's writing over a two-month period. The prolonged engagement in a preschool setting provided insight into how intervention activities could be refined to enhance the emergent writing skills of preschool children aged 3-5. It also provided insight into specific literacy strategies that were likely more effective across each cycle. The study's results indicated that when parents and teachers support preschool children, they progress significantly in their emergent writing skills.

In this chapter, I present a discussion of key findings. In addition, connections to the theoretical framework will be highlighted. I present research contributions,

recommendations, implications for practice, limitations, future directions, and the study's conclusion.

### **Importance of Adult Support on Children's Early Writing Skills**

Similar to previous studies (Bindman et al., 2014; Gerde et al., 2015, 2019; Neumann, 2018; Neumann et al., 2012), this study confirmed that when children receive support from adults, their emergent writing skills improve. Before the intervention, there was little or no writing support in the classroom (Bingham et al., 2017; Diamond et al., 2008; Gerde et al., 2015, 2019; Thomas et al., 2020; Tortorelli et al., 2022) or in the home with a focus on reading-related activities rather than writing. The adults' beliefs may have contributed to the lack of promoting early writing skills. For instance, before the intervention, the 3K teacher believed the children were unprepared for writing. Although there were ample opportunities for children to express themselves through drawing or scribbling, the teacher did not encourage letter formation or provide guidance that would transition students to more conventional forms of writing.

This finding aligned with previous research that "teachers utilize multiple sources of knowledge, including ideas about how children learn...to inform their pedagogical approaches" (Bingham et al., 2022, p. 22). As a result, if teachers believe children are not ready to write, this will be reflected in the classroom and instructional opportunities. Therefore, adults must provide children ages 3-5 with support, as this study showed that children progress in their writing and related literacy skills when this occurs.

### ***Correlation in the Frequency of Adult Support to Children's Literacy Growth***

This study found a correlation between the frequency of adult support through notebook use and children's growth in specific literacy measures. Children who used the writing notebook 11-45 times with the support of an adult improved significantly on all literacy measures compared to children who used the notebook five times or less. The participants in the 3K classroom who used the notebook 26-45 times had the highest mean growth in letter identification, while those in the 4K classroom who used the notebook 11-25 times had the highest mean growth in letter writing. This could be because the fine motor skills of some children in the 4K classroom were more developed than those in the 3K classroom. For instance, Linda, a 4K student, was already drawing identifiable letters and writing her name before the intervention, whereas most children in the 3K classroom were still scribbling.

Therefore, the 3K participants who received support from their parents through the writing notebook made the greatest gains in letter identification. Gradually, the children's letter writing improved as their identification of letters grew, and their fine motor skills improved. These results indicated that children developing their fine motor skills would likely know and share more verbally while their writing skills develop. It also showed that opportunities should still be provided for them to continue to grow in their writing skills, as this will likely help improve their fine motor skills over time.

### ***Correlation in Adult's Use of Specific Strategies to Children's Literacy Growth***

Adults used specific strategies to support children across the study's iterative cycles. These strategies included letter and word identification, spelling help, hand-over-

hand support, writing for children to copy, connecting writing to authentic experiences, and supervising children's writing. There seemed to be a correlation between the strategies used and children's growth in letter writing, letter identification, concept about print, and name writing. This section discusses how a specific strategy of letter instruction within a supportive context assisted Piper's growth in all literacy measures.

**Growth in Letter Writing.** In Piper's first cycle, she only drew while her mother labeled her drawings. Piper's mother moved Piper from drawing to writing by systematically and explicitly focusing on a letter per day. Piper's mother discussed the letter, allowed Piper to find that letter on a page or in a word or sentence, and allowed Piper to attempt to write this letter. These strategies improved Piper's letter writing; by the fourth cycle, Piper could write a letter her mother referenced without seeing the letter. In her pre-assessment, Piper was at the scribbling stage. During the post-test, Piper was able to write eight letters. Bindman et al. (2014) noted that how parents teach children to write letters on paper does not seem to relate to children's letter knowledge, but this present study proved otherwise.

**Growth in Letter Identification.** Piper improved in her letter identification knowledge as she moved from just knowing 19 upper and 11 lower case letters at the beginning of the study to identifying 23 upper and 14 lower case letters during the post-test.

**Growth in Concept about Print.** Before the intervention, Piper had demonstrated an understanding of the front of the book, the bottom of a picture, and the uppercase letter T. In her concept about print post-assessment, Piper could identify

lowercase letters s, t, and b. This is an addition to what she had demonstrated during the pre-test.

**Growth in Name Writing.** Although Piper could not write her full name during the post-test, she wrote the first letter of her name. Compared to scribbling during the pre-assessment, her attempt at writing the first letter in her name is commendable. Piper's literacy development progress might correlate to the systematic instruction her mother provided. This progress indicated that systematic letter instruction, connecting letters to words, demonstrating sentence writing, and composing authentic texts, is critical for developing related skills.

### **Strategies that may Have Improved Concept of Print and Letter**

**Identification.** The category of children who used the writing notebook five times or less did not improve significantly in all measures except in the concept of print and letter identification. The improved score on concepts of print could be due to specific strategies that included discussions about planning what to write and the mechanics of writing. The improved score on the letter identification assessment could result from the letter identification activities.

***Planning What to Write.*** The lead teacher's systematic focus on aspects that improved children's concepts of print may have been encouraged through the practitioner articles provided as part of the intervention. For instance, in the article titled "Promoting Preschoolers' Emergent Writing," Byington and Kim (2017) provided suggestions on how teachers could model writing, such as explaining to children "how to plan what to write" (p. 77). The 3K teacher did a similar activity in the class, asking children to recall what

they did while they played outside. Then she wrote their responses on the paper as the children observed. By writing and simultaneously discussing the writing with the children, Ms. Belinda demonstrated the directional movement of print. This is a major aspect of concepts about print that could have helped children identify that when we read, we read from left to right.

***Discussion of Mechanics of Writing.*** Byington and Kim (2017) identified that discussing the mechanics of writing, like punctuation, was crucial when supporting preschool children's writing. The 3K teacher was observed explaining why she used certain punctuation marks as she wrote for the class to see during the intervention. Contrary to this finding, a study by Bingham et al. (2022) found that concepts of print were the least supported foundational skill by teachers. Bingham et al. (2022) and others found that there was more emphasis on handwriting (Bingham et al., 2017, 2022) and spelling (Bingham et al., 2017) than on concepts about print in PreK settings.

***Letter and Word Identification Activities.*** The article by Byington and Kim (2017) also suggested that children should be taught that "letters create words and words create sentences" (p. 77). The 3K teacher engaged in activities focusing on letter and word identification. Anabel exemplified how this strategy may have improved children's concepts about print and letter identification. Anabel did not use the writing notebook with her parents at home. In her pre-assessment, Anabel scored a zero on both concepts about print and letter identification measures. During the post-test, Anabel scored a seven on her concept about print post-test. On the post-test, Anabel demonstrated an understanding of print containing the message. She also understood the directional



movement of print and the concepts of first and last. On her post-assessment letter identification, she could also identify capital letters A, X, and lowercase x and e.

Anabel's growth may have been attributed to the exposure she received in the classroom since she scored 0 during the pre-test and did not seem to actively engage in writing activities at home, as discussed by her teacher. This study shows that when teachers are provided with resources, they focus on using the information to improve instruction in foundational skills like the concept of print.

### **The Influence of Resources and Meetings on Adults' Knowledge and Practice**

This study found that parents' and teachers' knowledge and understanding of effectively supporting children's writing using high-quality strategies would have been limited if there had been no intervention to learn about these strategies. For example, previous studies examining adults' strategies to support their children found that parents (Bindman et al., 2014) and preschool teachers (Bingham et al., 2017, 2022) typically support children's early writing with low-quality strategies.

These low-quality strategies include not isolating sounds within words (Bindman et al., 2014), "providing words to trace, providing letter worksheets" (Bingham et al., 2017; p. 40), writing the letter for a child, and writing a letter, word or sentence for a child to copy (Bingham et al., 2022). Although some of these literacy strategies were used by adults in this study, the goal was to ensure that adults could change and lift their scaffolded support based on their knowledge about the child's individual literacy level. So, while some lower-level strategies were employed, the parents adjusted their support and strategies based on their knowledge of the child. This section discusses how the

practitioner articles, literacy tips, and bi-weekly meetings empowered teachers and parents to better understand how to provide varying levels of support and different strategies.

### ***Practitioner Articles***

By providing preschool teachers with practitioner articles, they were encouraged to offer options and choices in the classroom tailored to the students' needs, which helped move children toward the pedagogical goal of improved early writing skills. A total of three articles were presented to the teachers over the course of the study. In addition to reading the articles, the preschool teachers discussed ways to use the information presented to support students.

### ***Literacy Tips***

Parents were also empowered through the literacy tips from the idea sheets. These literacy tips guided parents on ways to support their children's writing. However, it is essential to note that parental expectations and beliefs about literacy may have determined the literacy tips and strategies they used in supporting their children. For instance, during the pre-semi-structured interview, Piper's mother in the 3K classroom indicated that she wanted her child to "know all of her letter sounds confidently" and "draw a couple of letters" by the end of the school year.

This expectation may have influenced her selection of the literacy tip she found on the idea sheet provided by the researcher "Write A-Z in upper- and lower-case letters while they see you do this" (See Appendix K). During the intervention, she focused on working on a letter per day with her child and related each letter to familiar words her

child knew. By drawing upon her beliefs and expectations and being consistent with her approach, Piper improved beyond her mother's expectations. By the end of the study, Piper could write eight letters and identify 37 upper- and lower-case letters.

### ***Bi-Weekly Meetings***

The bi-weekly meetings were also a medium through which the researcher, parents, and teachers could share ideas on what was inhibiting or enhancing their children's writing progress. For instance, parents and teachers learned that they could enhance children's writing by getting them to share their ideas and thoughts. Even if children could not write all their ideas, parents learned that children may still engage in the composition process by orally discussing their ideas and thoughts. They also learned that children could contribute to the sentence the parent writes by adding a letter or word, depending on each child's literacy level.

By encouraging composition through the bi-weekly meetings, adults also learned that children did not have to be fully "ready" to write and that writing could be scaffolded. Previous studies (Bindman et al., 2014; Skibbe et al., 2013) noted that there was a tendency for adults to write for their children. For instance, Bindman et al. (2014) found that 24% of parents wrote for their children on a timed invitation-writing activity instead of allowing them to write. In this study, adults were encouraged to provide opportunities for children to write independently. Although some children did not write by themselves all the time, by using a design-based method and meeting stakeholders at the end of each cycle, they could revisit strategies inhibiting children's writing progress and make adjustments for the next cycle. By working with children over a two-month

period, it was informative to see how certain strategies worked for certain children within specific cycles, confirming the need to differentiate and scaffold instruction.

Hindman et al. (2013) found that providing families with information through workshops and training rather than just sending home activities for children to complete strongly relates to a child's vocabulary learning. Similarly, this study found that parents benefitted immensely from bi-weekly meetings informing them of their children's literacy activities, progress, and strategies. For some parents, these bi-weekly meetings were a tool to keep them accountable to continue working with their children. In addition to these meetings, parents had access to literacy tips in the writing notebook before and during the intervention. The embedded literacy tip in the writing notebook made it easier for parents to reference in case they forgot what was discussed at the bi-weekly meetings.

### **Changing Strategies Across Cycles as a Result of Resources and Meetings**

As a result of the resources and bi-weekly meetings provided, adults could change the strategies used to move children toward the pedagogical goal of early writing. For instance, Linda's mother started by providing words, names, and sentences in dotted lines for Linda to trace because tracing was an activity Linda was familiar with, but she could not write without the dotted lines to trace. In Cycle 3, Linda's mother changed her strategy by providing hand-over-hand support for Linda. By Cycle 4, Linda could write sentences by copying her parent's writing. She did not need dotted lines or hand-over-hand support as scaffolds anymore. By Cycle 4, Linda had also learned that she could share her ideas and thoughts and have her parent write them for her. These activities built her composition knowledge while helping her with her independent writing.

The writing strategies used by Ms. Belinda also changed over time. In each cycle, Ms. Belinda encouraged children to write their names during sign-in. By Cycle 3, Ms. Belinda encouraged composition by allowing children to share their ideas and thoughts about outdoor activities. In Cycle 4, Ms. Belinda took dictation of the children's messages to Santa and encouraged the children to write their names on the letter. They also did word-matching activities. All these activities contributed to building children's "transcription," "composition," and "writing concepts" (Tortorelli et al., 2022, p. 729).

During writing, parents and teachers also explored different kinds of writing tools like whiteboards, colored pencils, crayons, and pens when writing with children. These writing tools were a motivation for the children. This study indicated the importance of variation in writing strategies as children progressed in writing, moving them toward the pedagogical goal of enhanced writing skills.

### **Influence of the Writing Notebook's Refinement on Children's Writing**

A notable intervention tool refined during the study was the writing notebook. Specifically, the writing notebook's layout, regularity of exchange, and frequency of use were refined.

#### ***Layout***

Initially, the notebook layout consisted of blank sheets with a paper template stapled on the first page to explain to parents what should be included on the following blank sheets. Parents found it challenging to keep updating each page according to the template. By redesigning the notebook's page layout for the 3K classroom by ensuring all the important information on the initial template was printed on all pages and

handwriting the essential sections in the books of children in the 4K classroom, the researcher could track relevant information and provide practical suggestions to parents and teachers after each cycle.

### ***Regularity of Exchange***

The writing notebook was also refined by encouraging the regularity of the exchanges between home and school. At the beginning of the intervention, the notebook was sent home, and parents were encouraged to send this notebook to school daily. However, not all parents were doing this. Sending reminders to parents via email and reminding parents during the bi-weekly meetings to keep sending the writing notebook increased the regularity of the notebook exchange between home and school. Although the notebook was primarily used at home, teachers provided feedback in the notebook when children brought the book to school.

### ***Frequency of the Use***

Across the cycles, the frequency of the use of the notebook enhanced children's emergent writing skills. The notebook was used more often with parental support in the 3K classroom. This could be attributed to different reasons. The book layout used in the 3K classroom may have been more appealing for children. Additionally, the 3K teacher showed more enthusiasm about providing feedback in the notebook, motivating the parents to keep working with their children and to send the books to the class more frequently. Both goals were achieved, and data showed that the 3K parents sent the notebooks to school more often than the 4K parents, and the 3K children used the notebooks more than the children in the 4K classroom.

Frequently using the notebook at home gave children more one-on-one individualized instructional time with their parents. This kind of instructional time was limited in the classroom due to the teacher-to-student ratio. This one-on-one individualized instructional time may have been a reason for the increased literacy growth on all measures for this category of children who used the notebook 11 to 45 times.

Intervention activities were refined with the main aim of enhancing children's emergent writing skills. Parents and teachers refined their strategies with the children across each iterative cycle. In addition, the notebook was refined with consideration for the layout, the way it was exchanged between home and school, and the frequency of its use. These changes during the study contributed to improving children's emergent writing skills.

### **Improved Parent-Teacher Collaboration**

This study found that parent-teacher collaboration improved when parents and teachers interacted through the writing notebook and bi-weekly meetings. Before the study, parent-teacher collaboration for children's literacy development was limited or non-existent. Intervention activities like the bi-weekly meeting and the feedback sections of the notebook encouraged parents and teachers to collaborate.

Even though parents spent more individualized time with their children, which may have contributed to improved writing skills, teachers' feedback also played an integral role in encouraging parents to work with their children. Where the teacher's feedback was non-existent in the notebook or teachers were absent at the bi-weekly

meetings, this might have discouraged parents from consistently working with their children. In this section, I discuss how the bi-weekly meetings and notebooks helped to improve collaboration between parents and teachers.

### ***Influence of Bi-Weekly Meetings on Parents' Work with Children***

Through the interaction of parents and teachers at the bi-weekly meetings, parents were better positioned to collaborate with the lead teachers because they now knew about their children's activities in the classroom and received tips on improving learning in the home. Parents could have richer conversations with their children because of this knowledge about classroom practices and activities. Since the study occurred during the COVID-19 pandemic, parents were not allowed in the school. Learning about what children were doing in the classroom from the bi-weekly meetings was even more helpful, given that parents could not visit the classroom. Furthermore, through the bi-weekly meetings, parents learned about their children's unique literacy development and how it compared to other children's personalities, interests, and development.

The interaction with their child's class teacher and other parents during the bi-weekly meetings motivated some parents to become more involved in their children's writing development. The bi-weekly meetings also provided structure for some parents and assisted in keeping them on task throughout the study. Through the feedback from the researcher, teacher, and other parents during the bi-weekly meetings, parents continued to learn about effective strategies they could implement with their children.



### ***Influence of the Use of the Writing Notebook on Stakeholders***

Generally, the parents in the 3K classroom used the writing notebook more often than those in the 4K classroom. This could be due to the 3K teacher's commitment to collaborate with parents and children. The 3K teacher realized early on that providing feedback in the notebook encouraged parents to keep sending the notebook back to school. She also continuously reminded children to write with their parents at home. The 3K teacher was interested in children's entries and showed this interest by discussing children's entries with them. By doing this, she saw the home interaction between parents and children as essential to enhancing emergent writing.

In some cases, the collaboration between parents and teachers was inhibited based on certain factors, including parent or teacher absence at the bi-weekly meeting, lack of notebook use by parents, insufficient details by parents or teachers in the notebook, inconsistent or unhelpful feedback in the writing notebook by teachers, or lack of notebook exchange from school to home. This study showed that parents and teachers must collaborate to enhance children's writing at home and school. This aligns with the findings of Hindman et al. (2013) and Marcon (1999), which indicated that parent-teacher collaboration strengthens children's academic development.

### **Summary of the Major Findings Relative to the Theoretical Framework**

The theories underpinning this research included Vygotsky's (1978) Zone of Proximal Development, and Bronfenbrenner's (1979) Ecological Systems Theory. These theoretical frameworks guided and shaped this study. In this section, the major findings and how the theoretical frameworks supported these findings are discussed.

### ***Zone of Proximal Development***

Vygotsky (1978) defined the Zone of Proximal Development as the "distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (p. 86). In this section, the findings connected to the Zone of Proximal Development are discussed using Linda as an example.

**The Child's Actual Developmental Level.** Before the intervention, Linda's actual developmental level was name writing. She was only comfortable writing her name and no other letters or words.

**The Child's Potential Developmental Level.** For this study, Linda's level of potential development was writing additional letters beyond the letters in her name and writing different words with the support of an adult.

**Adult's Role in Helping Child Problem-Solve.** To get Linda to write other letters and words, Linda's mother provided Linda with dotted lines in Cycle 1 because she knew her child was not comfortable writing letters without this scaffold.

### ***Role of Scaffolds in Problem Solving***

Scaffolds enabled Linda to solve problems beyond her "unassisted efforts" (Wood et al., 1976, p. 90) to guide her toward her potential development. Earlier, Linda's mother provided dotted lines as support for Linda to trace over, but as her mother observed the child's behavior, she realized the scaffold she provided did not assist Linda and, therefore, modified the scaffold. A new scaffold, hand-over-hand support, replaced the

use of dotted lines moving Linda toward her potential level. The "assisted efforts" from Linda's mother ensured the instructional scaffolding was in the child's Zone of Proximal Development.

**When the Scaffold is not Needed.** Once Linda became comfortable with writing using hand-over-hand support for two weeks (one cycle), she no longer needed that scaffold to support her in completing the writing tasks.

**Changing the Scaffold to ensure Continuous Progress.** Linda's mother then lifted the level of scaffolding again by writing for Linda to copy. This support was different from the use of hand-over-hand support and was a higher-level scaffold for Linda because she had to study how her mother shaped the letters when her mother wrote the example.

**Child Reaches Independent Problem Solving without Scaffolds.** By the final cycle, Linda could write letters without copying, as evidenced by her letter writing during the post-test. During the post-test, Linda wrote 22 letters unassisted, compared to the pre-test, during which she wrote eight letters. This study showed that understanding children's developmental levels is crucial to helping them progress and providing the right scaffold.

**The Right Scaffolds will Look Different for Each Child.** Providing differentiated instruction is important. Drawing on Vygotsky's (1978) theory of the Zone of Proximal Development, this research confirmed that the actual developmental level of each child differs, and therefore learning should be matched and differentiated for each child's developmental level. For example, Piper and Linda were at different actual

developmental levels. Piper was scribbling while Linda could write her name. These differences required that the children be provided with unique scaffolds in their respective Zones of Proximal Development.

**Understanding the Child's Needs Through Individualized Instruction.** By working with each child at home, parents better understood their children's developmental levels. The resources and information the researcher provided helped them to provide specific and tailored instruction that was helpful to each child. For instance, in Cycle 3, one of the strategies that Piper's mother used to support Piper was writing Piper's name, words, and sentences, omitting a target letter and replacing it with a blank for Piper to fill in. Linda's mother's strategies included discussing letter formation with her child as she wrote most letters. Although some strategies were similar, parents provided specific and individualized instruction that they believed would benefit their children.

***The Role of Appropriate Signs in Individualized Instruction.*** Vygotsky (1978) discussed the importance of using appropriate signs to help children remember a concept. Signs can, for example, help regulate a child's formation of letters. For instance, Ms. Belinda taught Anabel how to write "A" using language that described the motor movements needed to form the letter. Using this language served as a mediational sign to assist Anabel in forming A. Anabel learned how to use this language in the classroom to form the letter while writing during the post-test assessment. Anabel did not get to a point during the study where she no longer used the language or mediational sign, meaning that, according to Vygotsky (1978), she had not completely internalized the skill. If

Anabel had been supported at home with similar language, it would have further assisted her early writing progression, including writing the letter “A.” In the next section, I give an example of how a child benefitted from using the same signs at home and school.

*Using the Same Signs for a Specific Child in Different Settings.* This study showed the importance of parents and teachers using the same language to mediate thinking, especially when children focus on similar concepts at home and school. For example, Ms. Trish understood from the writing notebook that using “dotted lines” assisted Linda in the home. Recognizing how this sign supported the child in the home context encouraged the teacher to use dotted lines in the classroom, too. When Linda’s mother discontinued using dotted lines, Ms. Trish also did so. Continuing to provide scaffolding using dotted lines after Linda began to write letters by herself would have stifled her progress. In this way, the notebook served as a medium for parents and teachers to understand the signs used by each party and to adjust their support according to the child's progress. This study showed how parents and teachers could scaffold children's writing within their zone of proximal development using mediational signs.

**Importance of Providing Developmentally Appropriate Opportunities for Children.** When parents and teachers provide developmentally appropriate opportunities, children emerge into writing. This starkly contrasts the concept of waiting for children to be ready to read and write (Morphett & Washburne, 1931), which delays the development of foundational skills. Contrary to the notion that writing may be too difficult for preschool children, as reflected in some early learning standards (Tortorelli et al., 2022), this study showed that children enjoy the experience of writing with their

families and teachers and that with targeted levels of scaffolding, patience, and encouragement, children can thrive.

Although children may have been frustrated at certain points, knowing how to control the task difficulty helped to regulate this frustration. Some parents controlled the task difficulty by writing for children at certain points, thus allowing children to draw when they did not want to write, encouraging children to contribute a known letter to the sentence under construction, or even guiding the child to write through hand-over-hand support. These types of support help children understand more about the writing process and serve as a foundation that teachers can build upon in elementary school. Developmentally appropriate activities need to be evaluated using developmentally appropriate assessments.

### **Using Developmentally Appropriate Assessments to Guide Instruction.**

Although we see from this study that writing may be difficult for some preschoolers due to developing motor skills, using appropriate assessments to evaluate them will show where to provide instruction to move them toward the pedagogical goal of emergent writing. For instance, Vygotsky (1978) suggested that tests with varying difficulty levels provide us with data on what a child has mastered. This study used relevant and appropriate assessments with varying degrees of difficulty to determine what children knew and controlled, for example, letter identification and letter writing assessments. These assessments helped the researcher see the difference between the children's literacy levels and provided insights to teachers and parents about how to support the child.

In the 3K classroom, Piper could identify 23 upper case letters and 14 lower case letters by the end of Cycle 4 but could only write eight of these letters. Providing Piper with a measure that allowed her to identify the letters with and without writing helped demonstrate that this measure had different degrees of difficulty and provided information on Piper's writing progress. It is important to note that Piper was scribbling at the beginning of the study. By understanding Piper's writing level at the beginning of the study, the researcher and teacher could suggest to Piper's mother what strategies to use to help Piper progress in writing. Measures that recognize these minute differences and the developmental progression of each child are essential and critical to ensuring instruction is provided in the child's zone of proximal development.

#### **Specific Tasks Lie Outside the Child's Zone of Proximal Development.**

Bodrova and Leong (1998) identified that no matter the support provided to children, there will still be tasks that lie outside of the child's Zone of Proximal Development "such that no amount of assistance will facilitate learning" (p. 8). This study confirmed this assertion because, despite the instructional strategies used to support children's writing within the two-month study period, there were tasks outside their zone of proximal development. For instance, the 3-year-olds could not write as many letters even if they could identify them by name at the end of the study because their fine motor skills were still developing. Additionally, many of the three- and four-year-old children still needed the support of an adult when orally composing their ideas and thoughts. Despite the knowledge that certain tasks lie outside the child's zone of proximal development, children should continue to be exposed to literacy-related opportunities.

*Continuous Exposure to Literacy-Related Opportunities.* Bingham et al. (2017) confirmed that children could engage in composing even before their motor skills and letter knowledge developed. It was important that even though the children could not form all the letters necessary to convey their thoughts and ideas, parents and teachers still provided composition support. Through the composition process, children understood the purpose of writing, editing, and communicating with an audience. All these relevant skills will be helpful as they move through the primary and upper elementary grade levels. Therefore, encouraging children to complete tasks within their zone of proximal development and providing opportunities to reach their potential level is crucial in moving children toward the pedagogical goal of emergent writing. In addition to the work of Vygotsky, this study was also guided by Bronfenbrenner's Ecological Systems Theory. In the next section, key findings are discussed in light of this theory.

### ***Ecological Systems Theory***

Using the five ecological systems (microsystem, mesosystem, exosystem, macrosystem, and chronosystem), Bronfenbrenner (1979) described how the environment and interaction with it could affect the developing child.

**Microsystem.** Bronfenbrenner (1979) described the microsystem as the ecological environment directly impacting the developing child. This environment comprises the people the child interacts with on a "face-to-face basis" (p. 7). In this study, the environments where children had face-to-face interactions about early writing were the home and classroom. The findings revealed that the home environment seemed to have impacted children's writing development the most, especially for children who



wrote more frequently with the support of their parents. Specifically, children who wrote 11–45 times in their writing notebooks made more visible progress, which could be attributed to the frequent practice in the home environment, individualized attention, and interaction with the parent. According to Bronfenbrenner (1979), the building blocks of the microsystem are the "activity, role, and interpersonal relation" (p. 22). Children who had more frequent opportunities with writing in the home environment were likely to have felt more comfortable with the task due to the deep interpersonal relationship children had with their parents.

Children who used the writing notebook five times or less had an increased growth mean score in the Concepts of Print and Letter Identification measure. This could be attributed to the related classroom activities that helped to improve their knowledge in this area. The microsystem, whether at home or school, contributes to children's emergent writing development.

**Mesosystem.** The mesosystem is the "set of interrelations between two or more settings in which the developing person becomes an active participant" (Bronfenbrenner, 1979, p. 209). In this study, the preschool children were active participants in both the home and classroom. This study's results showed that for the developing child to make significant progress in early writing, there had to be a symbiotic relationship between teachers and parents. For example, parents who wrote with their children as frequently as possible were those in the 3K classroom. Four of these children wrote in the writing notebook with adult support 26–45 times. This frequency of writing with children may have resulted from Ms. Belinda's approach to motivating parents. This approach involved

frequent and helpful feedback in the writing notebook. Ms. Belinda stated during one of the classroom observations that she was trying to give feedback to keep the book going back and forth. To confirm this approach, Piper's mother stated during the post-intervention interview that "Ms. Belinda's comments back to me were then also encouraging to me, so it was almost like this feedback loop of positivity so that we kept doing it." This indicates that teachers' feedback in the writing notebook impacted parents' attitudes and interest in working with their children and helped inform the scaffolded writing support provided at home.

The results of this study align with one of Bronfenbrenner's (1979) hypotheses about the mesosystem, which indicates that the mesosystem has more potential for development when the players in the different settings are compatible and "if the roles, activities, and dyads in which the developing person engages encourage the development of mutual trust, a positive orientation, goal consensus between settings, and an evolving balance of power in favor of the developing person" (p. 212). By clarifying the research goals with parents and teachers before the intervention, both parties knew they shared a goal of supporting preschool children's early writing. Through the bi-weekly meetings and interaction in the feedback section of the notebooks, parents and teachers built mutual trust and a positive orientation as they interacted with each other about children's writing progress. While this was especially evident in the 3K classroom, findings also revealed that not all parents had a positive orientation. For example, some parents in the 4K classroom felt the teacher's feedback was not helpful because it was short and suggested strategies already used by the parents. This may have discouraged parents in

the 4K classroom from interacting more frequently with their children in the notebook and around writing in general.

Furthermore, another hypothesis by Bronfenbrenner (1979) about the mesosystem indicated that "the least favorable condition for development is one in which supplementary links are either non-supportive or completely absent..." (p. 215). The results of this study confirmed this hypothesis to be true. For example, when parents were not using the writing notebook, it limited the opportunities for teachers to collaborate with parents in a way that benefited children. This was evident by the results of children who used the writing notebook five times or less. These children failed to improve on all literacy measures except in areas related to concepts about print and letter identification. Therefore, this study confirmed that when teachers and parents have a healthy relationship built on mutual trust and goals and are invested in collaborating, children's opportunities for writing are more abundant.

**Exosystem.** According to Bronfenbrenner (1979), the exosystem is defined as "consisting of one or more settings that do not involve the developing person as an active participant but in which events occur that affect, or are affected by, what happens in that setting" (p. 236). The results of this study show that preschool children's writing progression was affected by events that occurred in settings of which they were not a part. For instance, some parents who did not use the notebook frequently were affected by circumstances that did not involve their children. Lucy's mother in the 3K noted in the post-semi-structured interview that she could not work with her child consistently because of issues beyond her control, stating, "I really did not do anything because I was

busy and was in bad health" [12/29\_Post semi-structured interview with Lucy's mother]. Some other parents who did not consistently work with their children had life-changing situations, for example, new babies or demanding jobs that impacted their ability to invest in writing sessions with their children.

In the classroom, the teachers were either influenced by a strict curriculum or no curriculum. For example, Ms. Belinda created her own curriculum, while Ms. Trish used the creative curriculum. Therefore, Ms. Belinda made more adjustments in the classroom instruction based on the researcher's feedback and information from the practitioner articles. For example, in Cycle 3 and Cycle 4, Ms. Belinda did more activities that encouraged children to compose and share ideas and thoughts because she had time in her schedule. This was based on the articles read and subsequent discussions with the researcher. By considering children's writing progression within the context of systems they were not directly part of, the researcher could understand why some children may or may not be actively writing at home or school.

**Macrosystem.** According to Bronfenbrenner (1979), the macrosystem "refers to the consistency observed within a given culture or subculture in the form and content of its constituent micro-, meso-, and exosystems, as well as any belief systems or ideology underlying such consistencies" (p. 258). The results of this study confirmed this assertion. For example, results showed that each home had specific cultural values that informed how parents engaged children in literacy-related activities. To explain this, I draw upon examples from Piper and Linda's home cultures. Piper's home language is English. Her parents read and spoke to her in English. There was a culture of reading books in the

home. Piper was also exposed to different digital tools used to support her knowledge of letters and sounds, all of which contributed to Piper identifying 19 upper case letters and 11 lower case letters in the pre-assessment. Piper's mother's beliefs were connected to the kind of literacy-related activities promoted in the home. She wanted Piper to "learn to read more easily and younger than she did" [9/20\_Pre-interview\_with\_Piper's mother]. This belief underlined cultural literacy values.

In Linda's home, the reasons for promoting reading were different. Linda's home language was Chinese. Linda's father and mother spoke and read to Linda in Chinese. However, Linda's mother provided forums for her children to learn English through TV programming. She also focused on teaching her children the 26 English letters (alphabets). Linda's mother wanted Linda and her twin sister to do better in English because they would start kindergarten soon, and she wanted them to be equipped to speak English. Despite the importance Linda's mother placed on exposing her daughter to her first language, her goals for kindergarten were tied to the current cultural expectations of the United States. Therefore, she wanted her children to be able to read and write simple English words.

Learning about the cultural values in the home helped the researcher understand the writing behavior of children. For example, Linda was more comfortable writing her name during the pre-assessment. During the post-assessment, Linda wrote her name and some other letters. She was not able to write any words. This could have been due to a language barrier of not knowing how to express her ideas in English. Therefore, by

considering the culture and beliefs of parents and teachers, the researcher could better understand the factors that could impact children's writing development.

**Chronosystem.** This refers to the changes that can occur in cultural values (Bronfenbrenner, 1979). Based on the new information and resources parents and teachers received, there was a change in teachers' and parents' behavior toward early writing development. For example, most homes focused on reading-related activities before the intervention. However, during the intervention, parents who used the writing notebook more often saw the value of supporting their children in writing-related activities. A similar change was noted in the classroom. Before the intervention, Ms. Belinda thought the children were unprepared for writing. By reading the practitioners' articles and learning about specific strategies she could use to support children's early writing, she provided opportunities to encourage children to write. For example, she started using language tied to motor movement to help children form shapes and letters.

By adjusting their cultural literacy values, parents and teachers began to see a change in children's writing development. The change made by teachers and parents produced corresponding changes in behavior and development in the children. Therefore, this study showed that situating preschool children's emergent writing development within the ecological systems provides a better and more holistic understanding of how factors other than children's interests and literacy levels can affect children's emergent writing skills.

In the following sections, I discuss the contributions of this study to the existing literature, make recommendations for practice, and highlight implications, limitations, and directions for future research.

### **Contributions**

Bindman et al. (2014) suggested that "a critical future direction will be to examine relations between parental writing support and children's literacy-related outcomes over time" (p. 623). Bingham et al. (2017) also suggested that it will be helpful for future research to examine how teachers' support changes over different time points during the year to understand how their approaches to supporting writing should change to meet children at their point of need. Therefore, parents and teachers collaborating to support preschool children over a two-month period can be seen as a major contribution to preschool writing research. The prolonged engagement gave insight into how parents and teachers changed their support for young children over a period of time.

Another contribution to early writing was the Writing Notebook, a significant tool through which parents and teachers collaborated. Using this writing notebook, children's writing progression over the two-month period was documented. The writing notebook also helped capture specific strategies that supported children. Furthermore, the feedback section of the writing notebook provided evidence of the importance of the teacher's feedback in guiding the parents' interactions with their children. Bingham et al. (2017) noted that it would be helpful for future studies to "develop and include measures of children's emergent composing skills" (p. 44). The writing notebook was a naturalistic measure documenting children's writing progress, including how strategies change over

time according to the child's needs. The Writing Notebook also documents how preschool children's writing changes with the introduction of explicit and systematic instruction. Most importantly, the Writing Notebooks demonstrated how vital the teacher's role is in keeping parents engaged and motivated to work with their children.

This study also provided insight into how Clay's (2005) Observational Survey of Early Literacy Achievement could assist in understanding preschool children's development around concepts about print, letter knowledge, and writing vocabulary, especially regarding name-writing. Some studies (e.g., Zhang et al., 2015) that have examined preschool children's early writing skills focused on children's name-writing skills as an outcome of early writing development. However, Puranik et al. (2011) noted that the disadvantage of evaluating children's name writing was that children could learn their names as a rote unit, thereby not learning or identifying individual letters within their names. By assessing children's concepts about print, letter identification, and letter and name writing, the specific components that directly and indirectly influence children's writing are better understood.

Although Clay's (2005) Observational Survey of Early Literacy Achievement guided the administration of the assessments in this study, not all sub-tasks of the instrument were used in the ways she recommended. For instance, in the concepts of print assessment, one of the questions says that if a child identified both t and b, the child should be given one point. The assessment did not provide for a situation where a child knew one of the letters, so a zero is usually allocated if the child knows one letter but not the other. Since this study aimed to enhance children's emergent writing skills, it was



paramount that the researcher knew what the child had learned at each stage and reflected this in the assessment. So instead of scoring zero if a child only knew t rather than b, the child was given partial credit to indicate what that child knew.

Furthermore, children's name writing was assessed using Bingham et al.'s (2017) scale, which was better suited for preschool. In this study, Bingham et al.'s (2017) scale was extended to nine points to reflect what children knew. In Bingham et al.'s study, eight points were given if a child knew the correct spelling of a word and name. However, two children in this study wrote more than one name or word during the assessment. Therefore, an adjustment was made to this scale by including nine points to indicate the correct spelling of more than one name or word.

Another contribution was the assessment of children's independent writing and composition. Bindman et al. (2014) did not assess children's independent writing. Children's writing was only assessed when supported by their parents. The present study used measures that helped make causal conclusions about how adult writing supports impacted children's emergent writing skills. Through the pre-and post-test, the researcher could see children's writing without parental support. The results of these tests showed that consistent and higher-quality support using the writing notebook benefited three- and four-year-olds' independent writing.

In addition, children's understanding of how to compose was visible through the writing notebook. Composing among preschool children has not fully been explored and understood in literature (Bingham et al., 2017; Tortorelli et al., 2022), and this study underscores how composing can develop among preschool children. By working with

children on composing, they better understood how to organize their ideas and thoughts as they orally shared them for an adult to express in written form. This understanding becomes relevant when children compose and write complete sentences by themselves. Through the composition process, children also understand that they need to have a purpose for writing, that they can edit their writing if it does not convey the intended message, that writing can take the form of sentences and paragraphs, and that an authentic audience can read their writing. All these relevant skills needed in the upper-grade levels begin with honoring and valuing the composition process with young writers. This is a major contribution because studies (e.g., Bingham et al., 2017, 2022) found that teachers had limited knowledge of promoting composing or idea generation among preschoolers. For instance, Bingham et al. (2017) noted that teachers supported children in composing in only 39% of the classrooms. According to the researchers, this represented only 7.3% of all observed teacher support.

Furthermore, most studies that have examined preschool children's early writing have been primarily quantitative (i.e., Bindman et al., 2014; Zhang et al., 2015). By using a design-based method, the researcher was able to combine qualitative and quantitative methods that were responsive to the implementation and iterative design of an intervention. This method allowed the researcher to understand children's progress in their literacy skills quantitatively and to see individual children's writing interactions with their parents and teachers using qualitative methods.

Finally, this study contributed to the literature by providing research-based tips to parents, practitioner articles, and professional development for teachers. Zhang et al.

(2015) suggested that "future studies may develop professional training that specifically promotes research-based writing instruction in the classroom" (p.313). This study contributed to the literature by investigating how the provision of research-based tips and articles on writing instruction could support parents and teachers in their interactions with young children. For example, one of the tips was encouraging parents to draw children's attention to letter-sound correspondence. This tip is crucial because children who learn letter-sound correspondence can use this knowledge to slowly articulate and write simple words. This supports their reading development as they engage in the reciprocal process of blending and reading words (Bingham et al., 2017). Other studies (Bindman et al., 2014; Skibbe et al., 2013) that examined how parents supported their children's early writing skills found that parents seemed to have a limited understanding of teaching this skill to their children. Therefore, as part of the iterative design of the study, it was one of the literacy tips shared for parents and teachers to implement.

### **Recommendations and Implications for Practice**

Results of this study showed that parents and teachers are more likely to support their preschool children's early writing skills when provided with the information and resources needed to help children thrive (Skibbe et al., 2013). Parents and teachers in this study received information from the bi-weekly meetings, writing notebooks, and implementation meetings. Parents, teachers, and the researcher shared information during the bi-weekly meetings about children's literacy engagement in the classroom and home, children's literacy progress, and the next steps to move children toward the pedagogical

goal of emergent writing. They also shared information through the parent comments section of the writing notebook and the teacher's feedback section.

Additionally, the teachers benefitted from the information shared during the implementation meetings. At the implementation meetings with the researcher, the teachers discussed literacy activities implemented, children's literacy progress, and future plans based on the information from the articles. The researcher also discussed classroom observations and critical areas from the articles during the implementation meetings. As a result, it is recommended that preschool teachers have access to training, practitioner articles, and practical early learning standards and curriculum that address the developmental trajectory of emergent writers to ensure component areas like print concepts, letter-sound correspondence, letter formation, and composition are supported.

Unfortunately, Bingham et al. (2017) noted that current curricula often do not provide clear guidelines for supporting preschool children in areas like composing and spelling. Recommendations from this study also include the review of existing curricula to reflect effective guidelines to support preschool writing in these areas. It is also recommended that resources be made available to capture the wide range of preschool children's developmental trajectories and varied writing skills so that teachers do not hold on to the "readiness" perspective that devalues preschool children's capacity for and natural interest in writing. Preschools should also encourage teachers to collaborate with parents to provide children with a solid foundation in literacy.

### **Limitations and Future Research Directions**

A number of study limitations should be noted. First, this study was uniquely situated in a community preschool. Parents and teachers were provided with resources and information to guide their children, but they decided on which resources or information to use. Therefore, while the results from the present study are informative, they cannot be replicated. Future studies may provide parents and teachers with specific tips and ensure they carry them out step by step, providing more insight into a scope and sequence that could be used at the preschool level.

Specific tips may also be integrated into the T.C.P Writing Collaborative Notebook to ensure this reflects the child's changing needs. For example, children may not need lined paper at the start of the intervention, but as the students progress, they might need guidance on writing on lines or having an instructional guide to form letters. In addition, future research could examine ways the writing notebook could be used as an integral part of the classroom along with other tools that may move children toward the pedagogical goal of early writing. These other tools could include colored paper, whiteboards, and specific types of pencils or pens.

Second, the study population of six parent-child dyads from the 3K classroom and five parent-child dyads from the 4K classroom and their lead teachers may not be large enough to generalize results to other populations. Although it was substantial for this study, future research could use a larger sample, for instance, multiple classrooms in different preschool settings.

Thirdly, COVID-19 was a limitation in this study. The research took place during the pandemic. Families and schools were trying to adjust to new practices and expectations related to health and safety, and things were changing rapidly. For example, during the data collection, the 3K classroom was closed for a week, and some teachers, parents, and children were ill and absent during the study. COVID-19 may have also influenced the number of parents who signed up for the study and the number of families participating weekly.

Furthermore, parents could not come into the classrooms, limiting interaction between parents and teachers and what parents could learn about their children's literacy development and experiences by being in the classroom space. However, the design of this study was an advantage as the intervention activities introduced supported parent-teacher collaboration, including the writing notebook and the bi-weekly meetings held via Zoom. These activities helped encourage parent-teacher collaboration and inform parents of what was happening in the classroom.

It will be beneficial for future studies to examine additional ways parents can be involved in their children's literacy development without having to be at school. This is important as it creates an opportunity for families who cannot attend school to be involved in their children's academic development. More importantly, many adjustments made during COVID-19 are now considered normal practice, which in some cases means continued restrictions on families coming into the classroom. With these changes, fostering opportunities for parent-teacher collaboration is more important than ever.

Furthermore, researchers may explore ways to support children with limited home support. Parents have different limitations that impact their support, including language barriers, health issues, and demanding jobs. Studies should examine how one can provide support to children whose families are faced with these challenges.

Finally, parents who supported children more frequently in this study were highly educated and worked professionally as academics, K-12 teachers, or lawyers, perhaps influencing the study results. However, it is noteworthy that despite their highly educated backgrounds, they were unaware of best practices to support their preschoolers in writing (Bindman et al., 2014). Future studies may examine how children from families of lower socioeconomic backgrounds in the United States also develop their early writing skills.

### **Conclusion**

The present study examined how parents and teachers could collaborate to support preschool children's early writing skills using a design-based method. Children who received individualized parental support over the course of two months improved their literacy skills significantly. The feedback from teachers influenced parents' writing interactions with their children. Therefore, the study demonstrated that effective parent-teacher collaboration could significantly improve preschool children's early writing and other related skills. This study makes important contributions to existing research because no studies known to the researcher have examined how parents and teachers can collaborate to support preschool children over time through an iterative, design-based method that integrates research-based strategies.

## REFERENCES

- Adcox, S. (2022, December 28). Gov. McMaster proposes expanding full-day 4K statewide in new SC budget. *Palmetto Politics*.  
[https://www.postandcourier.com/politics/gov-mcmaster-proposes-expanding-full-day-4k-statewide-in-new-sc-budget/article\\_e0e195f8-2b51-11ea-bc58-8f45391d86b5.html](https://www.postandcourier.com/politics/gov-mcmaster-proposes-expanding-full-day-4k-statewide-in-new-sc-budget/article_e0e195f8-2b51-11ea-bc58-8f45391d86b5.html)
- Al-Maadadi, F., & Ihmeideh, F. (2016). Early writing development: kindergarten teachers' beliefs about emergent writing in Qatari preschool settings. *International Journal of Early Years Education*, 24(4), 435-447.  
<https://doi.org/10.1080/09669760.2016.1244047>
- Barab, S., & Squire, K. (2004). Design-based research: Putting a stake in the ground. *Journal of the Learning Sciences*, 13(1), 1-14.  
[https://doi.org/10.1207/s15327809jls1301\\_1](https://doi.org/10.1207/s15327809jls1301_1)
- Bennett-Armistead, V. S., Duke, N. K., & Moses, A. M. (2005). *Literacy and the youngest learner: Best practices for educators of children from birth to 5*. Scholastic.
- Bindman, S. W., Skibbe, L. E., Hindman, A. H., Aram, D., & Morrison, F. J. (2014). Parental writing support and preschoolers' early literacy, language, and fine motor skills. *Early Childhood Research Quarterly*, 29(4), 614-624.  
<https://doi.org/10.1016/j.ecresq.2014.07.002>



- Bingham, G. E., Gerde, H. K., Pikus, A. E., Rohloff, R., Quinn, M. F., Bowles, R. P., & Zhang, X. Y. (2022). Examining teachers' early writing knowledge and practices. *Reading and Writing*, 35(9), 2201-2227.  
<https://doi.org/10.1007/s11145-022-10299-x>
- Bingham, G. E., Quinn, M. F., & Gerde, H. K. (2017). Examining early childhood teachers' writing practices: Associations between pedagogical supports and children's writing skills. *Early Childhood Research Quarterly*, 39, 35-46.  
<https://doi.org/10.1016/j.ecresq.2017.01.002>
- Bingham, G. E., Quinn, M. F., McRoy, K., Zhang, X., & Gerde, H. K. (2018). Integrating writing into the early childhood curriculum: A frame for intentional and meaningful writing experiences. *Early Childhood Education Journal*, 46, 601–611. <https://doi.org/10.1007/s10643-018-0894-x>
- Bloodgood, J. W. (1999). What's in a name? Children's name writing and literacy acquisition. *Reading Research Quarterly*, 34(3), 342-367.  
<https://doi.org/10.1598/rrq.34.3.5>
- Bodrova, E., & Leong, D. J. (1998). Scaffolding emergent writing in the zone of proximal development. *Literacy Teaching and Learning*, 3(2), 1-18.  
[https://www.readingrecovery.org/wp-content/uploads/2017/03/LTL\\_3.2-Bodrova-Leong.pdf](https://www.readingrecovery.org/wp-content/uploads/2017/03/LTL_3.2-Bodrova-Leong.pdf)

- Bramlett, R. K., Murphy, J. J., Johnson, J., Wallingsford, L., & Hall, J. D. (2002). Contemporary practices in school psychology: A national survey of roles and referral problems. *Psychology in the Schools, 39*(3), 327–335.  
<https://doi.org/10.1002/pits.10022>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Bronfenbrenner, U. (1992). *Ecological systems theory*. Jessica Kingsley Publishers.
- Byington, T. A., & Kim, Y. (2017). Promoting preschoolers' emergent writing. *YC Young Children, 72*(5), 74-82.  
<https://www.naeyc.org/resources/pubs/yc/nov2017/emergent-writing>
- Castro, D. C., Bryant, D. M., Peisner-Feinberg, E. S., & Skinner, M. L. (2004). Parent involvement in Head Start programs: The role of parent, teacher and classroom characteristics. *Early Childhood Research Quarterly, 19*(3), 413–430.  
<https://doi.org/10.1016/j.ecresq.2004.07.005>
- Clay, M. M. (1977). Exploring with a pencil. *Theory into Practice, 16*(5), 334-341.  
<https://doi.org/10.1080/00405847709542722>
- Clay, M. M. (2001). *Change over time in children's literacy development*. Heinemann Educational Books.
- Clay, M. M. (2005). *An observation survey of early literacy achievement*. Heinemann Education.

- Cunningham, A. E., Zibulsky, J., & Callahan, M. D. (2009). Starting small: Building preschool teacher knowledge that supports early literacy development. *Reading and Writing*, 22(4), 487-510. <https://doi.org/10.1007/s11145-009-9164-z>
- Dahl, K. L., & Freppon, P. A. (1995). A comparison of innercity children's interpretations of reading and writing instruction in the early grades in skills-based and whole language classrooms. *Reading Research Quarterly*, 30(1), 50-74. <https://doi.org/10.2307/747744>
- Diamond, K. E., Gerde, H. K., & Powell, D. R. (2008). Development in early literacy skills during the pre-kindergarten year in Head Start: Relations between growth in children's writing and understanding of letters. *Early Childhood Research Quarterly*, 23(4), 467-478. <https://doi.org/10.1016/j.ecresq.2008.05.002>
- Epstein, J. L., & Salinas, K. C. (2004). Partnering with families and communities. *Educational leadership*, 61(8), 12-19. [https://files.ascd.org/staticfiles/ascd/pdf/journals/ed\\_lead/el200405\\_epstein.pdf](https://files.ascd.org/staticfiles/ascd/pdf/journals/ed_lead/el200405_epstein.pdf)
- Fantuzzo, J., Gadsden, V., Li, F., Sproul, F., McDermott, P., Hightower, D., & Minney, A. (2013). Multiple dimensions of family engagement in early childhood education: Evidence for a short form of the Family Involvement Questionnaire. *Early Childhood Research Quarterly*, 28(4), 734–742. <https://doi.org/10.1016/j.ecresq.2013.07.001>
- Gentry, J. R. (2005). Instructional techniques for emerging writers and special needs students at kindergarten and grade 1 levels. *Reading & Writing Quarterly*, 21(2), 113-134. <https://doi.org/10.1080/10573560590915932>

- Gentry, J. R., & Gillet, J. W. (1993). *Teaching kids to spell*. Heinemann.
- Gerde, H. K., Bingham, G. E., & Pendergast, M. L. (2015). Reliability and validity of the Writing Resources and Interactions in Teaching Environments (WRITE) for preschool classrooms. *Early Childhood Research Quarterly*, 31, 34-46.  
<https://doi.org/10.1016/j.ecresq.2014.12.008>
- Gerde, H. K., Bingham, G. E., & Wasik, B. A. (2012). Writing in early childhood classrooms: Guidance for best practices. *Early Childhood Education Journal*, 40(6), 351–359. <https://doi.org/10.1007/s10643-012-0531-z>
- Gerde, H. K., Wright, T. S., & Bingham, G. E. (2019). Preschool teachers' beliefs about and instruction for writing. *Journal of Early Childhood Teacher Education*, 40(4), 326-351. <https://doi.org/10.1080/10901027.2019.1593899>
- Gerde, H. K., Wright, T. S., & Bingham, G. E. (2022). Sharing their ideas with the world: Creating meaningful writing experiences for young children. *American Educator*, 45(4), 34-40. [https://www.aft.org/ae/winter2021-2022/gerde\\_wright\\_bingham](https://www.aft.org/ae/winter2021-2022/gerde_wright_bingham)
- Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory*. Aldine.
- Gravemeijer, K., & Cobb, P. (2006). Design research from a learning design perspective. In J. Van den Akker, K. Gravemeijer, S. Mckenney, & N. Nieveen (Eds.), *Educational design research* (pp. 17-51). Routledge.
- Guo, Y., Sun, S., Puranik, C., & Breit-Smith, A. (2018). Profiles of emergent writing skills among preschool children. *Child & Youth Care Forum*, 47(3), 421-442.  
<https://doi.org/10.1007/s10566-018-9438-1>

- Hall, A. H., Simpson, A., Guo, Y., & Wang, S. (2015). Examining the effects of preschool writing instruction on emergent literacy skills: A systematic review of the literature. *Literacy Research and Instruction, 54*(2), 115-134.  
<https://doi.org/10.1080/19388071.2014.991883>
- Hindman, A. H., & Morrison, F. J. (2011). Family involvement and educator outreach in Head Start: Nature, extent, and contributions to early literacy skills. *The Elementary School Journal, 111*(3), 359-386. <https://doi.org/10.1086/657651>
- Hindman, A. H., Skibbe, L. E., & Morrison, F. J. (2013). Teacher outreach to families across the transition to school: An examination of teachers' practices and their unique contributions to children's early academic outcomes. *Early Childhood Education Journal, 41*(5), 391-399. <https://doi.org/10.1007/s10643-010-0410-4>
- Kim, Y. S., Al Otaiba, S., & Wanzek, J. (2015). Kindergarten predictors of third grade writing. *Learning and Individual Differences, 37*, 27-37.  
<https://doi.org/10.1016/j.lindif.2014.11.009>
- LaRocque, M., Kleiman, I., & Darling, S. M. (2011). Parental involvement: The missing link in school achievement. *Preventing School Failure: Alternative Education for Children and Youth, 55*(3), 115-122.  
<https://doi.org/10.1080/10459880903472876>
- Lee, K., & Rispoli, K. (2019). Head Start impact on fathers' involvement and Black children's development. *Journal of Social Work Education, 55*(4), 777-797.  
<https://doi.org/10.1080/10437797.2019.1567413>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

- Litkowski, E., & Kruger, A. E. (2017). Parents' and teachers' beliefs about school readiness: Working toward developing more culturally relevant interventions. *International Public Health Journal*, 9(2), 211-219.  
<https://www.proquest.com/docview/1929693091?pq-origsite=gscholar&fromopenview=true>
- Marcon, R. A. (1999). Positive relationships between parent school involvement and public school inner-city preschoolers' development and academic performance. *School Psychology Review*, 28(3), 395-412.  
<https://doi.org/10.1080/02796015.1999.12085973>
- McGee, L. M., & Richgels, D. J. (1989). "K is Kristen's": Learning the alphabet from a child's perspective. *The Reading Teacher*, 43(3), 216-225.  
<http://www.jstor.org/stable/20200340>
- McNair, J. C. (2007). Using children's names to enhance early literacy development. *Young Children*, 62(5), 84-89. <https://eric.ed.gov/?id=EJ776613>
- Morphett, M. V., & Washburne, C. (1931). When should children begin to read? *The Elementary School Journal*, 31(7), 496-503. <https://doi.org/10.1086/456609>
- National Early Literacy Panel. (2008). *Developing early literacy: A scientific synthesis of early literacy development and implications for intervention*. National Institute for Literacy. <https://lincs.ed.gov/publications/pdf/NELPReport09.pdf>

- Neumann, M. M. (2018). Maternal scaffolding of preschoolers' writing using tablet and paper-pencil tasks: Relations with emergent literacy skills. *Journal of Research in Childhood Education*, 32(1), 67-80.  
<https://doi.org/10.1080/02568543.2017.1386740>
- Neumann, M. M., Hood, M., & Ford, R. M. (2012). Mother-child joint writing in an environmental print setting: Relations with emergent literacy. *Early Child Development and Care*, 182(10), 1349-1369.  
<https://doi.org/10.1080/03004430.2011.615928>
- Neumann, M. M., & Neumann, D. L. (2010). Parental strategies to scaffold emergent writing skills in the pre-school child within the home environment. *Early Years*, 30(1), 79-94. <https://doi.org/10.1080/09575140903196715>
- Oti-Aina, O. (2021). *T.C.P Writing Collaborative Notebook*. United States Copyright Office
- Pelatti, C. Y., Piasta, S. B., Justice, L. M., & O'Connell, A. (2014). Language-and literacy-learning opportunities in early childhood classrooms: Children's typical experiences and within-classroom variability. *Early Childhood Research Quarterly*, 29(4), 445-456. <https://doi.org/10.1016/j.ecresq.2014.05.004>
- Practical Psychology. (2022, February 28). *Zone of proximal development (definition + examples)*. <https://practicalpie.com/zone-of-proximal-development/>
- Puranik, C. S., Lonigan, C. J., & Kim, Y. S. (2011). Contributions of emergent literacy skills to name writing, letter writing, and spelling in preschool children. *Early Childhood Research Quarterly*, 26(4), 465-474.  
<https://doi.org/10.1016/j.ecresq.2011.03.002>

- Quinn, M. F., & Bingham, G. E. (2022). Examining early composing: Children's differential writing performance based on task context and scoring conceptualization. *Early Education and Development*, 33(1), 139-163.  
<https://doi.org/10.1080/10409289.2020.1857167>
- Quinn, M. F., Bingham, G. E., & Gerde, H. K. (2021). Who writes what when? Examining children's early composing. *Reading and Writing*, 34(1), 79-107.  
<https://doi.org/10.1007/s11145-020-10063-z>
- Reinking, D., & Watkins, J. (2000). A formative experiment investigating the use of multimedia book reviews to increase elementary students' independent reading. *Reading Research Quarterly*, 35(3), 384-419.  
<https://doi.org/10.1598/rrq.35.3.4>
- Rich, S. J. (1985). The writing suitcase. *Young Children*, 40(5), 42-44.  
<https://psycnet.apa.org/record/1986-12987-001>
- Rowe, D. W. (2018). Writing development in early childhood. In C. Bazerman, A. N. Applebee, & V. W. Berninger (Eds.), *The lifespan development of writing* (pp. 55-110). WAC Clearinghouse. <https://wac.colostate.edu/docs/books/lifespan-writing/chapter3.pdf>
- Rowe, D. W., & Neitzel, C. (2010). Interest and agency in 2- and 3-year-olds' participation in emergent writing. *Reading Research Quarterly*, 45(2), 169-195.  
<https://doi.org/10.1598/rrq.45.2.2>
- Saldana, J. (2015). *The coding manual for qualitative researchers*. Sage.
- Saldana, J. (2016). *The coding manual for qualitative researchers*. Sage



- Saracho, O. N. (2004). Supporting literacy-related play: Roles for teachers of young children. *Early Childhood Education Journal*, 31(3), 201-206.  
<https://doi.org/10.1023/b:ecej.0000012138.07501.44>
- Sheridan, S. M., Knoche, L. L., Edwards, C. P., Bovaird, J. A., & Kupzyk, K. A. (2010). Parent engagement and school readiness: Effects of the Getting Ready Intervention on preschool children's social-emotional competencies. *Early Education and Development*, 21(1), 125–156.  
<https://doi.org/10.1080/10409280902783517>
- Skibbe, L. E., Bindman, S. W., Hindman, A. H., Aram, D., & Morrison, F. J. (2013). Longitudinal relations between parental writing support and preschoolers' language and literacy skills. *Reading Research Quarterly*, 48(4), 387-401.  
<https://doi.org/10.1002/rrq.55>
- Sulzby, E., Barnhart, J. E., & Hieshima, J. (1989). Forms of writing and rereading from writing: A preliminary report. In J. Mason (Ed.), *Reading/writing connections* (pp. 31-63). Allyn and Bacon.
- Teale, W. H. (1978). Positive environments for learning to read: What studies of early readers tell us. *Language Arts*, 55(8), 922-932.  
<https://www.jstor.org/stable/41404731>
- Teale, W. H., & Sulzby, E. (1986). Emergent literacy as a perspective for examining how young children become writers and readers. In W. H. Teale & E. Sulzby (Eds.), *Emergent literacy: Writing and reading* (pp. 7-25). Ablex Publishing Corporation.

- Thomas, L. J. G., Gerde, H. K., Piasta, S. B., Logan, J. A. R., Bailet, L. L., & Zettler-Greeley, C. M. (2020). The early writing skills of children identified as at-risk for literacy difficulties. *Early Childhood Research Quarterly*, 51, 392-402.  
<https://doi.org/10.1016/j.ecresq.2020.01.003>
- Torraco, R. J. (1997). Theory-building research methods. In R. A. Swanson & E. F. Holton (Eds.), *Human resource development handbook: Linking research and practice* (pp. 114-137). Berrett-Koehler.
- Tortorelli, L. S., Gerde, H. K., Rohloff, R., & Bingham, G. E. (2022). Ready, set, write: Early learning standards for writing in the Common Core era. *Reading Research Quarterly*, 57(2), 729-752. <https://doi.org/10.1002/rrq.436>
- Vygotsky, L. S. (1978). *Mind and society: The development of higher mental processes*. Harvard University Press.
- Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational Technology Research and Development*, 53(4), 5-23. <https://doi.org/10.1007/bf02504682>
- Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem-solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89-100.  
<https://doi.org/10.1111/j.1469-7610.1976.tb00381.x>
- Zhang, C., Hur, J., Diamond, K. E., & Powell, D. (2015). Classroom Writing Environments and Children's Early Writing Skills: An Observational Study in Head Start Classrooms. *Early Childhood Education Journal*, 43(4), 307-315.  
<https://doi.org/10.1007/s10643-014-0655-4>

## APPENDIX A

### The 3K Classroom Environment



The above picture shows a cross-section of the class. To the right of the class, from the back, is the reading center and science area with a blue board on the wall, the writing center, and the dramatic center.

## APPENDIX B

### The 4k Classroom Environment



The above section shows a section of the 4K classroom. This includes the reading center, the writing center with a blue table, and next to it is the gross motor center, and the carpet area where group time takes place.

## APPENDIX C

### Information Letter to the Director

....., 2021

Dear Director,

.....  
.....

#### INFORMATION LETTER

My name is Oluwaseun Aina. I am a Doctoral Student in the College of Education at Clemson University. With your permission, I would like to conduct a study in your preschool. I will be carrying out this research study with the help of Dr. C. C Bates, a Professor in the Department of Education and Human Development at Clemson University.

The purpose of this study is to examine how parent teacher collaboration can support preschool children's early literacy development. Research suggests that parent teacher collaboration can strengthen children's academic and social development. Children who participate are likely to have a literacy advantage at the start of kindergarten.

I will be working with lead teachers in the 3- and 4-year-old classrooms, 10 children from each classroom and their parents.

Your role will be to give approval to conduct this study, to contact 3- and 4-year-old classroom teachers and request their participation and encourage parents to participate. I have attached the information letters for parents and teachers. These letters will be distributed after your approval.

It is my goal that this study will be beneficial to all the participants.

Please feel free to contact me at ... if you have any questions. Dr. C. C Bates is the Principal Investigator for this research, and she can be contacted via email at ....

I look forward to hearing from you.

Thank you.

## **APPENDIX D**

### **Information Letter to the Parents**

....., 2021

Dear Parent,

#### **INFORMATION LETTER**

My name is Oluwaseun Aina. I am a Doctoral Student in the College of Education at Clemson University who will be carrying out a research study at your child's preschool with the help of Dr. C. C Bates, a Professor in the Department of Education and Human Development at Clemson University

The purpose of this study is to examine how parent teacher collaboration can support preschool children's literacy development. Research suggests that parent teacher collaboration can strengthen children's academic and social development. Your child is likely to have a literacy advantage at the start of kindergarten if he/she participates in this study.

Participating in this study is voluntary. To participate in this study, you will be required to:

- a. Participate in a semi-structured interview before and after the study as well as implementation meetings.
- b. Allow your child to participate in this study.
- c. Provide samples of your child's writing during the semi-structured interviews and during the research study.
- d. Allow your child's teacher to release samples of your child's writing as well.
- e. Continue your daily literacy activities with your child at home and track them using a notebook. This notebook will be provided by the researcher. More information and materials will be provided after the interview.
- f. Participate in bi-weekly Zoom meetings with your child's teacher and other participating parents to discuss how your daily activities are supporting your child's literacy progress.
- g. This program will span the fall semester.

Please feel free to contact me on my cell phone on .... or email at.... Dr. C. C Bates is the Principal Investigator for this research, and she can be contacted via email at [....](#).  
I look forward to hearing from you. Thank you.

## **APPENDIX E**

### **Information Letter to the Teachers**

... .., 2021

Dear Teacher,

#### **INFORMATION LETTER**

My name is Oluwaseun Aina. I am a Doctoral Student in the College of Education at Clemson University who will be carrying out a research study in your preschool with the help of Dr. C. C Bates, a Professor in the Department of Education and Human Development at Clemson University.

I am writing to you to inform you that this research study will be commencing in your class. The purpose of this study is to examine how parent teacher collaboration can support preschool children's literacy development. Research suggests that parent teacher collaboration can strengthen children's academic and social development. Children who participate are likely to have a literacy advantage at the start of kindergarten. Participating in this study is voluntary. To participate in this study, you will be required to:

- a. Participate in a semi-structured interview before and after the study.
- b. Provide writing samples of each participating child in the study during semi-structured interviews and during the duration of the study.
- c. Participate in a workshop/implementation session.
- d. Comment once a week in a communication notebook for each child that participates in this study. The notebook will go from home to school daily.
- e. Participate in a bi-weekly Zoom meeting with the researcher and participating parents to discuss children's literacy progress.
- f. The program will span the fall semester.



Please feel free to contact me on my cell phone on .... or email at ..... Dr. Celeste Bates is the Principal Investigator for this research, and she can be contacted via email at.....

I look forward to hearing from you.

Thank you.

## APPENDIX F

### A List of Practitioner Articles Used in this Study with the Teachers

Cycle	Article
Cycle 1	Byington, T. A., & Kim, Y. (2017). Promoting preschoolers' emergent writing. <i>YC Young Children</i> , 72(5), 74-82.
Cycle 3	<p>Bingham, G. E., Quinn, M. F., McRoy, K., Zhang, X., &amp; Gerde, H. K. (2018). Integrating writing into the early childhood curriculum: A frame for intentional and meaningful writing experiences. <i>Early Childhood Education Journal</i>, 46, 601-611.</p> <p>Gentry, J. R. (2005). Instructional techniques for emerging writers and special needs students at kindergarten and grade 1 levels. <i>Reading &amp; Writing Quarterly</i>, 21(2), 113-134.</p>

## APPENDIX G

### Literacy Tips Sent via Email to the 3K Classroom Parents in Cycle 1

Date: October 19, 2021

Cycle: 1

Week: 1

#### **Dear Parents,**

Once again, thank you for your willingness to participate in this study. I am sorry you have not heard from me. Due to the 3K class closing for a week, we had to hold off on moving forward. I am glad to be reaching out to you today!

#### **The goal of this research**

The goal of this research is to support your child's early literacy skills with an emphasis on early writing skills.

Supporting your child's early writing skills is not to put on the sideline other important skills that you are currently doing with your child which could include:

1. Encouraging play
2. Boosting socio-emotional skills
3. Building communication skills which may include listening, singing, speaking, reading and telling stories.

Rather, supporting your child's early writing skills is expected to enhance and enrich these other important skills.

#### **Research has shown the following:**

- That the building block of early writing begins prior to your child's start in kindergarten.
- The more support your child receives in writing, the more he/she begins to attend to letters, sounds, and words.

#### **Simple ways that you can integrate writing into already existing home literacy practices:**

- Capture your child's ideas and thoughts in writing about the songs he/she sings, what he/she shares during book reading, what he/she is passionate about (name, trains, mermaids, dinosaurs, school, playtime with friends). You can write the ideas your child shares and let him/her see what you are writing.
- Invite your child to try a letter or two. It doesn't matter if it comes out as a scribble. The more practice, the better.
- Share his ideas and thoughts with family, friends, or his classroom so your child knows that writing carries the message.
- Let your child see you writing about what you are interested in (shopping list, work related stuff, songs, writing letters or birthday cards to family and friends) and invite your child to write their own.

### **Simple ways to support your child's writing.**

*Please note that how you decide to support your child's writing should be based on what you know about your child and where they are at. Research shows that children have been supported in their writing in the following ways:*

- **Verbal cues:** This guides the way your child forms the letter on paper. If your child is already beginning to draw lines, circles, and a bit more controlled scribbles, you can use cues like “draw a line and a small curve in front” if your child wants to form a letter b. You will need to make it a practice to model this style so your child understands the cues you choose to use and begins to see what those cues look like on paper when followed.
- **Write for your child to copy.**
- **Provide dotted lines for tracing:** Let your child see how you make the dotted lines for each letter and invite your child to trace it.
- **Sound support:** If your child already knows the sounds of letters and can form letters, you can put sounds together and use this to guide his writing. For instance, if your child asks you to spell bat, rather than give the letter, provide the sounds (b-a-t).
- **Interactive writing:** Write your child's thoughts and ideas and invite them to write a letter or two or a word they already know how to.
- **Hand over hand support:** Sometimes, your child may need hand over hand support to help him/her shape a letter.
- **Demand for accuracy:** Let your child know how to form letters the right way. For instance, if your child wants to write a b and he forms d instead, you want your child to know that b is not d but in a loving and encouraging way.
- **Offer praise and lots of encouragement!**

### **What is expected**

- A notebook will accompany your child home today.
- Use this for writing with your child whenever you can. The goal is to engage in some sort of writing 10 mins a day but this will also depend on other factors.
- This notebook will be used at both home and school daily. Please don't forget to send this book with your child to school each day.

Please let me know if you have any questions.

## APPENDIX H

### Literacy Tips Sent via Email to the 3K Classroom Parents in Cycle 2

Date: November 2, 2021

Cycle: 2

Week: 3

Dear parents,

How are you doing today? I hope very well. Please see a summary of some ideas we shared at yesterday's meeting. Based on the interest, writing level and progress of children, you can try some of these strategies. These strategies are targeted towards (a) helping your child pay attention to letters around the environment (b) develop sound awareness (c) capture your child's ideas on paper (d) help your child to see how letters are formed (e) provide more writing opportunities.

1. **Write A-Z in the notebook:** In your child's notebook, write A-Z in upper- and lower-case alphabets i.e., Aa Bb Cc etc. It is important that your child sees you writing the alphabets. This is to help them with letter recognition and see the proper way of forming letters.
2. **Alphablocks video:** If your child has some TV time, you can allow them to watch Alphablocks on Youtube. This program will help with letter recognition and understanding of how letter sounds come together to form words. Please start with **Alphablocks level 1 videos**. This will be typed into the search box and you will see various videos that fall under this category. **This video is more effective when you also draw upon what they are seeing and watching in the program and use it in your conversations with them or during reading time.** i.e., Do you remember we saw "cat" on alpha blocks and then stretch it as you read C-a-t using the sound.
3. **Point out letters and words in the environment:** You can point out words on printed materials (i.e., road signs, cereal boxes, grocery store) so that your child knows that alphabets in their names can be found in other words.
4. **Point out some simple words to your child during reading and sound it out.** This helps your child to know that the print carries the message.
5. **Let your child own and share their ideas and thoughts:** Your child has fantastic ideas and thoughts about school, siblings, events, or interesting things that has happened. Get them to share this with you and write it in their

notebook. Leave some space for them to try a letter or word you know they are able to write. For instance, if your child says, “I love my teacher and my school. You can say something like, okay, lets write that in your notebook. Your teacher will like to see that. You can use lines to capture those ideas.

This joint writing activity will help you capture your child’s idea on paper and let your child see that writing has a function (for communicating, to remember ideas, to share experiences). You can have your child read this back to you or you read it together. The words or letters you ask your child to write will be based on what you know that your child is comfortable writing. For instance, letter in his or her names.

6. **Motor skill support:** You can support your child’s motor skills through play dough pinching activities, using chalk to write outside, using lacing cards, cutting with the scissors with supervision or even coloring.

7. **Please help fill out the information needed to help track progress and strategies that are working and not working:** (i.e., date, time, who wrote, activity that led to writing, and your comments too).

8. **Keep using the comment section to interact with your child’s teacher.**  
Thanks again for offering to participate in this study. Please let me know if you have any questions.

## APPENDIX I

### Literacy Tips Sent via Email to the 3K Classroom Parents in Cycle 3

Date: November 16, 2021

Cycle: 3

Week: 5

Please see below tips shared from last week's meeting

#### What is working in homes? (Parents voices)-

1. A different letter per night: **Pick a different letter of the alphabet every night, and I write upper case and lower case in the top corner of the page.** Tying in the letter writing activities to families and other activities has been the most helpful thing for her to engage with the letters rather than just drawing whatever she wants.
2. **Hand over hand support** didn't work at the beginning when I tried it with my daughter but two nights ago, she asked me to help her.
3. **Compromising:** I compromise with her by telling her you can write at the back of the sheet but you will write with mum in front of the sheet.
4. **Reading:** We focus on getting L. to read some words like dog, cat, hat, something like that. We focused on reading recently.
5. **Name writing and using this to scaffold other letters:** We get her to write her name. I wrote her name and told her to repeat that. In writing, I started with the easy letter like writing O because if she knows O, then I can let her know that letter C is half of O. After she knows C, I tell her to put a small tail beside it and that forms **C** and then the longer one makes a d and that is the order in which I let her do that. I think that is easy.
6. **. Reward system:** I encourage her to write her name by letting her know if she wants to own a toy, she needs to write her name on it to indicate that it belongs to her. If mum's name is on it, then it belongs to mum.
7. **Sharing child's ideas and thoughts:** I ask him "what is the message you want to send to school today? What are you thinking about? He wants to share and communicate these ideas. He communicates with different letters.
8. **Ask child what your child has written and write it under his writing attempts; modelling; and providing writing prompts:** I ask him what does it mean? What is your story? It gets him excited in writing the letters. I show him

how I write so he sees me do it too. We make writing a morning ritual. I give him prompts like “what do you want to do today?”

### **What is working in the classroom (Ms. Brenda’s voice)**

1. **Modelling of letters:** Sometimes we do it in the air. Last week (week of Nov. 1-5), we did capital T and a lowercase t on a large poster. We invited every child to write this.
2. **Making writing materials available:** We have papers available. We have baskets with paper and pencil and they can take these papers to write notes.
3. **Matching letters with sounds especially beginning sounds and match letters with the letter of their names:** We match letters and sometimes we talk about the beginning sound of a letter. They need to know the letter and the name of the letter. They matched letters with the letter of their name.
4. **Taking children’s dictation and promoting motor skill development through other activities:** We trace, we draw pictures, and they dictate what they have drawn so I can write it. Children sign in their names by attempting to write letters in their name.

### **Other action points**

1. **Write your child’s ideas and thoughts out and invite them to write a letter or more that they can write:** Use this opportunity to interact with them on what they are trying to communicate. Write what they say below their writing attempts.
2. **Let your child write about their day (in the ways they can) or write it with them:** Get children to share about their interesting times in school or home and write this in their notebook. Involve them in writing letters that they can write. For instance, if your child says, “I enjoyed playing with David and Betsy today. We baked cake while playing outside. Leave gaps in this sentence to allow them to write letters that they are now able to. For instance, if your child’s name is Ethan, they might already know how to write the E. So, you will write “I \_njoy\_d playing with David and B\_tsy today” and get your child to fill the blanks with e.
3. **Please fill the information about what literacy activities led to writing in the home. For instance, was it during singing, bedtime story or morning conversations.**
4. **Share other writing samples:** Please fill free to share writing samples other than what you have in the notebook. It could include letters to Santa Clause,

What parents are planning to do:

### **P’s mum**

1. P’s mum wants to watch alphablocks.
2. Tie reading a book to the writing activity. I will use this to bring more words in.
3. Whatever letter we are on, pick it out in the book.



### **S's mum**

1. We started watching the alphablocks and we will want to keep exploring alphablocks.
2. Label things in both Polish and English and make him read it because he is observant.
3. Use chalk outside, let him play with things we want to do, practice outside the book during play and write later in the book to see if he remembered what we did during play.

### **E's parents**

1. Pointing out words and letters in the environment. We read words like “stop” in the stop sign, with the hope that she will eventually be able to make that connection.
2. Be consistent with the book each day.
3. Encourage P to share ideas about what she did in the playground, ask her what story she wants to tell.
4. I like the fill in the gap games. This will be good ideas for us to pursue.
5. Try 1 or 2 alphablocks videos.

### **Ms. Belinda**

1. Keep working with children's interests.
2. I will get a tape recorder because I can't write as fast as they speak. We can make a book and they can write their stories in the book; they can be author and illustrator.

### **Ms. Belinda's suggestion**

1. Children take note of sight words. While reading, you may want to point out sight words like a, an, the, I
2. Label things in the house like table so that children can see how table is spelt.
3. I will try to get a basket with words and pictures so that children can pull one out and see this is a doll and this is how to spell doll and see how to write it if they chose too. This will be some good practice.

## APPENDIX J

### Literacy Tips Sent via Email on to the 4K Classroom Parents in Cycle 1

Date: October 8, 2021

Cycle: 1

#### **Dear Parent,**

Once again, thank you for your willingness to participate in this study.

#### **The goal of this research**

The goal of this research is to support your child's early literacy skills with an emphasis on early writing skills.

Supporting your child's early writing skills is not to put on the sideline other important skills that you are currently doing with your child which could include:

1. Encouraging play
2. Boosting socio-emotional skills
3. Building communication skills which may include listening, singing, speaking, reading and telling stories.

Rather, supporting your child's early writing skills is expected to enhance and enrich these other important skills.

#### **Research has shown the following:**

- That the building block of early writing begins prior to your child's start in kindergarten.
- The more support your child receives in writing, the more he/she begins to attend to letters, sounds, and words.

#### **Simple ways that you can integrate writing into already existing home literacy practices:**

- Capture your child's ideas and thoughts in writing about the songs he/she sings, what he/she shares during book reading, what he/she is passionate about (name, trains, mermaids, dinosaurs, school, playtime with friends). You can write the ideas your child shares and let him/her see what you are writing.
- Invite your child to try a letter or two. It doesn't matter if it comes out as a scribble. The more practice, the better.
- Share his ideas and thoughts with family, friends, or his classroom so your child knows that writing carries the message.
- Let your child see you writing about what you are interested in (shopping list, work related stuff, songs, writing letters or birthday cards to family and friends) and invite your child to write their own.

#### **Simple ways to support your child's writing.**

*Please note that how you decide to support your child's writing should be based on what you know about your child and where they are at. Research shows that children have been supported in their writing in the following ways:*

- **Verbal cues:** This guides the way your child forms the letter on paper. If your child is already beginning to draw lines, circles, and a bit more controlled scribbles, you can use cues like “draw a line and a small curve in front” if your child wants to form a letter b. You will need to make it a practice to model this style so your child understands the cues you choose to use and begins to see what those cues look like on paper when followed.
- **Write for your child to copy.**
- **Provide dotted lines for tracing:** Let your child see how you make the dotted lines for each letter and invite your child to trace it.
- **Sound support:** If your child already knows the sounds of letters and can form letters, you can put sounds together and use this to guide his writing. For instance, if your child asks you to spell bat, rather than give the letter, provide the sounds (b-a-t).
- **Interactive writing:** Write your child's thoughts and ideas and invite them to write a letter or two or a word they already know how to.
- **Hand over hand support:** Sometimes, your child may need hand over hand support to help him/her shape a letter.
- **Demand for accuracy:** Let your child know how to form letters the right way. For instance, if your child wants to write a b and he forms d instead, you want your child to know that b is not d but in a loving and encouraging way.
- **Offer praise and lots of encouragement!**

### **What is expected for the next 2 weeks**

- A notebook will accompany your child home today.
- Use this for writing with your child whenever you can. The goal is to engage in some sort of writing 10 mins a day but this will also depend on other factors.
- A form is attached that will give you an idea of what to track in the notebook.

Also, find attached the implementation calendar so you know what to look forward to. Kindly let me know if you have any questions.

## APPENDIX K

### Literacy Tips Sent via Email to the 4K Classroom Parents in Cycle 2

Date: October 28, 2021

Cycle: 2

Dear parents,

How are you doing today? I hope very well.

I just wanted to give you a summary of what we discussed at last/this week's meeting for the benefit of reference and for parents who couldn't attend the bi-weekly meeting.

Based on the interest, writing level and progress of each child discussed in the meeting, these are the following strategies that we would be trying in the next couple of weeks.

1. **Write A-Z in the notebook:** In your child's notebook, write A-Z in upper- and lower-case letters while they see you do this i.e., Aa Bb Cc etc. This is to help them with letter recognition and see the proper formation of letters.
2. **Alphablocks video:** If your child has some TV time, you can allow them to watch Alphablocks on Youtube. If your child is still on the letter recognition level, you want to allow him or her watch Alphablocks level 1. If your child knows his letters and some words, you may start with level 3. This will be typed into the search box and you will see various videos that fall under this category. This will help your child know the proper sounds of each letter and see how sounds come together to form words.  
**This video is more effective when you also draw upon what they are seeing and watching and use it in your conversations with them or during reading time.** i.e., Do you remember we saw "cat" on alphablocks and then stretch it as you read C-a-t using the sound.
3. **Let your child own and share their ideas and thoughts:** Your child has fantastic ideas and thoughts about school, siblings, events like Halloween, or interesting things that has happened. Get them to share this with you and write it in their notebook. **Leave some space for them to try a letter or word you know they are able to write.** For instance, if your child says, "I love my teacher and my school. You can say something like, okay, lets write that in your notebook. Your teacher will like to see that. You can use lines to capture those ideas. Your child says, "I love my teacher and my school."  
On paper, you make \_ \_ \_ \_ \_ . If your child can write I. Let your child write it on the first dash. Then write love. If your child can write my. Let your child write it on the next dash. Then write

teacher etc. If your child knows how to write S. You can say school starts with S. Write s on the last line and I will write the rest of the letters for you. This joint writing activity will help you capture your child's writing on paper and have your child participate in the writing experience with the letters or words he or she can write. You can have your child read this back to you or you read it together. The words or letters you ask your child to write will be based on what you know that your child is comfortable writing. For instance, letter in his or her names.

This activity will help your child see that his or her ideas matter, can be written and can be read. You can also use this to monitor your child's progress in letters that he or she can write properly. You can refer to the A-Z page to show your child a letter he is trying to write.

4. **Point out some simple words to your child during reading and sound it out.** This helps your child to know that the print carries the message.
5. **Please help fill out the information needed for analysis:** (i.e., date, time, who wrote, activity that led to writing, and your comments too).
6. **Keep sending the notebook to school daily so that your child's teacher can review and comment.**
7. **Motor skill support:** You can support your child's motor skills through play dough pinching activities, using chalk to write outside, using lacing cards, cutting with the scissors with supervision or even coloring.

Thanks again for offering to participate in this study. Please let me know if you have any questions.

## APPENDIX L

### Justification for Use of Article in Cycle 1 for the 4K Classroom

#### Justification for the use of article 1 - Promoting Preschoolers' Emergent Writing

1. From the observation and interview with the 4K teacher, children were encouraged to write their names. This article provided ideas on ways to promote writing to communicate ideas and thoughts beyond name writing.

2a. From observation and from what was gathered from the interview, children spent more time in the centers or outside play. In a whole day, teacher-directed instruction was about an hour. Student directed activity was about four hours.

2b. From the interview, it was noted that learning through play, learning through interaction with peers, socio-emotional development was key for the teacher.

2c. From observation, writing implements were in the writing center and children were encouraged to use them during free play. However, writing implements were not found in other centers apart from the writing center. This article provided ideas on how to integrate writing throughout the day and in different centers.

3. From the interview and observation, the teacher believed strongly that children should learn by themselves with little input from the teacher. ***This article touched on ways that teachers could scaffold writing instruction.***

4. From the interview with parents and the teacher, there was little information found on how the teacher encouraged home school partnerships in writing. ***This article talked about ways that the teacher could facilitate this.***

## APPENDIX M

### Observation Guide

Class: \_\_\_\_\_ Total number of children in class: \_\_\_\_\_

Time of arrival: \_\_\_\_\_

Time of departure: \_\_\_\_\_

Duration of observation: \_\_\_\_\_ Date of observation: \_\_\_\_\_

#### 1. Description of the Classroom Environment

Time Stamp	The Walls	
	Centers  (Book corner, Art Center, Housekeeping Center, Manipulatives etc.)	

	Writing implements/Tools Visible	
	Implements/Tools in use	
	Environmental Print	
	General Activity Ongoing	



2. Children Directed Activity

Time stamp	Center	Number/Gender/Role of children	Activity that children are participating in	Teacher support/activity

3. Teacher Directed Activity

Time stamp	Description of Activity	Location	Number/Gender/Role of children	What teacher did/ Type of support provided by teacher

4. Types of emergent writing observed amongst children (Tick applicable).

Time stamp	Type of writing	Observed examples/ What area of classroom	Child Id____	Child Id____	Child Id____	Child Id____	Child Id____
	Drawing						
	Marks						
	Uncontrolled scribbles						

	Controlled scribbles in repetitive form						
	Letter writing (Readable/Non- Readable)						
	Name writing (R/NR)						
	Word writing(R/NR)						
	Child's description of writing matches what is written						
	Child reads out what has been written using grapho- phonemic awareness						

	Any other observed:						
--	------------------------	--	--	--	--	--	--

5. Types of early writing support observed (Tick applicable).

Time stamp	Type of Early Writing Support observed	More Knowledgeable Other (Teacher/Student)	Child Supported Id_____	Child S. Id_____	Child S. Id_____	Child S. Id_____	Child S. Id_____
	Providing dotted lines for tracing						
	Offering hand over hand support						
	Writing for child to copy						
	Connecting letters to a corresponding						

	shape, object, or name						
	Slowly articulating the word to connect the emphasized sound to the equivalent letter						
	Taking oral dictation of child's idea						
	Interactive writing						
	Demanding for accuracy						

## 6. Notes

## **APPENDIX N**

### **Semi-Structured Pre-Teacher Interview Protocol**

Hello, my name is Oluwaseun Aina. I am going to ask you questions related to children's overall literacy experience in the classroom.

#### **PART A: Classroom Environment and Literacy Practices**

1. What class do you teach?

3-year-old class ( )

4-year-old class ( )

2. What is the age distribution of children in your class?

3. How many children are in your classroom?

4. What are the literacy tools you have in your classroom?

5. Do children have access to technology in the classroom? Yes ( ) No ( )

6. If yes, what kind of technological devices do they have access to?

7. If yes, what do they do with these devices?

8. Please can you describe a typical day in your classroom from arrival to dismissal of children using timestamps?

9. What activities do children do during circle time?

10. What activities do children do during center time?

11. What activities do children do during outdoor play?
12. What activities do children enjoy?
13. During what part of the day do children have free choice time?
14. What do they do during this time?
15. What do you think they learn during free choice time?

PART B: Centers and class activities

16. What are the names of the centers in your class?
17. How many children are allowed at these centers?
18. What activities do children participate in when in centers?
19. What do children learn when playing in centers?
20. Do you interact with them when they are in centers?
21. If yes, in what ways?
22. If no, why?
23. Are there literacy tools provided for children when in these centers?
24. If yes, what are the literacy tools provided?
25. During what part of the day do children have guided activities?
26. What do you do with children during guided activities?

Prompt: small group instruction.

27. Do you use play method or formal method during guided activities? Please explain.

28. What do children learn during these guided activities?

#### PART C: Curriculum

29. What is the name of the curriculum you use in your classroom?

30. What is the curriculum's focus area?

31. How long have you been using this curriculum?

32. In the past, have you used other curriculums in the preschool classroom?

#### PART D: Strategies

33. If yes, have you incorporated some of the strategies from these curricula(s) in your classroom?

34. If yes, what strategies have you incorporated?

35. If no, why?

36. What other strategies do you use in building children's literacy?

37. Why do you use these strategies?

38. Where did you learn these strategies?

39. How does your personal and professional experience impact what you know about building children's literacy skills?



40. Do you challenge children in their learning process?
41. How do you challenge their learning?
42. At the end of the school year, what do you think children should have mastered in your classroom?
43. What do you think children should know and be able to do in kindergarten?
44. What do you think is most important for your children to have when leaving your classroom?

PART E: Children's writing development

45. From your observation and interaction with each child participating in this study, what do they do on paper when a pen or pencil is held?

Prompt: Scribble, marks, drawings, writing of letters, writing words, writing short sentences.

46. Do they do any of the above with the intention of communicating?
47. Overall, how would you rate the writing level of children in your classroom? How many are scribbling, drawing, writing etc.?
48. How do you know when children in your class are ready to write?
49. What age do you think these children should begin to write letters?
50. What age do you think these children will begin to write 2 or 3 letter words?
51. At what age do you think they will be able to write clear messages?
52. Do you support children's writing? If yes, how do you?
53. Do children see you participate in handwriting activities?

54. If yes, what are some of the handwriting activities that children see you engaging in?

55. What kind of writing activities do children engage in?

PART F: Teacher-Parent Communication for Literacy Development.

I am going to ask questions that are connected to relating with parents.

56. What do you think parents must do with their children at home to build literacy skills?

57. What literacy activities do you think parents involve their children in when at home?

58. Do you involve parents in their children's early literacy development? Yes ( )  
No ( )

59. If yes, in what ways? If no, what is responsible?

60. How often do you communicate with parents about children's progress?

Very often

Often

Sometimes

Never

61. What modes of communication do you use in communicating with parents?

62. What do you think parents expect of you as their child's teacher as it relates to literacy development?

63. Does parental expectation inform some of the activities you do with the children in the classroom?

PART G: Demographics

64. What certificates or degrees do you have?

65. How many years of experience do you have teaching children in preschool?

66. Ethnicity:

67. Gender:

Kindly make available one writing sample for each child who is participating in this study. Thank you for participating in this interview

## **APPENDIX O**

### **Semi-Structured Post Teacher Interview Protocol**

Hello, my name is Oluwaseun Aina. I am going to ask you questions related to your overall experience in this research study.

1. From your interaction with parents during bi-weekly meetings and reading of their comments in the notebook, what did you learn about literacy activities that parents involved their children in? Please comment on each participating child.
  
2. Did this finding change how you related with parents concerning children's literacy development, particularly in the area of writing?
  
3. If yes, in what ways?
  
4. Did the professional development meeting, notebook and meetings with parents affect the way you supported children's emergent writing skills in the class? Please explain.
  
5. Did you learn any new strategies about supporting children's emergent writing skills?
  
6. What materials or collaborative efforts were the most beneficial to you?  
(Workshop, interaction with other parents etc.)

7. What were the adjustments you made to your class routine and how do you think this supported children's writing development?

8. When children are supported during a writing task, what are they able to do now that they were not able to do prior to the intervention? Please comment on each participant in the study.

9. How often were you communicating with parents about each participating child's progress during the intervention?

Very often

Often

Sometimes

Never

10. Do you think this will continue after this research? Please explain.

11. How often were parents communicating with you about their children's progress?

Very often

Often

Sometimes

Never

12. What modes of communication were you using to communicate with parents? (Please state for each participating child)

13. Do you think these modes were effective? Why or why not.

14. In your opinion, do you think the intervention enhanced children's writing development?

Kindly make available one writing sample for each child who is participating in this study. Thank you for participating in this interview.

## **APPENDIX P**

### **Semi-Structured Pre-Parent Interview Protocol**

Hello, my name is Oluwaseun Aina. I am going to ask you questions related to your child's overall literacy experience in the home and school.

#### **PART A: Child's demographic information**

1. What is your child's name?
2. How old is your child? Please state the year and month of your child's birth.
3. What is your child's gender?
4. What is your child's ordinal position in the family?

#### **PART B: Literacy practices in the home**

5. In what languages do you speak to your child at home?
6. In what languages do you read to your child at home?
7. What kind of literacy activities do you do with your child at home?

(Prompt: bedtime stories, reading aloud during the day, drawing, identifying letters)

8. What is the general regular routine that you have structured for your child?

9. What period of the day do you spend quality time with your child?
10. Are there other children in your home?
11. If yes, what are their ages and gender?
12. How do they contribute to your child's literacy experience?
13. What literacy activities does your child enjoy?
14. Are there any literacy activities that frustrate your child? If yes, how do you manage them?
15. What literacy tools do you have in your home?  
(Prompt: pens, paper, pencil, board games)
16. Does your child have access to technological devices at home? Yes ( ) No ( )
17. If yes, what kind of technological devices does he/she have access to?
18. What does your child do with these devices?
19. Does your child's use of these devices promote literacy skills?
20. If yes, what kind of literacy skills are promoted through the use of these devices?
21. What strategies do you use in building your child's literacy?



Prompt: Pointing out letters during story time, giving your child opportunity to scribble.

22. Why do you use these strategies?

23. Where did you learn these strategies from?

24. How does your personal and professional experience impact what you know about building your child's literacy skills?

25. What do you intentionally teach your child as it relates to reading and writing?

26. Why do you teach these things?

27. Do you challenge your child during the learning process?

28. How do you challenge your child's learning?

29. At the end of the school year, what do you think your child should have mastered in his/her current classroom?

30. What literacy skills do you think your child needs to have when entering kindergarten?

Part C: Questions about your child's writing development

31. What does your child make on paper when a pen or pencil is held?

(Prompt: Scribble, marks, drawing, writing of letters, writing words)

32. Does your child do any of the above with the intention of communicating?

33. What age do you think your child needs to begin to write letters?

34. What age do you think your child needs to begin to write 2 or 3 letter words?

35. At what age do you think your child should be able to write clear messages?

36. Do you support your child's writing? If yes, how do you?

37. What are some of the handwriting activities that your child sees you engaging in?

38. Does your child see you writing in other languages other than English?

39. If yes, what are the other languages?

40. Is your child encouraged to write in these languages?

41. If yes, how?

#### Part D: Parent – Teacher Communication for Literacy Development

42. Do you work with your child's teacher to improve his/her literacy development? Yes ( ) No ( )

43. If yes, in what ways do you work with your child's teacher?

44. If no, what is responsible for this?

45. What literacy activities does your child do in school?

46. What expectation do you have for your child's teacher as it relates to literacy development?

47. Are these expectations being met? Yes ( ) No ( )

48. What expectations do you have for your child's teacher as it relates to communicating with you?

49. What are the areas that your child's teacher can improve in as it relates to communicating with you?

50. What are the areas that your child's teacher can improve in as it relates to preparing your child for kindergarten?

51. How often does your child's teacher communicate with you about your child's progress?

Very often

Often

Sometimes

Never

52. What modes of communication does your child's teacher use in communicating with you?

53. What do you think teacher expect of you as their child's parent as it relates to literacy development?

54. What do you think teachers expect of you as their child's parent in general terms?

PART E: Parents' Demographics

55. What certificates or degrees do you have?

56. What is your occupation?

57. How does your work influence the time you spend with your child?

58. Is your home a single parent or multiple parent household?

59. Ethnicity:

60. Gender:

Directions: Kindly make available one of your child's writing samples for analysis. Thank you for taking the time to talk with me today about your child's literacy experience.

## **APPENDIX Q**

### **Semi-Structured Post-Parent Interview Protocol**

Hello, my name is Oluwaseun Aina. I am going to ask you questions related to your overall experience in this research study.

1. From your interaction with your child's teacher during bi-weekly meetings and reading of her comments in the notebook, what did you learn about literacy activities that your child was involved in?
  
2. Did this finding change how you related with your child's teacher concerning your child's literacy development, particularly in the area of writing?
  
3. If yes, in what ways?
  
4. Did the idea sheet, notebooks and the meetings with other parents and your child's teacher affect the way you supported your child's writing skills in the home? Please explain.
  
5. Did you learn any new strategies about supporting your child's writing skills?
  
6. What materials or collaborative efforts were the most beneficial to you? (Idea sheet, interaction with other parents, interaction with the teacher etc.)
  
7. What were the adjustments you made to your home routine and how do you think this supported your child's writing development?

8. When your child is supported during a writing task, what is he or she able to do now that he or she was not able to do prior to the intervention?

9. How often were you communicating with your child's teacher about your child's progress during the intervention?

Very often

Often

Sometimes

Never

10. How often was your child's teacher communicating with you about your child's progress?

Very often

Often

Sometimes

Never

11. Has your expectation for ways in which your child's teacher should communicate with you changed? Please explain.

12. What modes of communication was your child's teacher using to communicate with you?

13. Do you think these modes were effective? Why or why not.

14. In your opinion, do you think the intervention enhanced your child's writing development?

Directions: Kindly make available one of your child's writing samples for analysis. Thank you for taking the time to talk with me today about your child's literacy experience.

## APPENDIX R

### Sample of Code Book Developed from each Student's Writing Notebook: Stefan's

#### Code Book

Cycle	Week	Total No of Entries	Entry	Type of Support	Nature of Support	Parents comment
1	1 Oct. 19-22	0		-	-	
1	2 Oct. 25-29	4	1  10/25	Parental Support	Providing more insight into what child had written by commenting in the comment section  Child wrote his name "SEASTIAM"	Parent noted she is teaching Stefan to "sign his name".
			2  10/27	Parental Support	Providing more insight into what child had written by commenting in the comment section  Child wrote "B F T A".	Parent noted in the comment section that "THIS MESSAGE SAID, "I LOVE YOUR CLASS, MS. BELINDA"
			3  10/27	Parental Support	Providing more insight into what child had written by commenting in the comment section.  Child wrote "E I A B I T"	Parent noted that "THIS IS A BIRTHDAY WISH".

*Note.* Notebook entries were grouped according to weeks and cycles. In vivo codes are in quotation marks. The type of support was coded using descriptive codes. This code book was also used to calculate the total number of entries in each cycle and throughout all four cycles.

## APPENDIX S

### Sample of Codes Developed from Ms. Belinda's Classroom Observation

	<b>Cycle 1</b>	
Pre-intervention	Week 1: Oct. 21, 2021	Week 2: Oct. 27, 2021
Foster purposeful Conversations	Foster purposeful conversations	Foster purposeful conversations
Name recognition activities	Encourage children's literacy efforts	letter identification activity (focus on letter I & M)
Encourage independent book reading	Name recognition activity	Letter finding activity (Upper and lower case letter)
Encourage children's writing attempts by giving praise	letter identification activity (focus on letter P)	Encourage singing
Writing outdoor for children to see	Letter finding activity	Tying singing activity to book reading, and letter identification
	Reinforce the use of the notebook among participants	Playing songs
	Read aloud sessions with children	Read aloud session with children
	Encourage independent book reading	Encourage independent book reading
	Make literacy tools (i.e., books, plastic alphabets) accessible.	Encourage sign in when children arrive in class
	Providing feedback in the writing notebook	Encourage children's writing attempts by giving praise
	Class writing activity (Writing lower and upper case letters)	Guiding children on where to write on
	Encourage children's writing attempts by giving praise	Reinforce the use of the Writing notebook while at home
	Instructing children to write instead of color	Cutting activity to support motor control
		Encourage children's writing by nudging them to continue

*Note.* This is a sample of codes developed from the classroom observation during the pre-intervention and cycle 1 stage. These codes do not include all the codes in Cycle 1.



## Appendix T

### Paired Samples Test Results for the 3K Classroom

#### *Paired Samples Statistics*

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	27.583	6	23.3161	9.5188
	Posttest	47.250	6	20.0044	8.1668

## Appendix U

### Paired Samples Test Results for the 4K Classroom

#### *Paired Samples Statistics*

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	42.417	6	24.7799	10.1163
	Posttest	57.917	6	37.5345	15.3234

## APPENDIX V

### Descriptive Analyses showing the Range of Adult Support Entries and their Mean

#### *Descriptives*

Range of adult support entries in notebook			Statistic	Std. Error
Growth	0-5	Mean	6.8750	4.71865
		95% Confidence Interval for Mean	Lower Bound	-8.1418
			Upper Bound	21.8918
		5% Trimmed Mean	6.8611	
		Median	6.7500	
		Variance	89.063	
		Std. Deviation	9.43729	
		Minimum	-2.00	
		Maximum	16.00	
		Range	18.00	
		Interquartile Range	17.13	
		Skewness	.017	1.014
		Kurtosis	-5.653	2.619
	11-25	Mean	23.8750	3.59615
		95% Confidence Interval for Mean	Lower Bound	12.4304
			Upper Bound	35.3196
		5% Trimmed Mean	23.8889	
		Median	24.0000	
		Variance	51.729	
		Std. Deviation	7.19230	
		Minimum	15.00	
		Maximum	32.50	
		Range	17.50	
		Interquartile Range	13.63	
		Skewness	-.102	1.014
		Kurtosis	1.125	2.619
	26-45	Mean	22.0000	3.18198