UNIVERSITY OF LEEDS

AN EVALUATION OF THE EFFECTIVENESS OF A DIALOGIC READING PROGRAMME IN DEVELOPING THE HOME LITERACY ENVIRONMENT, LANGUAGE AND EARLY LITERACY SKILLS OF PRESCHOOLERS IN LOW SOCIOECONOMIC STATUS FAMILIES

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Submitted in accordance with the requirements for the degree of

Doctor of Philosophy

February 2023

Declaration

The candidate confirms that the work submitted is his own, except where work which has formed part of jointly authored publications has been included. The contribution of the candidate and the other authors to this work has been explicitly indicated below. The candidate confirms that appropriate credit has been given within the thesis where reference has been made to the work of others.

The motivation of the investigation of the effectiveness of the dialogic reading programme on the home literacy environment, language and early literacy skills of children from low socioeconomic status comes from discussions with Dr Paula Clarke, Dr Hannah Nash and Dr Catherine Davies. Davut (1) conducted designed the intervention, (2) conducted the feasibility and acceptability study, (3) redeveloped the intervention and (4) conducted the pilot randomized controlled trial.

I dedicate this work to my endless love and best friend Hatice Kübra for her advice, support, patience, and her faith

Acknowledgements

I would like to express my sincere gratitude and appreciation to my supervisors Dr. Paula Clarke, Dr Hannah Nash and Dr. Catherine Davies for their continuous support and guidance with their immense knowledge during my PhD. I am grateful for their kindness and approachability whenever I needed their help. It was an exceptional experience for me to work with them. I am also grateful for the scholarship from the Ministry of National Education, Republic of Turkey during my PhD.

I would like to thank Dr. Judith Hebron for her useful comments at my transfer report and for being my PhD viva examiner. I would like to also thank Dr Lucy Taylor for her useful comments at my transfer report, and Dr. Kelly Burgeoyne for being my PhD viva examiner.

I would like to thank my mother Güli, my father Yusuf and my sisters and brother, and all my family members and friends for their unconditional and emotional support during my 4 years being far from them. Despite the distances, I always felt their presence as they are beside me.

Finally, I would like to thank my wife, Hatice, who has supported me since the beginning of this journey, and my sunshine daughter Meryem Aksa, who joined us in the middle.

Abstract

The purpose of this research was to determine the effects of the 12-week and home-based Dialogic Reading Programme on the home literacy environment, language and early literacy skills of Turkish preschoolers from low socioeconomic background. The research was planned as four stages. First, the Dialogic Reading Programme including shared reading, vocabulary items and narrative skills was developed. Second, the Feasibility and Acceptability study was conducted with 8 parents and their preschool aged children. They conducted the first three weeks of the intervention with their children. They conducted five sessions per week and each session lasted 30 minutes. Semi-structured interviews were held with parents at the end of the study and their views on the program were determined. Third, all elements of the Dialogic Reading Program were reviewed according to parental views and the final version of the programme was decided. Fourth, a Pilot Randomized Controlled Trial was conducted. Fifty preschoolers and their parents took part in the study. Preschoolers were pre-tested on language and early literacy skills. Then, they were allocated to intervention and control groups randomly. All parents completed the Home Literacy Environment Questionnaire. The parents in the intervention group attended parent training sessions. Then, they conducted the intervention through 12 weeks at home. The intervention included five sessions per week and each session lasted 30 minutes. Parents in the control group did parenting as usual. Children were post-tested on the language and early literacy skills at the end of the study. Parents completed the Home Literacy Environment Questionnaire again. Also, semi-structured interviews were held with parents to determine their views about effects of the intervention on their children's language and early literacy skills, and to determine the effects of the lockdown process on the implementation of the program and on parent-child interaction and communication. Results showed that children in the intervention group had significant improvements in language and early literacy skills, but this was not the case for the control group. The home literacy environment of the children in the intervention group enriched more significantly than those in the control group. Also, parents reported that the intervention was funny, useful and beneficial for their children and improved their language and early literacy skills. Parents also mostly mentioned that the lockdown positively affected the implementation of the program and the parent-child interaction and communication. In conclusion, the intervention was found effective on both the HLE and language and early literacy skills of Turkish children from low SES, and the COVID-19 pandemic had both positive and negative effects on the

implementation of the intervention and the interaction and communication between parents and children. Both quantitative and qualitative results are discussed and considered along with other studies in the literature. Finally, the strengths and limitations of the research and implications and suggestions for further studies are presented.

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Abbreviations

SES: Socioeconomic status

HLE: Home literacy environment

DR: Dialogic reading

DRP: Dialogic reading programme

ZPD: Zone of proximal development

HLM: Home literacy model

ID: Intellectual disability

SLI: Specific language impairment

ASD: Autism spectrum disorder

F&A: Feasibility and acceptability

HLEQ: Home Early Literacy Environment Questionnaire

TEL: Test of Early literacy

TELD-T: Test of Early Language Development - Turkish

PAT: Print Awareness Assessment Tool

LI: Language impairment

HI: Hearing impairment

Chapter 1

Literacy Development, Socioeconomic Status, and the Home Literacy Environment

1.1 Introduction

This chapter presents an overview of the literature that provides the background and rationale for the research reported in this thesis. It begins by explaining the major definitions of literacy and introducing the components of early literacy. Then, it examines the potential effects of socioeconomic status (SES) and the home literacy environment (HLE) on literacy development. Finally, the relationships and pathways between SES, HLE and literacy development are considered.

1.2 What is Literacy?

Literacy is seen as a vital skill for the economic and social welfare of human life Purcell-Gates and Tierney (2009), and children who face difficulties at the beginning of literacy acquisition often have poor literacy skills in the future (Dodd and Carr, 2003). It is also defined as key to accessing the school curriculum and considered to be one of the main factors that influences school achievement (Dodd and Carr, 2003).

Historically, there have been two main approaches examining the concepts, skills, and development of literacy. The first is the cognitive perspective, and second sociocultural perspective. There are various approaches under the sociocultural umbrella; therefore, the sociocultural perspective includes more explanations than the cognitive. Both are explained below.

The cognitive perspective proposes a universal developmental process comprising the same sequence of milestones for all learners (Davidson, 2010). For example, Chall (1983) introduced six universal stages, from birth to 18 years old, for the processes involved in reading. These stages are pre-reading, initial reading, fluency, reading for learning, construction and deconstruction. Chall (1983) claimed that these stages are the same for all people, including those who need support. The cognitive perspective has impacted on some influential academic commitments. For instance, (the NELP, 2008) was organized by the National Institute for

Literacy to examine scientific research on the development of early literacy skills in children from birth to five years old, focusing on some cognitive and psycholinguistic skills such as phonemic awareness, reading accuracy and comprehension. The National Institute for Literacy (NELP, 2008) is a collaboration of literacy service providers, foundations, businesses, School Districts and other community partners to equip children in the US with sufficient reading, writing and communication skills.

An alternative approach is the sociocultural perspective, which explains literacy in terms of rules about using knowledge (Cook-Gumperz, 2006). That is, literacy is not only reading and writing, but also a set of socially constructed skills based on ideology and communicative practices (Cook-Gumperz, 2006). The scientist that pioneered this perspective, Vygotsky (1978) suggested that all activities in human life happen within a cultural context, and that language and other communication symbols mediate them. Vygotsky (1978) argued that historical developments of cultural context are helpful for understanding the content of literacy activities such as drawing and shared reading (Davidson, 2010). Additionally, under the sociocultural umbrella, new terms have emerged, such as literacy as a social practice, multi-literacies, media literacies, critical literacy and new literacies (Perry, 2012, Burn and Durran, 2007, Shor, 1999).

The new literacies perspective, also known as 'literacy as a social practice', dates to Street and Street (1984), who discussed the ways in which people use literacy activities for different purposes in daily life. This perspective emphasizes the importance of social relationships because literacy practices are helpful for understanding the relationships between people and the groups or communities in which they live. In this regard, Barton et al. (2000) made some propositions about the nature of literacy, suggesting that there are different types of literacy related to different parts of daily life. There are social and power relationships and patterns in literacy practices. Moreover, literacy practices make sense in terms of social goals and cultural perspectives. Literacy is historically situated. Lastly, literacy practices change, and informal learning appears more frequently in the process of learning (Perry, 2012).

Multiliteracies was a term first suggested by the New London Group in 1996. This perspective focuses on the power of culture and society in which literacy practices happen. However, unlike the social practice perspective, this term also refers to various communication channels and media, and increasing linguistic and cultural diversity (Cope and Kalantzis, 2000). Multiliteracies theory suggests multimodality, which in turn implies the proliferation of

multimodal ways of making meaning whereby the written word is increasingly part of visual, audio, and spatial patterns.

Critical literacy defines literacy as both word and world and accepts that it is not only a cognitive skill but also a social skill. Freire and Macedo (1998) emphasized that literacy is a mental process which includes taking a written word, connecting it to the world and using it for empowerment. Shor (1999) also argued that literacy is a social action that is mediated, using language and emphasized reading and writing as two processes of consciousness, while media literacy is another contemporary term aligned with the sociocultural perspective, which draws attention to connections between print and media (Burn and Durran, 2007). It is also accepted as a social and cultural term, and known as "the ability to access, analyse, evaluate and communicate messages in a variety of forms'' (Hobbs, 2001).

In addition to historical and contemporary perspectives, in recent years, some researchers have tried to establish a definition of literacy that applies to all, including those who need extensive support (Keefe and Copeland, 2011, Kliewer et al., 2006). For example, Keefe and Copeland (2011) determined five principles of a comprehensive definition: firstly, all people can be literate; secondly, literacy is both a human right and a basic part of life experience; thirdly, it requires a relationship with others; fourthly, literacy contains the anticipation that interaction is possible; and finally, it is a collective responsibility of every person in society.

Overall, it can be argued that literacy is a fundamental human right for all people, no matter their development, disability, gender, nation, language or SES. It includes cognitive processes such as decoding and making letter-sound correspondences. Furthermore, it is a social skill that is helpful when connecting with other people and looking to understand our position in society. Lastly, it is a process containing a perception oriented to the world, and a mediator between print and media.

Among the perspectives mentioned above, the sociocultural theory of Vygotsky (1978) guided the approach of the current research. As mentioned before, the sociocultural approach states that learning is a social skill and develops as a result of natural dialogue and interaction between learner and his/her environment. It states that learning differs from person to person, not in certain stages for everyone. The dialogue and interaction mentioned in this theory is based on the talk between the child and the adult in the child's environment (Mercer and Howe, 2012). In order for this talk to take place, the child language acquisition should be improved. It has been stated that language acquisition is effective on both collective and individual thinking

(Vygotsky, 1978). Also Cazden (1972) and Barnes (1976), two pioneers of this theory, argued that to provide child engagement, support child learning and improve child outcomes, talk to him/her. There are also research findings that support these views. It has been determined that the learning outcomes of children improved as the interaction strategies increase in their classroom (Mercer and Littleton, 2007, Dawes, 2004). The current research believes that, in parallel with this approach, learning can differ from person to person and it develops as a result of social interaction and talk. Therefore, it uses adult-child dialogic reading (DR), which required social interaction for learning new concepts and solving problems. DR is based on the strategies that make talk and social interaction essential. The relationship between DR and sociocultural perspective is also explained in detail in the section of 3.3.1 Theoretical Framework.

1.3 What is Early Literacy?

Early literacy, referred to by Clay (1966) as "emergent literacy", corresponds with the period between birth and the formal learning of reading. This highlights that reading development does not begin only when children start primary school, and it explains the development of literacy in the early years of life.

Children born in literate societies join a written world from the first days of their lives. They live with books, magazines, newspapers and shopping list at home, and with posters, signs, stickers, etc. in preschools. Children can use these materials in activities such as choosing a television channel by recognizing the corresponding symbol in the TV guide, preparing a celebration card, and reading stories. Thus, they can learn many reading rules before they start to formally learn to read (Justice and Sofka, 2013).

Gunning (2012) summarized these rules as follows: understanding the relationship between reading and writing; realizing the difference between print and picture; understanding writing and page directions; dividing sentences into words; and understanding the function of space and capital letters in writing. These understandings were categorized by Tracey and Morrow (2017) as *"concepts about print"* and *"concepts about books".* These concepts can help young children to recognize the relationships between spoken and written language. Because the emergence of literacy has a basis in the awareness of the relationship between spoken and written language, Tracey and Morrow (2017) argued that the early literacy perspective is consistent with the Whole Language Theory proposed by Goodman (1967) and Smith (2004).

According to this theory, reading develops naturally, like oral language, in an interactive and rich literacy environment.

All of the rules, knowledge and concepts that children acquire about reading and writing before formal literacy teaching are defined as early literacy skills by Ezell and Justice (2005). Even though children do not know how to read and write structurally, they can acquire the necessary skills via their observations and experiences in their environments (Justice and Kaderavek, 2002).

Early literacy skills improve in social contexts, including experiences such as interactions and observations. The HLE is identified as being a social context of central importance, in which children can interact with family members using literacy materials (Hamilton, 2013). Therefore, the early literacy perspective is seen as consistent with Vygotsky's (1978) social constructivist theory.

Children who grow up in an environment which supports early literacy have well developed skills regarding reading and writing concepts at school. Most of these children know how to read and write structurally when they start primary school (Dickinson and Tabors, 2002). Gunning (2012) suggested that early reading concepts are acquired gradually during the early years. Consistent with this, Tracey and Morrow (2017) associated the early literacy perspective with the Stage Models of Reading theory outlined by Frith (1985), Ehri (1991) and Chall (1983), which explain literacy development in four stages: namely, 1) pre-alphabetic stage, 2) partial alphabetic stage, 3) full alphabetic stage and 4) consolidated alphabetic stage. Early literacy skills are said to develop during the pre-alphabetic and partial alphabetic stages. Morrow (2012) explained that reading, writing, listening and speaking are four interrelated components of the early literacy perspective, meaning that well-developed speaking and listening skills enable children to have proficient reading and writing skills in the future. Tracey and Morrow (2017, p.103) summarized the three tenets of the early literacy perspective as "(1) listening, speaking, reading and writing are interrelated; (2) literacy development is continuing and ongoing; and (3) parents have a powerful influence on children's literacy development".

Finally, early literacy contributes to later reading skills (Justice and Ezell, 2002). These skills are considered to be fundamental in formal reading and writing education. In the literature, a significant number of studies have shown that early literacy skills predict later reading performance (Spira et al., 2005, Cabell et al., 2011, Vellutino et al., 2003, Missall et al., 2007, Nelson, 2005, NELP, 2008). Those skills are phonological awareness, vocabulary knowledge,

letter knowledge, listening comprehension and print awareness (Lonigan and Whitehurst, 1998, Justice and Ezell, 2001, Justice and Kaderavek, 2002). Specific early literacy skills and their relationships to later reading success are examined in subsections 1.3.1 to 1.3.5.

1.3.1 Phonological Awareness

Aarnoutse et al. (2005, p.2) defined phonological awareness as "the implicit and explicit knowledge that people have of the sound structure of spoken words", and, according to Stuart and Stainthorp (2015), there is a learning sequence of phonological awareness. Children initially become sensitive to larger units of sounds such as sentence, words and syllables rather than phonemes. Then they can recognize initial and final sounds. They next recognize the phonemes in the middle of syllables, or words, because middle sounds are the most difficult for young children to isolate.

Phonological awareness has a significant place in early literacy processes, and there is a strong positive relationship between this skill and decoding (Bryant and Bradley, 1987, Shaywitz and Shaywitz, 2005). To be able to decode, the child has to understand that spoken words are made up of phonemes and that letters represent these phonemes. The first step is learning letter-sounds (alphabet), then sounding out each letter in a word, holding these sounds in order in short term memory, and finally blending them together. Reading achievement, including both reading accuracy and comprehension in primary school, is strongly related to phonological awareness in the preschool period (Kjeldsen et al., 2014, Lundberg et al., 1988, Maclean et al., 1987, Yopp and Yopp, 2000, Yeh and Connell, 2008). Therefore, it is important for preschool settings to encourage the development of phonological awareness by engaging children in suitable activities and games (Stuart and Stainthorp, 2015).

1.3.2 Vocabulary Knowledge

Vocabulary knowledge has been defined by Neuman and Dwyer (2009, p.2) as "[…] the words we must know to communicate effectively: words in speaking (expressive vocabulary) and words in listening (receptive vocabulary)". Word reading and reading comprehension processes depend on the development of vocabulary knowledge (Stuart and Stainthorp, 2015). The Lexical Quality Hypothesis (LQH), which is a theory investigating the relationship between vocabulary and reading, suggests that reading comprehension and other reading skills are related to variation in the quality of word representations (Perfetti, 2007). The theory

suggests that skilled comprehenders learns new word more effectively than their peers with low comprehension skills (Perfetti, 2007). The relationships between vocabulary and reading skills have been examined in both the preschool period, longitudinally from the preschool to the school period and simultaneously in the school period. First, the relationship between vocabulary and reading skills starts in the preschool period with the relationship between vocabulary and phonological awareness. Although most of the multivariate studies in the literature support that oral language does not have a direct role in decoding development, phonological awareness and spoken language are significantly related in the preschool period (Lonigan et al., 2000, Lonigan and Whitehurst, 1998, Storch and Whitehurst, 2002). Several studies have shown that there are short-term and longitudinal relationships between the vocabulary and phonological awareness of children in the preschool period (Cooper et al., 2002). Second, the longitudinal relationship of vocabulary in the preschool to the school reading success has been also examined and a significant number of the studies have shown this relationship (Beck et al., 2002, Hart and Risley, 2003, Liu et al., 2010, Verhoeven and Perfetti, 2011). They have shown that children with better vocabulary skills become better readers than their peers. Third, the relationship between vocabulary and reading skills in the school period was also investigated. For example, Ouellette (2006) determined the role of the breadth and depth of vocabulary in various reading skills. Sixty Grade 4 students with typically development took place in the study. Students were assessed on measures of vocabulary including receptive and expressive vocabulary breadth (the number of words with known meaning), depth of vocabulary knowledge (how well the meanings are known). They also were assessed on reading skills including decoding, visual word recognition, and reading comprehension. Results showed that receptive vocabulary breadth significantly predicted decoding performance. Results also showed that depth of vocabulary predicted reading comprehension whereas expressive vocabulary breadth significantly predicted reading comprehension. Overall, these results showed that reading performance in school period is related to vocabulary skills in the same period.

1.3.3 Print Knowledge

Print knowledge or print awareness is explained by Justice and Ezell (2001, p. 208) as "children's ability to recognize the function and form of print and the relationship between oral and written language". It is defined as knowing fundamental features such as the expectations

that writing makes sense, spoken words are expressed using certain symbols, and a written text is read from left to write or from top to bottom (Justice and Ezell, 2002).

Children's print awareness develops as they gain experience in their environment. Due to these experiences, most children can distinguish text and pictures in books when they reach 12 months (Justice and Sofka, 2013). Furthermore, children who can distinguish text and pictures can recognize some letters on signs and some words such as their names or the name of a storybook when they reach the second and third years of life (Justice and Sofka, 2013). These children can read some simple words in books when they are four or five years old, and, finally, when they reach the age of six, they may be familiar with and even adopt several functions of writing (Justice and Sofka, 2013): for example, writing letters and words, writing postcards, making a list, drawing cartoons, signing, and writing poetry (Farver et al., 2007, Pullen and Justice, 2003).

1.3.4 Letter Knowledge

Letter knowledge or alphabet knowledge is an important skill for the transition to formal reading and writing processes (Treiman and Rodriguez, 1999). In writing systems with an alphabet, children must have the knowledge that written language consists of phonemes, and that it can be divided into these sounds, which are represented with letters (Aktan, 2001). Letter knowledge is important for children's learning of sounds and their ability to read words, and it is a prerequisite for phonological awareness (Kargin et al., 2015, Johnston et al., 1996). Alphabet knowledge is one of the best predictors of reading fluency in the first year of schooling (Adams, 1990, Karakelle, 2004) and later reading success as well as an indicator of richness in the HLE, which influences reading development (Burgess et al., 2002). Muter et al. (2004) found that letter knowledge and phoneme sensitivity are two predictors of later word recognition. In addition, reading fluency in primary school is strongly related to letter knowledge during the preschool period (Denton and West, 2002, Leppanen et al., 2006, Evans et al., 2006)

1.3.5 Listening Comprehension

Listening is assessed through answering questions about events in a text (Florit et al., 2009, Burgoyne et al., 2018). It is accepted that children who give correct answers to the questions have well-developed listening comprehension skills, but children who cannot answer them

have poor listening comprehension skills (Kargin et al., 2015). It is also assessed through retelling and summarising the story in the text (Gazella and Stockman, 2003). There is a strong relationship between listening comprehension and vocabulary (Kargin et al., 2015), and listening comprehension and vocabulary have positive effects on future reading comprehension (Kargin et al., 2017, Zhang and Annual, 2008).

1.4 Socioeconomic Status and Its Relationships to Literacy Development

SES is one of the most widely studied factors in education research because it is suggested that SES is associated with the development of children at different stages of their lives pervasively and throughout childhood. A meta-analysis of 19 studies conducted by Letourneau et al. (2013) showed a significant relationship between SES and children's behavioural, cognitive and language development. SES is thought to consist of variables which influence the quality of the environment that supports or limits children's developmental potential (Phillips and Shonkoff, 2000). It is typically measured by the combination of at least two variables, including parental income, parental education, marital and occupation status, home resources, postcode and occupational prestige, etc. (Ensminger et al., 2003). Parental income is an indicator of SES because it shows potential economic and social opportunities for children (Sirin, 2005). Secondly, parental education is another strong indicator of SES because it affects the quality of parent-child activities and is associated with parental income (Sirin, 2005). The third factor is occupation, which is highly correlated with parental education and income (Sirin, 2005). The last indicator is home resources, which includes all the materials and services that children can benefit from during their development (Sirin, 2005). There is consensus that these components together represent SES better than any of them alone (Ensminger et al., 2003).

SES has been correlated to certain cognitive, socioemotional and health outcomes from birth that continue through the whole lifespan (Bradley and Corwyn, 2002). In the second half of the twentieth century, a great interest in SES emerged, and many studies including SES and child's cognitive and academic development were conducted that discovered a strong association between SES and child development. Numerous studies have shown that low income and low parental education levels are associated with low school achievement and low IQ levels (Duncan et al., 1994, Kennedy et al., 1963, Zill et al., 1995). Some studies have found that maternal and paternal education, among all SES variables, are the best predictors of cognitive development (Mercy and Steelman, 1982, Scarr and Weinberg, 1978). Some studies have

found that SES is an indicator of verbal skills (Mercy and Steelman, 1982) and language proficiency skills (Hart et al., 1997). Moreover, SES was found to be related to differences in rates of school attendance and number of school years completed (Brooks-Gunn and Duncan, 1997).

Associations between low SES and the language, cognitive, socioemotional and physical development of young children have been well established (Evans, 2004, McLoyd, 1998), alongside a suggested strong relationship between SES and academic and cognitive skills (Sirin, 2005, Bursuck and Damer, 2007, Cabell et al., 2011, Dickinson and McCabe, 2001). Letourneau et al. (2013), in a systematic review, discussed seven studies of language and literacy development, and found that children classed as higher SES had better language skills than those classed as lower SES. There were also some studies showing an association between SES and literacy development (Korat et al., 2007, Korat and Levin, 2002). For example, D'Angiulli et al. (2004) investigated this association longitudinally in the Canadian context, measuring children's reading, phonological awareness and spelling skills from kindergarten to third grade. They also measured children's SES levels, considering 10 indicators including parental education, income and occupation. Results showed that although the association between SES and reading failure decreased at third grade, it was significant in earlier years.

Early literacy development has also been shown to be associated with SES (Duncan and Magnuson, 2013). When compared to children with higher SES, children with lower SES have poorer early literacy skills, which become necessary for later academic success when they start primary school (Teale, 1986, Korat, 2005, Strang and Piasta, 2016, Neumann, 2016). It seems that SES associates with later reading success (Snow et al., 1998, Hamilton, 2013).

Some studies have examined whether SES associates with specific early language and literacy skills including phonological awareness, print and letter knowledge, and vocabulary (Korat, 2005, Strang and Piasta, 2016, Neumann, 2016). Korat (2005) compared children with low and middle SES, and categorized early literacy components as contextual (print functions, environmental print, identifying literacy activities) and non-contextual (phonemic awareness, names of letters and print concept), according to Whitehurst and Lonigan (2001, 1998b). The first aim of the study was to compare the different SES groups in terms of progress in contextual and non-contextual components; the second was to examine potential relationships between these components, and the third was to determine which component skills best predict word recognition and emergent writing abilities. The study was conducted with 70 children, including 34 and 36 children from low- and middle-SES families, respectively. Results

indicated that there was a strong correlation between contextual and non-contextual skills, and low-SES children scored lower than middle-SES children on non-contextual but not on contextual measures. Unlike contextual components, non-contextual measures predicted word recognition and emergent writing skills. It was suggested that a probable reason for the differences between non-contextual skill levels was that the children from low-SES families had less exposure to literacy activities at home than their middle-SES peers did.

Similarly, Strang and Piasta (2016) longitudinally observed and compared the initial performance and developmental progress of print awareness, phonological awareness and letter knowledge of children from different SES over a period of one year. The study included 57 children, aged from two to five years old, with most of them aged three or four. They collected data for letters and sounds at three time points, and for print awareness and phonological awareness at the end of the year. Analyses indicated that compared with children classed as higher SES, children classed as lower SES knew fewer of the names and sounds of letters at the beginning of the year. Children's initial performance and SES-predicted phonological awareness were recorded at the end of the year; however, unlike the SES, only the initial performance predicted print awareness at the end of the year. Results of the last measure showed that the rate of development was not correlated with SES differences and was not a predictor of end of year performance but rather related to the initial performance of early literacy skills and a predictor of phonological awareness at the beginning of preschool.

Letter-sound knowledge, as an early literacy skill, includes three essential components: namely, letter-sound recognition, letter-sound recall, and letter reproduction. Dodd and Carr (2003) compared proficiency in these three tasks of letter-sound knowledge to each other in a study including 83 children aged between four years and 11 months and six years and four months. Participants were grouped into high-SES and low-SES sets. Results indicated that children in both groups performed letter-sound recognition better than both letter-sound recall and letter production. In addition, children with higher SES scored better than children with lower SES across all tasks.

Lastly, the vocabulary knowledge of children with lower SES has been shown to increase more slowly than children with higher SES (Rescorla and Alley, 2001, Feldman et al., 2000, Hart et al., 1997). Two main reasons for these differences could be the home learning environment and language-learning experiences (Linver et al., 2002, Hoff and Naigles, 2002), two factors that encourage children to be part of an interaction. Hoff et al. (2002) investigated the relations between SES and parenting. Results showed that mothers with lower SES talk to their children

less than mothers with higher SES. In addition, they found lower-SES mothers asked fewer questions and used a smaller range of vocabulary while talking with their children. These findings may be helpful to understand the relation between SES and language development. Similarly, Hoff's findings (2003) support the relationship between SES and language and vocabulary development. She measured the vocabulary knowledge of children with middle and high SES and examined natural interaction between them and their mothers, with 33 mothers with high SES and 30 with middle SES and their children participating in the study. Hoff (2003) found that children with high SES had larger productive vocabularies than children with middle SES and that maternal speech accounted for the differences between the performances of high- and middle SES children.

1.5 Home Literacy Environment

HLE is identified as the home environment wherein all resources or opportunities are available for children, and its effects on early language and literacy development has become of increasing research interest (Roberts et al., 2005, Lonigan et al., 2000, Sénéchal and LeFevre, 2014, Martini and Sénéchal, 2012).

In the literature, HLE is generally conceptualized almost in the same way and based on similar components. Most studies addressing and conceptualizing HLE are in western countries including North America and Europe. First, as part of two studies, DeBaryshe (1995) examined the HLE of 60 low SES preschoolers and then 56 peers with working-class families. The preschoolers attended both studies were African-American. DeBaryshe (1995) dealt parental demographics and reading habits as key components when conceptualizing HLE and suggested that both of them support parental reading beliefs, and three of them support parent-child activities at home. Unlike DeBaryshe (1995), Sénéchal and LeFevre (2002) examined the HLE of 110 Canadian preschoolers with low SES. All children were in English spoken home. They conceptualized HLE as home experiences. The home experiences included two key components namely shared reading and direct teaching. HLE was also conceptualised by Hamilton (2013) examining the HLE of 245 British children whose families are at risk of dyslexia and their typically developing peers. Hamilton (2013) conceptualized HLE more broadly under two main concepts, namely familial context and HLE context. The familial context included SES, parental reading habits and parental reading beliefs whereas the HLE context included shared reading, direct teaching and child interest. Hamilton (2013) suggested

that the components of the familial context are the foundation of the HLE context and are effective in increasing HLE's quality. Marjanovič Umek et al. (2005) examined the HLE of 353 Slovenian preschoolers. Samples were chosen from different regions of Slovenia. Marjanovič Umek et al. (2005, p. 1) identified five components of HLE: "Stimulation to use language, explanation (F1), Reading books to the child, visiting the library and puppet theatre (F2), Joint activities and conversation (F3), Interactive reading (F4) and Zone-of-proximal-development stimulation (F5)". They found that all HLE components, except F4, were positively associated with level of maternal education. As for the Asia context, Zhang et al. (2020) examined the HLE and reading development of 159 Chinese pre-schoolers. They conceptualized HLE under three components, namely formal literacy experiences, informal literacy experiences, and access to literacy resources. They found that formal literacy experiences and access to literacy resources predicted reading comprehension. However, Informal literacy experiences were not found associated with any literacy skill. As for the Middle East, Aram et al. (2013) examined the HLE of 88 Arabic-speaking children and the HLE's relations to literacy development. They conceptualized HLE as shared book reading and joint writing. Results showed that both shared book reading and joint writing were asccoiated with children's achievements at the end of first grade.

Overall, the term of HLE has been studied in different countries and consequently conceptualized. The term has been dealt with similarly in all studies, but not totally the same. In all studies HLE represented all materials and activities provided by adults to children in the home environment. Phillips and Lonigan (2009) reviewed the studies focusing on conceptualising HLE and explained its components as follows: functional uses of literacy; parent's and child's interest in reading; parental attitudes towards reading; parent's educational background; parental teaching and modelling of literacy skills; library use with the child; literacy artefacts; parental encouragement; and value of reading. According to DeBaryshe et al. (2000), when sufficient HLE components (determined measuring via questionnaires and surveys) are presented, children become familiar with literacy activities and materials, become more self-confident about engaging in reading activities, and discover literate behaviours and teaching strategies when joining with parents in these activities. Table 1 provides summary information on conceptualizing HLE in different contexts.

Table 1

Conceptualizing HLE in Different Contexts

Reference	Context	Conceptualising
DeBaryshe (1995)	USA	Parental demographics Parental reading habits
Sénéchal and LeFevre (2002)	Canada	Shared reading Direct teaching
Hamilton (2013)	United Kingdom	Familial Context (SES, parental reading beliefs and habits) HLE Context (shared reading, direct teaching and child interest)
Marjanovič Umek et al. (2005)	Slovenia	Stimulation to use language Reading books to the child, visiting the library and puppet theatre Joint activities and conversation Interactive reading Zone-of-proximal-development stimulation
Zhang et al. (2020)	China	Formal literacy experiences Informal literacy experiences Access to literacy resource
Aram et al. (2013)	Israel	Shared book reading Joint writing

While HLE was synthesized into the research, regardless of the context, the research often considered it with SES components and language and early literacy development. The research examined how the HLE quality associates with SES backgrounds and how language and early literacy skills related to the HLE quality. These correlational relationships are described in the sections 1.6, 1.7, and 1.8.

1.6 The Relationships between Home Literacy Environment and Literacy Development

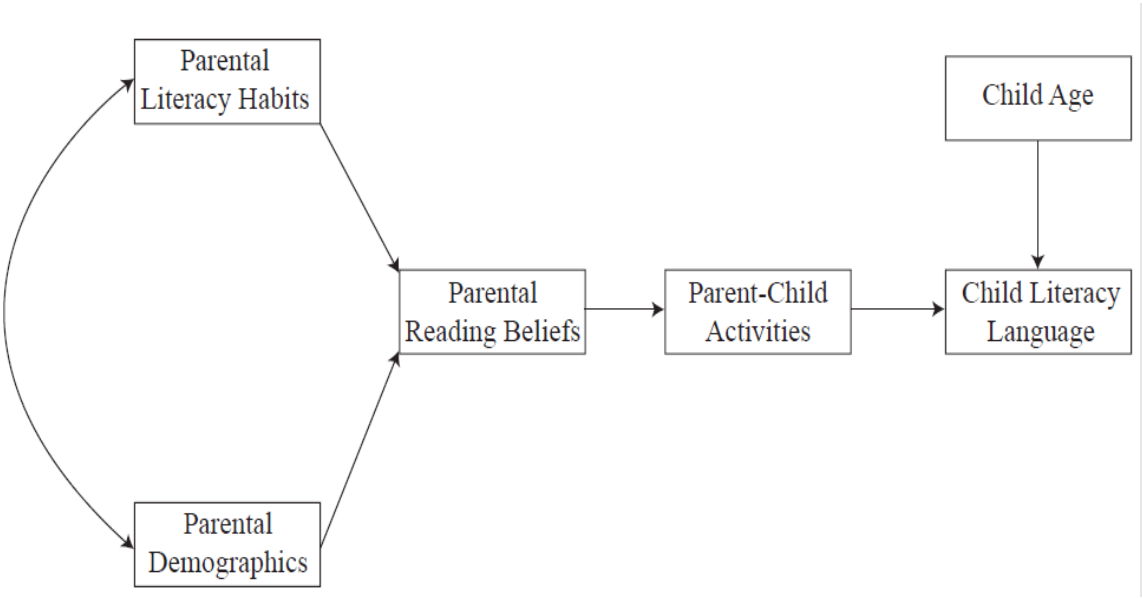
It has been well documented that parents play a vital role in the early language and literacy development of children in the home. Parents can create home literacy resources and support their children to use them, and these resources include materials (storybooks, pencil, paper etc.) and activities (conversation, shared reading etc.) that support the language and literacy development of children (Sirin, 2005). A considerable number of studies have suggested associations between HLE and language and literacy development. This research has focused

on the effectiveness of various components of HLE, such as shared book activity, visiting libraries, etc.

Also, DeBaryshe (1995) examined parental demographics, HLE activities and child's development, and found positive associations between them, as shown in Figure 1.

Figure 1

DeBaryshe's Model of Home Literacy Environment and Literacy Development (1995)



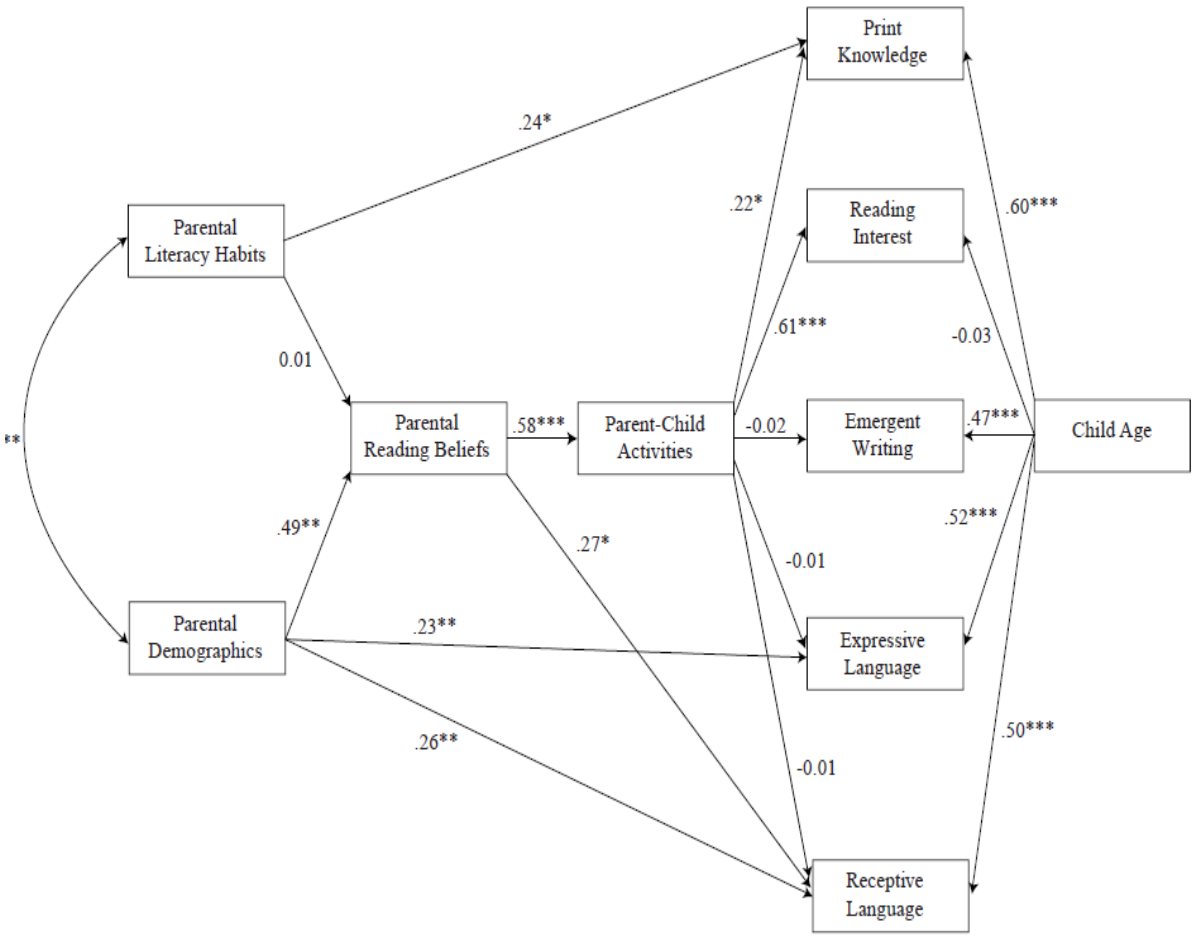
Although the descriptive figure presented above by DeBaryshe (1995) is used to support correlational relationships between HLE and language and early literacy skills in this study, all data was collected at a single point in time. It was believed that parental beliefs drive parent-child activities and support child's language and literacy development. However, no analysis was done to determine which parental beliefs encouraged which parent-child activity and which activity developed language and literacy skills. Also, data was not collected to show that how parental beliefs shaped and affected parent-child activities in time. Therefore, longitudinal data is needed in order to be able to conduct this type of analysis.

Weigel et al. (2006) tested and expanded DeBaryshe (1995)'s model and considered home literacy in terms of parental literacy habits, parental reading beliefs, parent–child literacy and language activities. They examined the associations between these components and their longitudinal relationship to the early language and literacy skills of preschool children. They found that parental literacy habits were related to parents' reading beliefs, and language and

literacy activities were predicted by parent's reading beliefs and reading interests, and children's print knowledge was associated with language and literacy activities at home. Moreover, children's receptive and expressive language skills were found to be related to parent's demographic features. Children who had parents with higher levels of education, positive school experiences, high literacy skills and incomes, expressed themselves and understood other people better. The findings of Weigel et al. (2006) were presented in Figure 2 below.

Figure 2

Findings of Weigel et al. (2006) regarding DeBaryshe's Home Literacy Environment and Literacy Development Model



The relationships between HLE and child's language and early literacy development has been studied in diverse cultures and nations. For example, Yeo et al. (2014) investigated the associations between different components of HLE and their relations to language and early

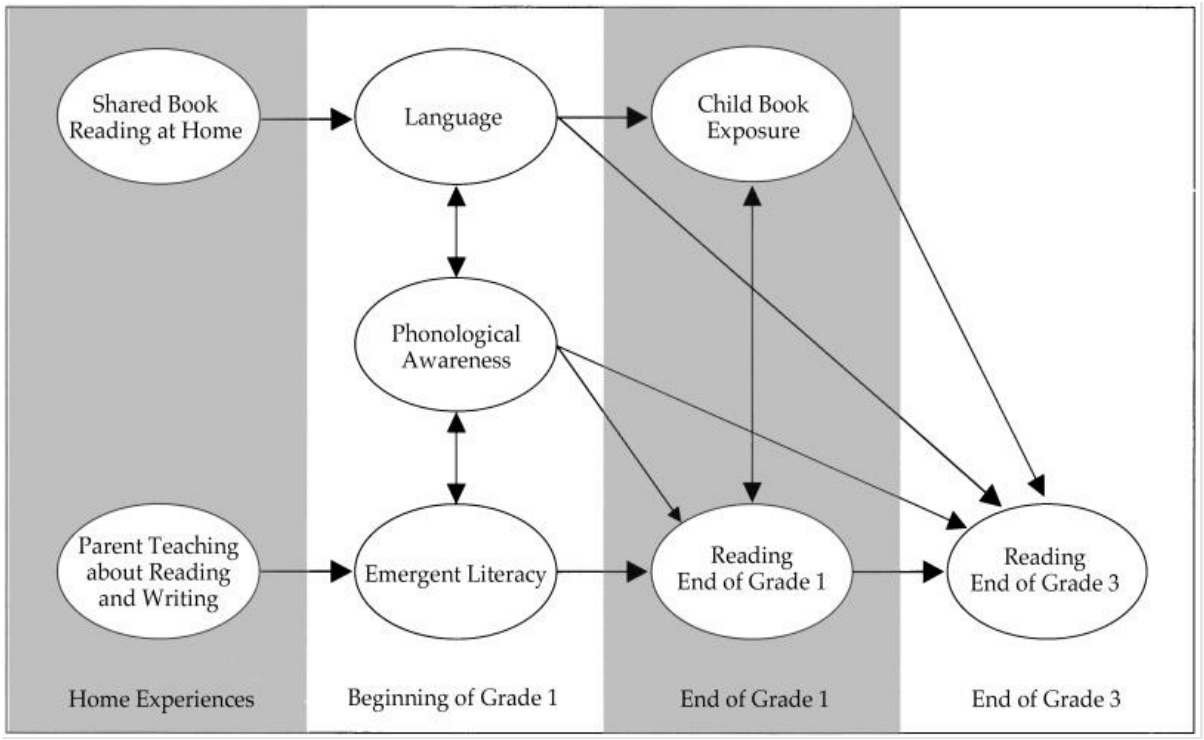
literacy skills of children from Singapore, with 193 six-year-olds and their parents participating in the study. Results showed that two components of HLE – parent's beliefs about reading and home literacy activities – had substantial and positive correlations with early literacy and reading motivation of children. When compared with parental beliefs, home literacy activities explained individual differences in reading outcomes better. However, there were some limitations of the research. First, data on child interests was collected from parents, not children. If the data was collected directly from the children, more reliable findings could have been obtained. Second, it examined the relationship of fewer HLE components to children's language and early literacy skills than the study of Weigel et al. (2006). More critical analyses could have been done if more components had been examined in the study. Lastly, the preschools were not randomly selected. The preschools were suggested by the Ministry of Social and Family Development. This made it difficult to generalize the findings to other cultures in Singapore and to other contexts around the world.

Sénéchal and LeFevre (2002) tried to examine and formulate components of HLE and its relationships to language and early literacy and reveal various pathways in literacy development. To define the HLE and to determine its effects on literacy development of children, Sénéchal and LeFevre (2002) created the home literacy model (HLM). They investigated the relationship between two types of home literacy activities (storybook exposure and literacy teaching) and early literacy and later reading achievements of children from middle- and high-SES backgrounds. The model showed various pathways of literacy development from preschool to end of Grade 3. In the first study, at the beginning, parents completed a questionnaire about the HLE of their children, which included some questions about frequency of literacy activities (shared reading and visiting a library) and the number of literacy materials such as storybooks. Children's language and early literacy skills were then assessed in kindergarten and Grade 1. Their reading achievements were also assessed at the end of the Grade 1 and Grade 3. It was found that whereas shared book-reading predicted receptive language, direct instruction about reading and writing predicted development of early literacy skills. Furthermore, both language and early literacy skills were related to phonological awareness in Grade 1, that is, the relationship between HLE and phonological awareness was mediated by language and early literacy skills. Early literacy and phonological awareness at the beginning of Grade 1 were related to reading accuracy at the end of Grade 1. Additionally, children's language and phonological awareness in Grade 1, alongside their reading accuracy and storybook exposure, were directly associated with reading comprehension in Grade 3.

Lastly, the relationship between early literacy at the beginning of Grade 1 and reading achievement at Grade 3 was mediated by reading achievement at the end of Grade 1. These results provide a useful framework with which to understand direct and indirect relationships and pathways between the HLE experiences and reading achievements of early school years. To extend the HLM of Sénéchal and LeFevre (2002), Sénéchal (2006), in a longitudinal study, studied with French-speaking children. She tried to test the impact of two independent variables (formal and informal experiences) on language, early literacy and reading achievement of children from kindergarten to Grade 4. Her results showed that parent teaching was related to better knowledge in kindergarten, decoding skills in Grade 1 and reading accuracy in Grade 4. Shared reading was associated directly with vocabulary knowledge in Grade 1, and this in turn mediated vocabulary knowledge and reading comprehension in Grade 4. In addition, shared reading predicted frequency of book reading for pleasure in Grade 4, which showed that shared book-reading has a long-lasting effect on child's reading behaviours. However, both Sénéchal and LeFevre (2002) and Sénéchal (2006) had some limitations in terms of sample group and variables. First, parents in the sample group of Sénéchal and LeFevre (2002) were from middle and high SES and those in the sample group of Sénéchal (2006) were from middle SES. Since parents from low SES were not included in the studies, the results could not be generalized to all SES groups. Second, although the relationships of HLE to language and some early literacy skills were found, relationships of HLE to phonological awareness was not directly investigated in the study of Sénéchal and LeFevre (2002). Third, in the study of Sénéchal (2006) measurements were conducted in kindergarten, Grade 1 and Grade 4. However, no measurements were conducted in Grade 2 and Grade 3. Therefore, the changes in the children's reading skills through Grade 2 and Grade 3 could not be determined. This made it difficult to make comment on changes in children's reading skills. In future studies, parents from low SES should be included in sample groups and more comprehensive relationships should be investigated through four years. The research findings of Sénéchal and LeFevre (2002) were shown in Figure 3 below.

Figure 3

The Home Literacy Model (HLM) of Sénéchal and LeFevre (2002)

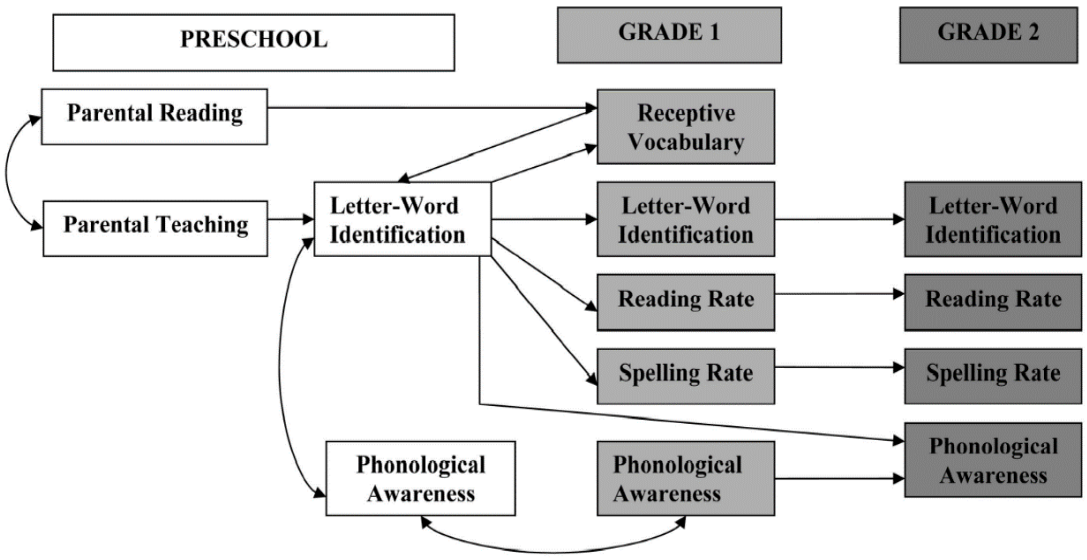


Similarly, Hood et al. (2008) supported the HLM in a three-year longitudinal study with Australian preschool children. Results showed that both parental reading and parental teaching were weakly correlated to each other and were indirectly predictive of phonological awareness in Grade 1. Consistent with the findings of Sénéchal and LeFevre (2002) shared book-reading was found to be positively associated with receptive vocabulary in Grade 1. Unlike the original study, shared book-reading was not found to be a predictor of later reading success, but this might be because of the measured variables. While the original study measured decoding and reading comprehension, this study measured accuracy and fluency. Parental teaching was found to be related to letter-word identification in preschool, and this relationship mediated the correlation between parental teaching in preschool and word-reading, spelling rate, and phonological awareness in Grades 1 and 2 as well as vocabulary in Grade 1. This study had some limitations. First, the questionnaires completed by the parents were anonymous and it was not known which parent filled which form. Therefore, it was not possible to determine which activities were conducted by which parents. It meant that the relationship between parental demographic and type of the HLE activities was not investigated. Second, parent-child emotional quality during reading activities was not investigated. Although parent-child emotional quality during reading activities was found effective in vocabulary development and reading comprehension (De Jong and Leseman, 2001) and reading motivation and frequency (Serpell et al., 2005), little was known about this. Therefore, in future studies, the relationship between social-emotional quality during parental literacy activities and children's language and

literacy outcomes should be investigated. The Figure 4 given below presented the results of Hood et al. (2008).

Figure 4

Findings of Hood et al. (2008) on Home Literacy Model of Sénéchal and LeFevre (2002)



Martini and Sénéchal (2012) expanded the HLM to examine and clarify the relationships between formal teaching at home (one form of home literacy experience), child interest in literacy, parent expectations and early literacy acquisition, with 108 children and 108 parents (one parent per child) participating in the study. All children spoke English as their first language. To determine parent's activities and expectations, the Home Literacy Questionnaire (HLQ) was used and children's alphabet knowledge, emergent reading, their interest in literacy and analytic intelligence were measured. Results showed a positive relationship between parent teaching and parent expectations: that is, parents who often taught their child had higher expectations of their child's knowledge of early literacy skills. Moreover, parents who taught their children at home often had children with greater interest in learning literacy. Lastly, both parent activities and expectations and child interest levels were found to be associated with the early literacy skills of children. This study showed that it was not only parental activities that related to acquisition of early literacy skills, but that parental expectations and child interest are also variables to consider alongside parent teaching activities. This study has some limitations. To test the HLM model, Sénéchal and LeFevre (2014) followed 110 English-speaking children who were schooled in French from preschool to Grade 2. They found long term evidence of associations between home literacy practices and reading and vocabulary

knowledge. According to the results, parent teaching and expectations in preschool were two strong positive predictors of early literacy development from preschool to the beginning of Grade 1. Moreover, parents teaching and listening to their child affected growth in word reading throughout Grade 1, and shared reading in preschool was a positive predictor of vocabulary from preschool to Grade 1. In contrast to Sénéchal (2006), Hood et al. (2008) and Martini and Sénéchal (2012), the unique result of this study was that parents whose children had reading performance below average in Grade 1 increased the amount of teaching from Grade 1 to Grade 2, while those whose children had reading performance above average in Grade 1, decreased the amount of teaching from Grade 1 to Grade 2. The studies conducted by Martini and Sénéchal (2012) and Sénéchal and LeFevre (2014) had some limitations. First, sample groups in both studies included well-educated parents from high SES. It could not be tested whether the findings of both studies in parallel with other SES groups. Other limitations were that all data about HLE was collected through the HLE questionnaires which were completed by the parents. No direct observations were done to collect data on HLE. Also, only the relationships of HLE to reading skills were examined but its relationships to writing skills were not investigated. To collect more comprehensive and reliable data in future studies, observational data on HLE might be collected and the relationships of HLE to writing skills should be investigated with more diverse samples.

The research conducted by Sénéchal, Hood, LeFevre and their colleagues (Hargrave and Sénéchal, 2000, Hood et al., 2008, Sénéchal and LeFevre, 2002) has shown that HLE activities have short- and long-term correlational effects on children's language and reading progressions such as reading accuracy, fluency and comprehension. Young children's language and literacy development is not only predicted by shared book-reading, but direct teaching is another home-based way in which parents might support their children. For example, teaching letter knowledge is found to be effective for early literacy and subsequent reading fluency and accuracy (Sénéchal and LeFevre, 2002). They have made clear various direct and indirect pathways in literacy development. For instance, while letter knowledge in preschool is positively correlated with decoding skills in Grade 1 and reading accuracy in Grade 4, vocabulary knowledge in Grade 1 is found related to reading comprehension in Grade 4. Sénéchal's research also highlighted that home literacy experiences, especially shared book-reading, have long-term associative effects on motivation for reading. Furthermore, family expectations and child interest are two other variables of HLE that are found to be effective on language and literacy development among children.

Most studies in the literature dealing with the relationship between HLE and language and early literacy skills have been conducted in western countries and strong relationships between them have been found (Hargrave and Sénéchal, 2000, Hood et al., 2008, Sénéchal and LeFevre, 2002, Hamilton, 2013, Van Steensel, 2006, DeBaryshe, 1995). As explained in the section 1.5 other countries in the world have similar approach to HLE and conceptualized it as similar to western countries. Marjanovič Umek et al. (2005), Zhang et al. (2020), Yeo et al. (2014) and Aram et al. (2013) have investigated the relationships between the HLE and language and early literacy skills of Slovenian, Chinese, Singaporean and Israeli preschool aged children, respectively. All of them found that children's language, early literacy and reading skills are strongly related to their HLE. Therefore, it is clear to hypothesised that the results of other countries in the world are similar to those of western countries.

1.7 Relationship between Socioeconomic Status and Home Literacy Environment

Various components of SES are associated with the frequency and quality of HLE activities (Kluczniok et al., 2013, Korat, 2009, Marjanovič Umek et al., 2005), and those components are related to language and early literacy and, in turn, later reading achievement as well as social and cognitive outcomes of children (Snow et al., 1998, Bradley and Corwyn, 2002). The relationships of SES to early literacy development might be mediated by HLE because research has suggested that children with lower SES typically have less access to home literacy resources (Ergül et al., 2017b, Neumann, 2016, Kluczniok et al., 2013, Aram et al., 2013, Korat, 2005), and that their early literacy skills generally develop more slowly than peers with higher SES (Korat, 2005, Strang and Piasta, 2016). For example, Neumann (2016) compared the early literacy skills and HLE of Australian children from low- and high-SES homes. The study included 101 preschool children, aged from three to five years, who were measured on early literacy skills including print awareness, letter knowledge and name writing. Their parents completed the Home Literacy Questionnaire (HLQ) that included parent-child demographic factors and questions about home literacy materials and activities. Results showed that when compared to children with higher SES, children with lower SES scored lower on early literacy measures and had less access to home literacy materials, including alphabet resources and storybooks. Even so, parents with both higher and lower SES reported that they spent the same amount of time on shared reading activities, while parents with lower SES focused less on letters and words while doing shared reading.

Aram et al. (2013) also investigated the relationship between HLE activities (joint writing and shared book-reading), SES background (family income, parent's education, occupation and profession) and early literacy (vocabulary knowledge and letter knowledge) in preschool and literacy achievement (reading accuracy and fluency, reading comprehension, word writing and letter presentation) in Grade 1, with Arabic-speaking children. Unlike Neumann (2016), this was a longitudinal study and examined long-term relationships. They found correlations between SES, early literacy skills and HLE in kindergarten and in Grade 1. They also found that joint writing activities were significant, and shared reading significantly contributed to reading accuracy, fluency and comprehension in Grade 1. Aram et al. (2013) study is especially important because it demonstrated the longitudinal relationships between SES and HLE components on different aspects of reading achievement.

1.8 Relationship between Socioeconomic Status, Home Literacy Environment and Early Literacy

The relationships between SES, HLE and early literacy development was examined in detail by Hamilton (2013), who investigated the relationships between SES and HLE and their roles in early and later literacy development. SES, HLE and early literacy of 245 preschoolers aged 4 years 8 months were measured. A considerable number of direct and indirect associations between the factors were found during preschool and primary school.

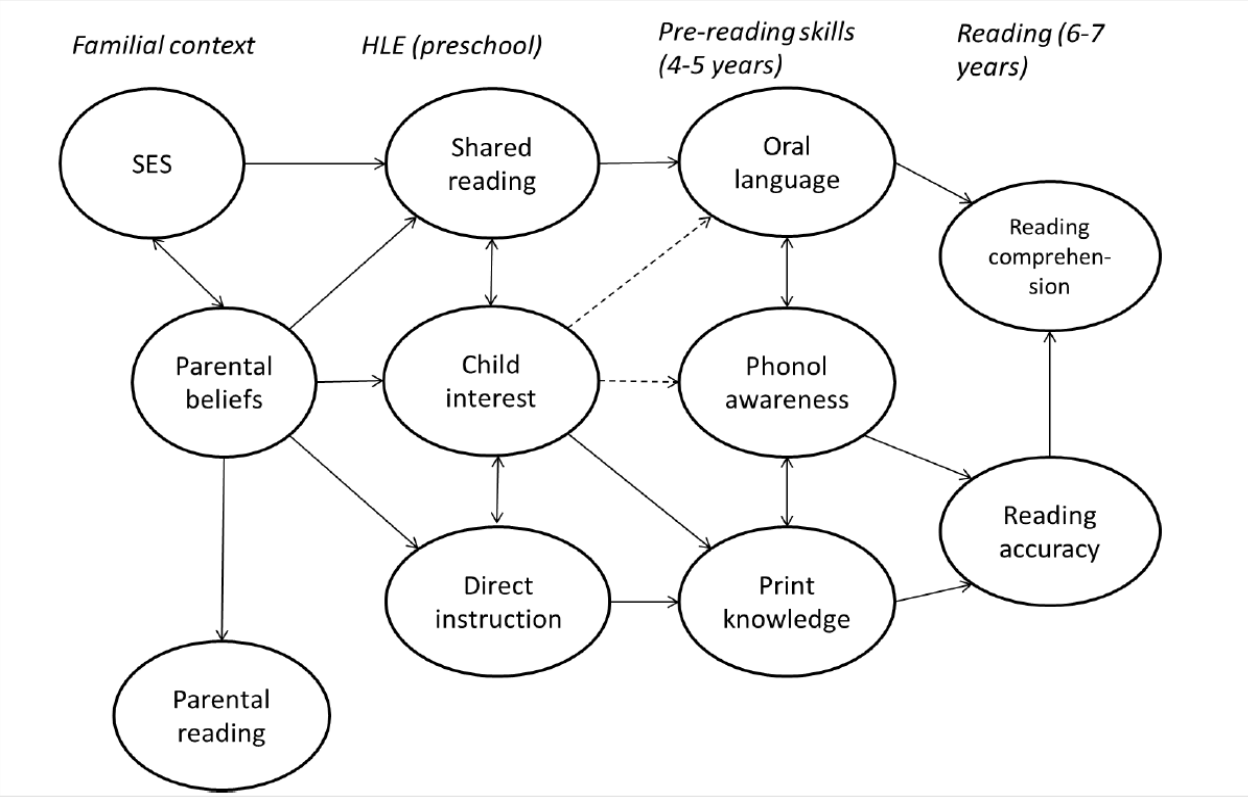
All factors in the model were divided in four steps: namely, familial context (SES), HLE, pre-reading skills and reading. It was revealed that variables in familial context including parental beliefs and SES had reciprocal associations, and that parental beliefs affected parental reading habits. SES was found to be associated with shared reading in the HLE context, and parental beliefs were found to be associated with all the HLE-context variables: namely, shared reading, child interest and direct instruction. All components of the HLE context were found to be associated with each other. Moreover, reciprocal associations were found between shared reading and child interest, and between child interest and direct instruction.

While shared reading was found to be associated with early language skills, direct instruction was found to be associated with print awareness. Child interest was found to be associated with all early literacy skills including language, phonological awareness and print knowledge, and reciprocal associations were found between all early literacy skills. Reading comprehension was found to be associated with early language ability, while reading accuracy was found to

be associated with phonological awareness and print knowledge. Lastly, reading accuracy was found to be associated with reading comprehensions. A comprehensive diagram showing all the pathways and relationships in literacy development is presented below.

Figure 5

The Role of Home Literacy Environment in Literacy Development – The Theoretical Model of Hamilton (2013)



1.9 Summary

This chapter began with defining literacy and early literacy terms. It continued by explaining associations between early literacy skills and later literacy achievement before exploring the correlations of HLE and SES to literacy development. Finally, it concluded by examining the associations between SES, HLE and literacy development. The chapter shows that early literacy skills are significantly important for later reading success. It also shows that HLE activities including shared reading and direct teaching are associated with improvement of early literacy directly and later reading success indirectly. It lastly showed that SES, HLE and early literacy are correlated to each other.

Chapter 2

Turkish Perspectives on Early Literacy Development, Home Literacy Environment and Socioeconomic Status

2.1 Introduction

This chapter discusses Turkish perspectives on key concepts involved in the current research. It begins with an examination of the history of early childhood education in Turkey (2.2), then explains the emergence and development of early literacy concepts and presents an introduction and description of assessments of early literacy skills used in the Turkish context (2.3). It continues by examining home literacy environment (HLE) and presenting descriptive studies considering socioeconomic status (SES) (2.4).

2.2 Development of Preschool Education

When the Republic of Turkey was established in 1923, there were 80 preschools with 136 preschool teachers and 5880 preschool children attending them across 38 cities (Oktay, 1983). These preschools and teachers remained after the end of the Ottoman Empire (Derman and Başal, 2010). The government did not have sufficient budget for all stages of education, and it gave priority funding to primary schools; therefore, preschool education was deemed to be the responsibility of families and private schools (Oktay, 1983). This meant that the number of preschools decreased during the first 20 years of the Republic.

2.2.1 Governmental Regulations

The first government actions taken to improve preschool education were made by the National Education Councils. At the Fourth National Education Council in 1949, early childhood education was discussed and parental education was recommended. Then, during the Fifth National Education Council (1953), a preschool education programme and regulations for opening preschools were included on the agenda for the first time (Oktay, 1983). However, the decline in the number of preschools continued. By 1960, the number of preschools, teachers and preschoolers had dropped from 80, 136, and 5880, respectively, to 64, 104 and 2730. This

decrease was also caused by the Second World War and other local problems such as military coups.

Preschool education started to improve in the 1960s. The most effective development of preschool education was begun at the Seventh National Education Council in 1962 (Çelik and Gündoğdu, 2007). Types of preschool education in developed countries were analysed, and new recommendations were presented that focused on the training of preschool teachers, establishing classrooms in primary schools for preschool children with developmental delays, and establishing preschools for children who needed special education. It also included recommendations for providing preschool education to children in need of protection due to absent parents, establishing preschools for children of working mothers, and establishing 10 preschools in selected city centres (Çelik and Gündoğdu, 2007). After the seventh council, 'Preschool and Pre-class Regulation' was published by the government, and the number of schools, teachers and preschoolers started to increase dramatically. In the following years, the Eighth and Ninth National Education Councils highlighted the importance of preschool education again, its definition was renewed, and its function was reintroduced (Çelik and Gündoğdu, 2007). As a result of these government actions, the number of preschools, teachers and preschoolers increased dramatically during the 1980s and 1990s with their numbers reaching 3504, 6225 and 105,424, respectively. However, the number of preschools in Turkey was still insufficient for the preschool education population (Çetinkaya, 2006).

At the beginning of the twenty-first century, since preschool education was not included in compulsory education, most preschool-age children did not have the opportunity to attend any formal education. Preschool education attendance rates and spending on education per student in 2004 were found to be significantly lower in Turkey than in other European and OECD countries (Derman and Başal, 2010, Çetinkaya, 2006). There was a huge gap between preschool education rates in rural and urban areas in favour of the urban children (Çetinkaya, 2006). Also, books and magazines published to support preschool education in Turkey did not consider the circumstances of children in rural areas (Çetinkaya, 2006). This meant that Turkey could not provide for the demand in preschools and did not provide sufficient opportunities and funding for all children. The rate of children in preschool education was 20 percent in 2006, meaning that 80 percent of Turkish preschool-age children missed out on the offer.

In 2010, preschool was included in compulsory education for the first time. However, this regulation was removed two years later since there were not enough classrooms and materials in the country for all preschool children. Among OECD countries, Turkey had the lowest rates

of enrolment, teacher training, number of students per teacher, per capita expenditure, and proportional budget spending (Aktan and Akkutay, 2014). Meanwhile, although preschool education was not compulsory in other OECD countries, their rates of children in preschool were more than 90 percent. In 2019 the government allocated a larger budget to preschool and as a result, the preschool enrolment rate in Turkey increased dramatically to include 69 percent of the five-year-old population (Meb, 2013). However, the same situation continued in terms of accessibility with 31 percent of preschool-age children deprived of preschool education (Meb, 2013). The government aims to increase preschool enrolment rates to 100 percent of the five-year-old population by the end of 2022 and to solve the accessibility problems (Meb, 2013).

2.2.2 Curricula

Curricula must reflect evolving political, scientific, and cultural contexts (Kandır, 2001). Since the establishment of the Republic, four preschool curricula have been issued with the first published in 1994. It was a simple curriculum consisting of two parts. The first focused on the cognitive, language, social-emotional, and physical development of children aged 0-36 months. The second aimed to prepare children aged 0-36 months by setting and reaching performance goals, which addressed some language and cognitive skills that were expected to be grasped by children aged 36 months. It analysed preschool topics and presented systematic daily plans for teachers to complete. In the following years, the idea of separate preschool programs according to age was introduced, and a new curriculum was developed.

The second curriculum was published in 2002. It was more comprehensive and structured than its predecessor and based on supporting the cognitive, language, psychomotor, social-emotional and self-care skills of typically developing children aged 36-72 months. Gürkan (2003) explained that the curriculum is child-centred and the behaviours to be gained are considered essential. He also mentioned that it suggests methods for problem-solving and playing and promotes the educational use of experiences from daily life and environmental opportunities. Lastly, he explained that the curriculum suggests family participation and evaluation. The curriculum was updated over a period of four years, then removed because it did not respond to current needs such as literacy development in early childhood and other activities for language skills. Therefore, a new curriculum was implemented.

The third preschool education curriculum was published in 2006, in which the importance of family participation was further stressed, and for the first time, inclusive education was featured (Düşeka and Dönmez, 2012). This curriculum included all the features of the second one with new developmental areas. Therefore, it was more comprehensive than previous versions. It was organized into three modules, for children aged 36-48, 48-60 and 60-72 months, and included learning outcomes to prepare children for primary school. Düşeka and Dönmez (2012) explained that it was child-centred, that the goals and achievements were essential and that its developmental characteristics were arranged separately for each age group. Units were flexible, creativity was prioritized, and teachers were required to work in a planned way. Environments that allowed the child to gain experiences freely were considered important, and problem-solving and playing were basic activities. They also suggested that it encouraged the use of everyday experiences and environmental opportunities for educational purposes. Diversification of learning experiences and parent involvement were also considered important. It was used for four years, then removed in 2013 since it was considered outdated.

The curriculum introduced in 2013 is the most recent and most comprehensive yet (Meb, 2013). It includes all the characteristics of previous curriculums and more. It is child-centred, flexible, cumulative, eclectic, balanced and play-based. It prioritizes learning by discovery, foregrounds developing creativity, encourages the use of everyday experiences and mobilizes opportunities for educational purposes. In the curriculum, themes and topics are tools not purposes and preschools are seen as fulfilling an important function. It considers cultural and universal values and supports parental education and participation. It also features a versatile evaluation process, makes adaptations for children with special needs and signposts to guidance services.

The curriculum (Meb, 2013) includes various cognitive and linguistic developmental areas. Cognitive skills include paying attention to events, subjects and people, making predictions, remembering, counting, observing, matching, grouping, comparing, and organizing. It also includes following instructions, measuring, recognizing shapes and symbols, forming patterns, understanding the part-whole relationship, simple addition and subtraction, understanding cause-effect relationships, understanding time concepts, and producing solutions for problems. Language skills include phonological awareness, vocabulary knowledge, letter knowledge and print awareness. In addition, it is the first curriculum to include early literacy skills.

To summarize, the first of the four curricula developed in the Republic of Turkey assumed a simple teacher-orientated form designed for children aged 0-36 months. Over the years, the advancements in education created the need for a new curriculum, and thus the second

curriculum was developed. This curriculum was more comprehensive and structured than the first and was designed for typically developing children aged 36-72 months. However, since it did not address current needs and other activities for language skills, it was removed and a new one was put into practice. The third curriculum, developed in 2006, was more comprehensive than the previous two, and individuals with special needs were considered for the first time. In this curriculum, the children's developmental areas were categorized by years for the first time: 36-48, 48-60 and 60-72 months. Finally, the current fourth curriculum is the most comprehensive. It is categorized by age, including the needs of children with disabilities, and for the first time it includes early literacy skills such as phonological awareness and print awareness.

2.3 Early Literacy Concept

The emergence of the early literacy concept in Turkish literature dates back 25 years. The first studies that introduced it into the Turkish context were written between 1996 and 2010, and they are discussed below.

2.3.1 Emergence of the Early Literacy Concept

The concept of early literacy was first referred to by Uzuner (1996), who used the term "emergent literacy", in the first study within a Turkish context that included brief information about the concept. Then, it was mentioned again by Çelenk (2003) as an "incubation period" covering birth to the beginning of primary school and including all language, early literacy, motor and cognitive skills required for reading and writing in the future. The importance of early literacy experiences and growing up within a literacy-rich environment during the preschool period was highlighted. Çelenk (2003) also hypothesized that children who have a literacy-rich environment could become more successful in the future than those with a low-literacy environment. The incubation period was divided into five sub-periods: a) recognition and awareness; b) fake reading, c) discovering reading rules; d) searching for meaning from print; and e) forecasting reading. Recognition and awareness represent the period in which children can realize that a pencil, book and paper are for reading and writing skills. Fake reading is the period in which children imitate adults' reading behaviours. Discovering reading rules is the period in which children start to realize reading rules such as print direction (from right to left and from top to bottom). Searching for meaning from print is the period in which

children observe family members and establish the relationship between the language of speech and written language. Thus, they begin to discover that all written materials can be spoken, and oral language can be written. The last stage is forecasting reading, which is the period in which adults and their children take part in shared reading practices, and children guess about the print on the pages.

The early literacy concept has continued to be discussed and renamed. It was again referred to by Baydık (2004) as emergent literacy, and its differences from the traditional literacy perspective were discussed. The concept was particularly based on Teale and Sulzby (1986)'s perspective and brought new breath into the Turkish early-childhood education context. Emergent literacy was introduced as a natural process before reading and writing was taught structurally. It differs from person to person, and it does not include a systematic learning process. Its development is affected by the quality of environment in terms of literacy material. Baydık (2004) mentioned that literacy development begins from birth and literacy skills develop thorough adults' support. She also mentioned that children start to discover print by following adults and that their listening, speaking, reading, and writing are related to each other without any direct sequencing between them. She lastly explained that there is a continuity between preschool and primary school periods and each child might experience these literacy periods in diverse ways and sequences. Baydık (2004) not only explained emergent literacy concept, but also introduced early literacy skills such as phonological and print awareness. Lastly, she explained the importance of shared reading practices in the development of early literacy skills and discussed shared reading as one of the most natural and effective interventions for developing language and early literacy skills among children at risk of illiteracy.

Another definitive study on the definition of early literacy skills in a Turkish context was conducted by Uyanık and Kandır (2010), who defined early literacy skills as "early academic skills". Those academic skills were defined as language skills, phonological awareness, print awareness, letter knowledge and general knowledge. The preschool period was seen as critical for learning early literacy skills. The importance of a rich literacy environment in both preschool and the home was supported by evidence from studies in the literature. It was also suggested that many teachers and parents may not be aware of children's developmental stages, may not realize that their children's early academic skills are not at the expected level and do not support those skills. Therefore, to improve those skills, it was suggested that a) teachers should support early literacy skills by preparing and implementing high quality activities for

this purpose; b) teachers should support children's early academic skills, creating a rich classroom environment including written and visual materials, and enable children to interact with those materials; and c) parents should spend quality time and interact with their children around written materials and provide them with different tools and materials to support their academic skills.

As the number of studies discussing the concept of early literacy within a Turkish context have increased, early literacy skills have started to be investigated through descriptive and experimental studies. Valid and reliable studies have also been conducted to provide tools with which to assess early literacy skills. All developments and studies that have been done in the last decade (2010-2022) are introduced and discussed below.

2.3.2 Teacher Knowledge of Early Literacy

The concept of early literacy has started to be understood by teachers and other professionals due to the studies that have introduced the concept and latest curriculum from 2013. Therefore, several studies have investigated preschool teachers' and teacher candidates' understanding of the concept of early literacy and skills, and some studies have examined the quality of the classroom environment and shared-reading practices. Those studies have aimed to determine the awareness of this concept among Turkish professionals.

In the Turkish literature, three studies for determining teachers' knowledge of early literacy, self-efficacy and practices and two studies for determining the same among trainee teachers were conducted between 2012 and 2017. Altun and Tantekin Erden (2016) produced the most comprehensive study in terms of the number of samples and measures, while Ergül et al. (2014) provided the most comprehensive in terms of participant diversity, which included teachers with low, middle and high SES. Güney (2012) and Doğanay Bilgi and Aslan (2017) studies included teachers in mainstream classrooms, and the greatest number of questions were asked by Güney (2012). Unlike the others, Doğanay Bilgi and Aslan (2017) not only asked questions about teachers' beliefs and experiences but also observed teachers' behaviours and classroom arrangements. The results of all five studies demonstrated that teachers and trainee teachers had limited knowledge of early literacy, that most did not include early literacy skills in their practices, and that they demonstrated low self-efficacy in planning activities to support these skills.

There could be several reasons why teachers do not have knowledge about early literacy and do not include them in their practice. It might be that trainee teachers did not study early literacy during their undergraduate period. Alternatively, even if the new curriculum was available during their undergraduate period, their college tutors might have referenced the old one. It might be that older teachers did not follow the updated curriculum because they followed their traditional ways and used outdated knowledge. The studies mentioned above are introduced in more detail below.

First, Güney (2012) investigated how preschool teachers support the development of early literacy skills of children with intellectual disabilities (ID) in their classrooms. Semi-structured interviews were held with 10 preschool teachers in Bolu, Northwest Anatolia, Turkey. The teachers had at least one student with ID in their classroom and were asked the questions in the "Teacher Interview Form", which consisted of 19 open-ended questions. Results showed that preschool teachers did the same activities with all children in the classroom and did not prepare a specific adaptation to improve the early literacy skills of children with ID. Results also showed that most teachers did sound activities (matching and discrimination) to improve phonological awareness and painting activities for teaching early literacy skills. Finally, it was also seen that teachers did not implement shared reading activities, which is widely recognized as one the best ways to support early literacy skills.

Similar to Güney (2012), Ergül et al. (2014) tried to determine the knowledge levels of preschool teachers using the "Teacher Interview Form", which was developed by the researchers Ergül et al. (2014). Results showed that teachers had limited knowledge about the early literacy concept. Eight teachers defined the concept as knowing reading and writing structurally before the formal teaching process, eight defined the concept as readiness for later academic achievement, and one defined it as an area of children's general development.

Doğanay Bilgi and Aslan (2017) investigated special education teachers' knowledge of the early literacy concept and skills as well as teachers' classroom practices and arrangements for the development of these skills. Eighteen special education teachers who worked with children with disabilities, in public schools in Ankara, Turkey participated in the study, and data was collected using three tools. The first was the Teacher Interview Form, developed by Doğanay Bilgi and Aslan (2017), which was used to determine teachers' knowledge of the concept. Semi-structured interviews were held with the special education teachers, in which the researchers asked 12 open-ended questions in interviews lasting between 20-35 minutes. The second tool was the Observation Form, which was used for examining teachers' practices

during the class. The researchers observed the teachers during two classes. The last tool was the "Classroom Arrangement Control List" developed by Doğanay Bilgi and Aslan (2017), which was used to examine the number and frequency of adaptations provided by teachers in their classrooms. The data was analysed using a content analysis method, and the results showed that 12 teachers had never heard of the early literacy concept, and three teachers defined the concept as knowing reading and writing before formal literacy teaching. Two teachers defined it as readiness for reading and writing, one defined it as knowing the importance of this concept, and one defined it as prerequisite skills for later reading success. Results also showed that only six teachers, a quarter of the total, used shared-reading activities in their practice. Finally, results showed that teachers had limited information and criteria to choose the best illustrated storybooks for their students. The researchers suggested that the Turkish government should organize in-service training in order to improve teachers' background knowledge on early literacy skills and their development.

Similar to studies above, Ergül et al. (2014) tried to determine the knowledge level of preschool teachers. A Teacher Interview Form, developed by Ergül et al. (2014), was used for data collection. Results showed that teachers had limited knowledge about early literacy. Eight teachers defined the concept as knowing reading and writing before the formal teaching process. Eight teachers defined the concept as readiness for later academic achievement, and one defined it as an area of children's general development.

There have also been studies that have aimed to determine the knowledge and awareness levels of trainee teachers about the concept of early literacy and its skills. It was expected that since the new curriculum included those skills, trainee teachers would have greater knowledge of those skills and allocated teaching time to those skills in their internship practices. For example, Özdemir and Bayraktar (2015) investigated trainee teachers' knowledge of early literacy and the relationship between early literacy and later reading and writing skills. They also investigated whether they had sufficient knowledge for preparing intern practices to support development of early literacy skills, and whether their undergraduate education was sufficient in terms of early literacy. Interviews were conducted with 39 undergraduate students (2 males and 37 females), who participated voluntarily. The study was conducted in Eastern Anatolia, Turkey. The results first showed that more than half of the trainee teachers had not heard of the early literacy concept before. Secondly, two out of three trainee teachers were not aware of early literacy skills. Thirdly, only one out of three trainee teachers mentioned a positive relationship between early literacy skills, and those trainees could not explain the

nature of that relationship. Finally, half of trainee teachers mentioned that they did not have enough knowledge about early literacy skills.

Altun and Tantekin Erden (2016) investigated trainee teachers' knowledge of the early literacy concept, and how they designed internship practices to improve early literacy skills. They also investigated how often trainee teachers prepared activities to support early literacy in their internship practices, and whether they felt confident during the planning and implementation stages of those activities. Interviews were held with 81 students (76 females, 5 male) attending Grades 3 and 4, who participated voluntarily in the study. It was conducted in Ankara, Central Anatolia, Turkey. Data was collected using a survey of early literacy knowledge and internship practices, developed by Altun and Tantekin Erden (2016) consisting of two parts. The first one included demographic information questions and the second another seven questions. It took the trainee teachers between 45 and 60 minutes to complete, and the data was analysed using content analysis. The results revealed, firstly, that one out of three trainee teachers did not have any information, almost half had little information and none of them had much information about early literacy. Trainee teachers mostly explained that they did not have theoretical information about the concept and lacked experience. Secondly, only half of the trainee teachers believed that early literacy skills prepared children for primary school, while a quarter believed it was unnecessary to support children's early literacy skills. Thirdly, one out of three trainee teachers did not support early literacy skills in their internship practices, one out of eight supported them once a month, another one in eight once every three weeks, two out of eight every two weeks and one in eight once a week. Fourthly, a quarter of trainee teachers felt inadequate when considering preparing early literacy activities for children and half of them partially inadequate. Only one in five trainee teachers felt adequately equipped to prepare the activities. Overall, most preschool trainee teachers did not have information about the early literacy concept and skills and believed that they were not capable of planning and implementing activities to support these skills.

Overall, the results from all descriptive studies conducted with teachers and trainee teachers show that they did not have sufficient knowledge about early literacy concepts and skills. Since they did not have sufficient knowledge about the issue, they could not support children's skills effectively. This risks children's literacy development in Turkey. Children, especially those with low SES, need to be supported in terms of early literacy during preschool. It is hoped that this research will offer a guide for teachers in Turkey, and it is believed that, as the number of

research and interventions increase, teachers' knowledge levels and awareness of early literacy skills will increase.

2.3.3 Data Collection Tools for Assessing Early Literacy Skills

Increasing interest in early literacy skills has led to the development of tools to assess them. The tools are especially important for teachers and researcher because teachers can assess their students' development and researchers can use them for assessing their participant groups in their research. Some tools have been adapted into Turkish whereas others were created specifically for the Turkish language and context. Table 2, below, provides a summary of them.

Table 2

Data Collection Tools for Early Literacy Skills in Turkey

Author	**Name**	**Measures**
Büyüktaşkapu (2012)	Mountain Shadows Phonological Awareness Scale (MS-PAS)	Phonological Awareness
Sari and Aktan Acar (2013)	The Phonological Awareness Scale of Early Childhood Period (PASECP)	Phonological Awareness
Çetin and Alisinanoğlu (2013)	Print Awareness Checklist	Print Awareness
Işıtan and Akoğlu (2016)	Phonological Awareness Checklist	Phonological Awareness
Doğanay Bilgi et al. (2020a)	Print Awareness Assessment Tool (PAT)	Print Awareness

Kargin et al. (2015)	Test of Early Literacy Skills (TEL)	Multiple Skills
Karaman and Aytar (2016)	Early Literacy Skills Assessment Tool (ELSAT)	Multiple Skills
Delican (2018)	Reading and Writing Readiness Diagnostic Tool (RWRDT)	Multiple Skills

2.3.3.1 Assessment Tools for Phonological Awareness

There are two data collection tools for assessing phonological awareness of Turkish children only. The first one is an adaptation of the Mountain Shadows Phonological Awareness Scale (MSPAS) (Büyüktaşkapu, 2012), and the second is the Phonological Awareness Scale of Early Childhood Period (PASECP), originally developed in Turkish by Sari and Aktan Acar (2013). The MSPAS includes only 20 items and takes 10 minutes to complete; however, the PASECP is much more comprehensive and sophisticated, including eight subscales and 78 items. The MSPAS evaluates two subskills of phonological awareness, whereas the PASECP assesses eight subskills of phonological awareness. They are introduced below in more detail.

Büyüktaşkapu (2012) conducted a validity and reliability study to the MSPAS for the Turkish context. The scale was prepared for assessing phonological awareness of preschool and first-grade primary school children, involving 150 children (72 females and 78 male) who attended preschool education in Konya, Central Anatolia, Turkey. Children were selected from 10 different preschool classes in low and high SES regions. The data was collected by researchers administering the tool on a one-to-one basis, and sessions took about 10 minutes on average. To provide the scale with validity, exploratory factor analysis and principal component analysis were used first, then a varimax rotation technique was applied. To provide reliability for the scale, study KR-20 was employed and calculated at 0.96. The implementation of validity and reliability study to adapt the MSPAS consisted of 20 picture items. The researcher read aloud picture names, and the child was asked to mark the picture starting with the same sound. Then,

the child was asked to find and mark the picture that started with a different sound among four pictures. The child's correct answers were coded as "1" and the wrong answers as "0". The highest and lowest scores could be taken from the scale were 20 and 0, respectively. It was found have good validity (both internal and external) and reliability for assessing the phonological awareness of six-year-old Turkish children. The length of the implementation of the MSPAS takes approximately 10-12 minutes. It could be completed by both teachers and researchers. It does not need any training to be administered. However, the researchers must cite Büyüktaşkapu (2012) when they use the MSPAS in their research.

The PASECP was developed by Sari and Aktan Acar (2013), originally in Turkish who aimed to measure the validity and reliability of the PASECP, and to determine norm values for it. The test battery was completed by 733 children aged between 60-72 months (53 percent male and 47 percent female). Children were selected from five different cities in the Marmara Region, Turkey and from 25 different preschool classes in regions with varying SES. Demographic information was collected about the children with the eight subscales of the PASECP measuring rhyming, segmenting, blending, beginning sound detection, generating new words related to the desired phoneme, grouping words starting with the same sound, saying the remaining unit of a word by throwing a syllable, and letter knowledge. The children were individually assessed by the researchers in the sessions that took about 15 minutes on average per child. The children's correct answers were coded as "1" and the wrong answers as "0". The PASECP "t" test and Kaiser-Meyer-Olkin were then employed to provide content and structural validity. The result of the t test was .001 and the Kaiser-Meyer-Olkin was .647. Next, test-retest, Cronbach Alpha, Guttman and Spearman Brown were calculated to provide reliability for the PASECP. The test-retest coefficient was between .975 and .433, depending on subscale, and the internal consistency of the Cronbach alpha and Guttman were .9611 and .8474, respectively. As a result, the PASECP was found to be a valid and reliable data collection tool for assessing the phonological awareness of children aged 60-72 months. The length of the implementation of the PASECP takes approximately 15 minutes. It can be completed by both teachers and researchers. It does not need any training to be administered. However, the researchers must cite Sari and Aktan Acar (2013) when they use the PASECP in their research.

2.3.3.2 Assessment Tools for Print Awareness

There are three data collection tools for assessing print awareness among Turkish preschoolers. All of them were developed originally in Turkish. The first one, by Çetin and Alisinanoğlu

(2013), was developed for children aged 60-72 months. The second was developed by Işıtan and Akoğlu (2016) and was also for children aged 60-72 months. However, the most recent tool by Doğanay Bilgi et al. (2020a) was developed for a wider age range of children, aged 48-72 months. The first tool evaluates print awareness skills by asking questions directly; however, the others make use of illustrated storybooks. All have been evaluated in validity and reliability studies involving children from different SES regions, which are introduced in detail below.

The "Checklist for the Evaluation of the Print Awareness of Pre-School Children" was originally developed in Turkey by Çetin and Alisinanoğlu (2013). Four hundred preschool children aged 60-72 months took part in the evaluation study, selected from 19 different schools in low, middle, and high SES regions across five various parts of Ankara, the capital city of Turkey. The checklist consisted of two factors. The first included nine items and was called Book Concepts, while the second included eight items and was called Print Concepts. Some of the Book Concepts questions were about showing the front and back of the book and identifying its name, while some Print Concepts questions were about selecting the beginning and end of the print on the page, and long and short words. To provide the checklist with content and structural validity, expert opinions were applied, then exploratory and confirmatory factor analysis. The first version of the checklist included 20 items before the validity analysis, then expert opinion was applied to establish content validity. At the end of the expert opinion, one item was removed from the checklist. Varimax vertical rotation was then used for exploratory factor analysis. When the initial results of the factor analysis were examined, it was seen that items 9 and 10 had factor loadings below 3. Therefore, items 9 and 10 were removed from the test and the factor analysis was repeated for the remaining 17 items. After the second analysis, the checklist was divided into two factors. The factor load values of the first factor items were between 0.486 and 0.891, and the load values of the second were between 0.585 and 0.951. For the confirmatory factor analysis, the Chi-square fit test (Chi-square goodness of fit test, $\chi 2$), goodness of fit Index (GFI), and adjusted goodness of fit index (AGFI) were applied, with the results Ki-kare ($\chi 2$) = 6102.71, ($\chi 2$/sd)=52.16, GFI=0.98 and AGFI=0.97. The Kuder Richardson 20 (KR-20) was calculated to assess the reliability of the checklist, and it was found to be 0.72. The length of the implementation of the checklist takes approximately 10-12 minutes. It can be completed by both teachers and researchers. It does not need any training to be administered. However, the researchers must cite Çetin and Alisinanoğlu (2013) when they use the checklist in their research.

Another original tool in the Turkish context was developed by Işıtan and Akoğlu (2016). It has a more comprehensive content than Çetin and Alisinanoğlu (2013), includes more items and is suitable for a wider age range (48-72 months). Just over 200 typically developing children from two cities, Kırıkkale (Central Anatolia) and Balıkesir (Marmara Region), participated in the validity and reliability study. The children in the study were from middle-SES regions, and Turkish was the only language spoken in their homes. Children were assessed by the researchers using an illustrated storybook. The test was completed as a DR protocol and included DR strategies (Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1988). During the protocol, the researcher read a book with the child and encouraged him/her to interact. During the interactions the researcher asked questions about print awareness. Each assessment session took an average of 20-25 minutes, and the checklist consisted of five sub-dimensions (naming book and print order, meaning of print, letters, words, and punctuations) together with three items on writing skills. To measure the validity of the checklist, t test was employed, and it was found that older children performed better than younger ones. Results of the t test were found to be $p<.05$, then KR-20 was employed to rest the reliability of the checklist, resulting in .74 and .76. As a result, the checklist was found to be suitable for assessing print awareness of children aged 48-72 months. The length of the implementation of the tool takes approximately 20-25 minutes. It can be completed by both parents, teachers and researchers. It does not need any training to be administered. However, the researchers must cite Işıtan and Akoğlu (2016) when they use the tool in their research.

The last measure of print awareness was developed by Doğanay Bilgi et al. (2020a) and called the Print Awareness assessment Tool (PAT). It is similar to the task developed by Işıtan and Akoğlu (2016) in that both evaluate children's print awareness using illustrated storybooks, but the PAT also measures children's print awareness during a shared reading session. The two tests differ in terms of the number of items; however, both measures assess similar skills. The validity and reliability study included 216 typically developing children (109 girls and 107 boys) aged 48-72 months and selected randomly from six preschools across four regions with various SES in Ankara, Turkey. The first version of the PAT included 27 items, and content validity was assessed using opinions from four experts, who decided that the assessment tool satisfactorily represented the scope intended to be measured, before exploratory and confirmatory factor analyses were conducted. For the exploratory factor analysis, item statistics were calculated using item analyses of the data of 216 children. The item difficulty levels and item discrimination levels of 27 items were recorded between 0,20 and 0,80, which means that

they were not too difficult or too easy. Therefore, no items were removed from the PAT. However, according to confirmatory factor analyses all the items were recorded between 0,15 and 0,98, except for four items (1, 5, 10 and 11), which means that those items were removed from the PAT. For the reliability analysis, internal consistency (KR-20) was also calculated, and a result of .76 was found. As result, the PAT was found to be a valid and reliable data collection tool with the 23 items. The length of the implementation of the PAT takes approximately 10 minutes. It can be completed by both parents, teachers and researchers. It does not need any training to be administered. However, the researchers must cite Doğanay Bilgi et al. (2020a) when they use the PAT in their research.

2.3.3.3 Assessment Tools for Multiple Early Literacy Skills

There are three multiple early literacy assessment tools in Turkish literature. The Test of Early Literacy (TEL) was developed by Kargin et al. (2015) to evaluate the early literacy skills of preschoolers in Turkey, consisting of seven subtests: namely, Receptive Vocabulary, Expressive Vocabulary, Category Naming, Functional Knowledge, Letter Knowledge, Phonological Awareness and Listening Comprehension. The validity and reliability study involved 403 preschoolers aged between 60 and 72 months and selected from regions with different SES in Ankara. Content validity was determined by taking the opinions of four experts. All the TEL test items were presented online to experts one by one, and they were asked to score each item as 1 (appropriate), 2 (revised) or 3 (not appropriate) following the triple Likert-type evaluation form. They were also asked to write a short explanation for any "not appropriate" scores they gave an item. As a result of the evaluations of the expert group, all items in the tool were found to be valid. Next, confirmatory factor analyses were performed to assess the validity and exploratory factors of the construct. The results of the exploratory factor analyses of all subtests were between 0,33 and 0,93, and the confirmatory factor analyses of all subtests were between 0,000 and 0,57. The internal consistency (KR-20) and two half-test reliability (spearman brown) were calculated for the reliability analysis, with the KR-20 and Spearmen Brown results found to be 0,94 and 0,79, respectively. As a result, the TEL was found as a valid and reliable data collection tool for assessing the early literacy skills of Turkish preschoolers. The length of the implementation of the TEL takes approximately 40 minutes. It can be completed by both teachers and researchers. It needs a compulsory training to be administered. Also the researchers must cite Kargin et al. (2015) when they use the TEL in their research.

The second multiple assessment tool was developed by Karaman and Aytar (2016) and called the Early Literacy Skills Assessment Tool (ELSAT). It shared some similarities with the tool above in that both assessed phonological awareness and listening comprehension; however, in this tool, there was no vocabulary or letter knowledge subtests. Instead, Kargin et al. (2015) included print awareness and prewriting subtests, and the validity and reliability study included 473 children aged 48-77 months (244 female and 229 male). Children were selected from 23 schools in regions with different SES in Ankara, and the ELSAT consisted of five subtests: namely, phonological awareness (including five factors and 53 items); print awareness (including three factors and 16 items); story comprehension (including one factor and nine items); matching images (including one factor and nine items); and pre-writing skills (including one factor and nine items). Expert opinions were taken to assess content validity, then exploratory and confirmatory factor analyses were calculated, before item discrimination values were examined to assess structural validity. According to the validity results, the pre-writing print awareness subtests had a weak fit; however, the other subtests had a fit value within acceptable levels. Furthermore, the results of the item discrimination showed that for all items at the top and bottom, 27 percent are distinctive. To assess reliability, KR-20, test re-test and split-half reliability were calculated, and KR-20 was found to be between .61 and .91 across the five subtests. The length of the implementation of the ELSAT takes approximately 30 minutes. It can be completed by both teachers and researchers. It does not need any training to be administered. However, the researchers must cite Karaman and Aytar (2016) when they use the ELSAT in their research.

The last multiple assessment tool is the Reading and Writing Readiness Diagnostic Tool (RWRDT), developed by Delican (2018), which includes measures of both early literacy skills and pre-reading and writing skills. Children (397 females and 384 male) aged 60-84 months participated in the validity and reliability study, drawn from the beginning of the first grade in primary school. They were selected from different primary schools in low-, middle- and high-SES regions of the city of Sivas, East Anatolia, and a general screening model was employed. The RWRDT consists of six subtests: namely, basic visual perception test (32 items); listening, monitoring and comprehension (28 items); visual reading and comprehension test (33 items); phonological awareness test (125 items); print awareness test (24 items); and basic writing skills test (27 items). Expert opinions were applied to assess content validity while exploratory and confirmatory factor analyses were calculated to assess construct validity. The basic visual

perception test's item difficulty levels were between 0,36 and 0,91, and item discrimination levels were between 0,32 and 0,56. This means that the items were both of ideal difficulty and distinctive. The basic visual perception test's KR-20 result was 0,82, and the listening, monitoring and comprehension test's item difficulty levels were between 0,31 and 0,85, with item discrimination levels between 0,32 and 0,70. This means that the items were both of ideal difficulty and distinctive. The listening, monitoring and comprehension test's KR-20 result was 0,91, the visual reading and comprehension test's item difficulty levels were between 0,41 and 0,88, and item discrimination levels were between 0,29 and 0,49. This means that the items were both of ideal difficulty and distinctive. The visual reading and comprehension test's KR-20 result was 0,74, the phonological awareness test's item difficulty levels were between 0,30 and 0,68, and item discrimination levels were between 0,34 and 0,62. This means that the items were both of ideal difficulty and distinctive. The phonological awareness test's KR-20 result was 0,96, the print awareness test's item difficulty levels were between 0,30 and 0,79, and item discrimination levels were between 0,31 and 0,60. This means that the items were both of ideal difficulty and distinctive. The print awareness test's KR-20 result was 0,87, the basic writing skills test's item difficulty levels were between 0,27 and 0,67, and item discrimination levels were between 0,40 and 0,52. This means that the items were both of ideal difficulty and distinctive. The basic writing skills test's KR-20 result was 0,78. As a result, the RWRDT was found to be a valid and reliable data collection tool for assessing the early literacy skills of Turkish preschoolers. The length of the implementation of the RWRDT takes approximately 45 minutes. It c be completed by both teachers and researchers. It does not need any training to be administered. However, the researchers must cite Delican (2018) when they use the RWRDT in their research.

As mentioned above, there are several number of data collection tools developed for the assessment of early literacy skills in the Turkish literature. Mostly, tools for phonological awareness and print awareness have been developed. However, it is seen that there is only one assessment tool for vocabulary and letter knowledge skills, which are two of the most important early literacy skills. There are two subtests for vocabulary and letter knowledge in the TEL developed by Kargin et al. (2015). It is important to develop new tools for the evaluation of these two skills. Among all tools available in the Turkish literature, only the use of TEL of Kargin et al. (2015) requires a certificate and training and these could be obtained by paying a fee. The use of other tool is free. Although almost all of the tools are free, their use is limited. Researchers or teachers who want to use these tools can first contact the developers of the tools

and then access the materials of them. This decreases their use especially in the classroom by teachers. Since teachers could not access these materials whenever they need, they do not have opportunities for the regular assessments to track children's progress. This makes it difficult to determine children at risk of literacy in preschool. In order to overcome this accessibility problem, the data collection tools should be provided in classrooms. This is the responsibility of the Ministry of Education. The Ministry should provide the tools in the classrooms and participate teachers in the training.

2.4 Home Literacy Environment

HLE is a relatively new concept in Turkey and so far, there are only a limited number of studies about it, introduced in Table 3 below.

Table 3

Overview of the Review Sources for Home Literacy Environment in the Literature

Author	Purpose	Research Design	Target Population	Results
Sarıca et al. (2014)	Developing Home Early Literacy Environment Questionnaire (HLEQ)	Descriptive survey	341 parents of preschool children	HLEQ was found to be a reliable and valid tool for assessing HLE of Turkish preschoolers with different SES
Ergül et al. (2017b)	Determining the possible differences between the HLE of preschoolers with low, middle and high SES	Descriptive survey	340 parents of preschool children	Children with high SES had significantly richer HLE than those with middle and low SES.

Turan and Akoğlu (2014)	Comparing the phonological awareness skills levels and home literacy experiences of typically developing children and those with language impairments	Causal-comparative model	20 children aged 5-6 years old	Typically developing children had more home literacy experiences than their peers with language impairments.
Akoğlu and Kızılöz (2018)	Investigating the relationship between HLE and print awareness of preschool children	Correlational survey	60 preschool children aged 48-68 months	Writing practices at home were found to be associated with children's print awareness scores.

In the Turkish context HLE was first studied systematically by Sarıca et al. (2014), who developed the Home Early Literacy Environment Questionnaire (HLEQ) to assess the HLE of Turkish preschoolers. The questionnaire was given to 341 parents of children who attended 12 different preschools in Ankara: 129 parents were with low SES, 97 middle and 115 high SES. They were asked to complete the HLEQ, which constituted 23 items under four subscales: namely, reading, writing, phonological and print awareness, and shared book reading. The maximum and minimum scores that could be obtained from the HLEQ were 114 and 23, respectively. Then, exploratory and confirmatory factor analyses were conducted to assess the validity of the HLEQ, and internal consistency (KR-20) was calculated for the reliability analysis. To determine the norm values for each subscale, t test was employed. Results showed that HLEQ was a reliable and valid method for assessing the HLE of Turkish preschoolers with different SES. In addition, the norm values for each subscale of the HLEQ were 39.99 and under (weak), 40-60 (moderate) and 60.01 and higher (rich). This meant that parents who scored 39.99 and below provided a weak literacy environment to their children, those between 40 and 60 provided a moderate literacy environment to their children, and those over 60 provided a rich literacy environment to their children.

Ergül et al. (2017b) examined the possible differences between the HLE of preschoolers from low, middle and high SES with a study including 341 parents of preschoolers. According to the results, children from high-SES backgrounds had significantly richer HLE than those from middle and low SES backgrounds, and children from middle-SES background had substantially better HLE than those from low SES backgrounds. Results also showed that the home scores of all three SES strata were found under the norm values of each subscale, meaning that all three SES backgrounds were found at the weak-HLE level. Therefore, the authors discussed the importance of home-based interventions for parents and children in Turkey to inform parents to diversify their children's HLE and to support their children's language and early literacy skills.

The relationship between HLE and pre-/early literacy skills has also been investigated. Turan and Akoğlu (2014) compared the phonological awareness skills and home literacy experiences of typically developing children and those with language impairments (LI). Twenty children aged 5-6 years participated with their parents in the study: 10 children (four girls, six boys) were typically developing while 10 (three girls, seven boys) had LI. The children's developmental performance was determined by using the Ankara Development Screening Inventory (ADSI), and their phonological awareness was assessed individually using the Phonological Awareness Checklist (PAC). The children's parents also completed a family literacy questionnaire. Results of the PAC measure showed that typically developing children performed better on average than their peers with LI. Results of the questionnaire also showed that, except for one item (the number of books that children have) typically developing children had richer literacy experiences at home than their peers with LI. In conclusion, a correlational positive relationship between HLE and phonological awareness was found.

Another relational study was conducted by Akoğlu and Kızılöz (2018), who explored the relationship between the HLE and print awareness of preschool children in a study with 60 preschool children aged 48-68 months (27 female, 33 male) and their parents. The children were grouped by age. The First group comprised children aged 48-54 months, the second group comprised those aged 55-61 months, and the third group comprised those aged 62-68 months. Children were selected from a middle-SES district of Ankara. To collect data on the HLE, parents completed the Home Early Literacy Environment Questionnaire (HLEQ), and to collect data on children's print awareness skills, the Early Childhood Print Awareness Checklist (ECPAC) was used. Results showed that the ECPAC scores of children aged 48-54 months were lower than those aged 55-61 and 62-68 months. Results of the HLEQ showed that the

scores of parents of children aged 55-61 months were higher than those of parents in the other two groups. As for correlational results, writing practice at home was found to be associated with children's print awareness scores, and parental social interaction and educational background and home literacy activities were found to be significantly correlated with each other. The nature of these associations was identified by Curenton and Justice (2008). Parental education and socialization were found to be correlated to shared reading activities at home, and parental education and socialization were found to be indicators of SES (Deniz et al., 2015).

Among the studies introduced above, Sarıca et al. (2014) is the most relevant study to current research because the HLEQ which was developed in that study was used as a data collection tool for current research. The study conducted by Ergül et al. (2017b) was another important one because it showed that children with low SES are developmentally at risk of illiteracy. Therefore, children from low SES are participants in the current research, and the results of (Akoğlu and Kızılöz, 2018) are important for current research because HLE and print awareness were found related to each other.

Overall, the Turkish context has examined the HLE in many aspects and found several pieces of evidence. First it suggests that parents from low SES provide a smaller number of books and other literacy-related materials for their children and provide a lower quality HLE than parents from high SES (Altun, 2013, Alaca and Küntay, 2017, Ergül et al., 2017b). Therefore, their children are possibly more at risk of literacy learning problems than those from high SES. Second, the Turkish context suggests that regardless of SES, parents know that spontaneous literacy activities are important. However, university graduate parents perform spontaneous literacy-related activities at home more frequently than parents with lower education levels (Altun, 2013). Third, the Turkish context suggests that the parental views on the necessity of literacy development in early years and the frequency of parental activities at home are affected by whether their children have developmental disabilities. Parents whose children have intellectual disability (ID) or language disorder (LD) reported that it is less important to do activities for language and early literacy skills with their children in the home environment compared to parents with typical developing children (Altun, 2013, Turan and Akoğlu, 2014). Lastly, the Turkish context suggests that it is important for children to see their parents at home when they read books, magazines and similar written materials and take notes, since it enables children to learn about concepts and rules of the written language. Children whose parents engage in more literacy behaviors have better alphabet and writing concept knowledge, and greater interest in reading (Akyüz, 2016, Altun, 2013, Kuşçul, 1993, Nergis, 2008).

Chapter 3

Dialogic Reading

3.1 Introduction

This chapter first explains shared book-reading. Then, it introduces dialogic reading (DR), as one type of shared reading intervention. Finally, it presents and evaluates evidence from DR intervention studies concerning its impact on children's language and early literacy skills.

3.2 Shared Book-Reading

Supporting language and early literacy skills in the preschool years is important because children's later literacy skills depend on their development (NELP, 2008). For example, while vocabulary is related to later reading comprehension (Stanley et al., 2018), print awareness and phonological awareness are predictors of other reading skills including accuracy and fluency (Güldenoğlu et al., 2016, Dessemontet and de Chambrier, 2015). Creating a rich home literacy environment (HLE), planning activities and playing games are some of the important ways parents can support their children's literacy development (Demir and Bilgi, 2018).

As one component of a rich HLE, shared reading is a commonly used interactive and language-based activity to support language and early literacy skills among children with and without disabilities (Justice and Ezell, 2002, Hargrave and Sénéchal, 2000, Mucchetti, 2013, Whalon et al., 2015, Aslan, 2018). It is also an important cornerstone of most preschool programmes around the world (Callaghan and Madelaine, 2012). Shared reading could promote more communication behaviours than other types of play or activities (Justice and Kaderavek, 2002). The results of the studies conducted by Whalon et al. (2015) and D'Agostino et al. (2020) supported the idea of Justice and Kaderavek (2002). They showed that shared reading improved verbal participation and engagement of children with autism, and it taught them to initiate verbal comments. The communicative behaviours provided by shared reading foster child engagement and make shared reading more of an interactive activity than other activities.

Shared reading gives children the chance to participate in reading activities across different environments such as homes, preschools, kindergartens and paediatric services (Dowdall et al., 2019). It provides meaningful experiences and an effective context for children to learn

important pre-reading skills (Blom-Hoffman et al., 2007), and improve language (Coyne et al., 2004, Hassinger-Das et al., 2016) and early literacy skills (Doyle and Bramwell, 2006). It helps children to improve their cognitive skills, such as problem solving, and provides helpful learning experiences, including summarizing, making logical links between events and discussing concepts (Hindman et al., 2014). It is also helpful for improving children's imagination, presenting them with new information, exposing them to new perspectives, and enabling them to comment on new ideas and events based on both their and different people's experiences (Van Kleeck et al., 2003). Children learn about language and the structure of a story through listening and discussion during reading, and they learn reading strategies for independent reading through hearing fluent reading (Van Kleeck et al., 2003).

During shared reading sessions, an adult or older sibling or peer can use several types of interaction strategies to help the child comprehend the story. Dickinson and Smith (1994) named these as the co-constructive, didactic interactional, and performance-oriented approaches. The co-constructive approach includes analytic talking while reading; the didactic interactional approach involves answering some recall questions asked by the adult; and the performance-oriented consists of a reconstruction of the story or making connections between the story and real life. Dickinson and Smith (1994) conducted an experimental study to determine which approach is the most effective in improving children's vocabulary and story comprehension. The intervention group included 375 students from 25 classrooms, all of which from schools with SES. A shared reading intervention was delivered in all the classrooms but of different types. In 10 classrooms, the didactic interactional approach was implemented during reading sessions over the course of a year, with the performance-oriented approach in another 10 classrooms and co-constructive approach in five, and children's story comprehension and vocabulary were assessed before and after each intervention. Although all these styles were found to be effective, the performance-oriented method was found to be the most effective in terms of children's comprehension and vocabulary. According to the results, all approaches led to some conversations occurring between child and adult, which could be about various aspects, such as the content of the story, a targeted word or early literacy aims. These types of talk were named by researchers, for example, they were classified as literal, inferential and early literacy talk (Cabell et al., 2019). They were also classified as either meaning-based or code-focused by Hindman et al. (2014). Meaning-based talk was found to help a child to better understand a story, while code-focused talk was found to improve child's early literacy skills.

Shared reading activities have been conducted in both one-on-one (Burgoyne et al., 2018), small group (Aslan, 2018) and whole group (Pollard-Durodola et al., 2011) settings with the various types of settings having different advantages and disadvantages. It has been argued that children in small-group settings can understand a story better than those in one-to-one and whole-class settings (Van Kleeck et al., 2003); children in small groups and one-to-one settings make more comments and ask more questions than those in whole-class settings (Van Kleeck et al., 2003). Although all settings may be beneficial for children, small groups provide more interactive opportunities for children to foster their skills (Simsek and Erdogan, 2015b, Tetik and Işıkoğlu Erdoğan, 2017). Presumably this is because there are both teacher and peer interactions possible when working in small groups.

In recent decades, a considerable amount of research in the literature has shown that shared reading during the preschool period is not only effective in improving language and early literacy skills but also later language and literacy skills, indirectly (Hamilton, 2013, Hood et al., 2008, Sénéchal and LeFevre, 2002).

3.3 Dialogic Reading

3.3.1 What is Dialogic Reading

Dialogic Reading (DR) is a form of shared book reading that involves more interactive and communicative behaviours during reading. It was introduced by Whitehurst (1992) as the method in which the child evolves from being a story listener to a storyteller. By this method, the adult and child change their roles. While the child becomes a storyteller, the adult becomes an active and questioning listener who expands the child's answers and comments.

As for how the DR supports language skills, it gives the child the opportunity to ask the adult the name of the concept while encountering it in the reading session (Ergül et al., 2016, Zevenbergen and Whitehurst, 2003, Storch and Whitehurst, 2002, Whitehurst and Lonigan, 2001, Whitehurst et al., 1999, Whitehurst and Lonigan, 1998b, Whitehurst and Lonigan, 1998a, Lonigan and Whitehurst, 1998, Whitehurst et al., 1994b, Whitehurst et al., 1994a, Arnold et al., 1994, Whitehurst, 1992, Whitehurst et al., 1988). The adult explains the meaning of the concept to the child; therefore, an interaction starts between them. After the adult answers the child's question, he/she again offers the child the opportunity to talk about the concept and encourages the child to make comment on it. If the child makes comment, the adult expands

his/her talk. DR is not only based on the interaction starting by the child. The adult also could start interaction by asking questions or making comments on the concepts, characters or events in the book. After the adult asks questions, he/she gives the opportunity to the child to answer. When the child answers the question, the adult evaluates his/her comment and gives the opportunity to talk more. During the session, the adult not only asks the child questions, but also allows her/him to make predictions on the next pages of the book. The adult also provides clues and encourages the adult child to connect the events in the book with real life. All these processes that take place during DR sessions enable the child to learn the meaning new words, express himself better, establish a cause-effect relationship between events, and make more predictions. These processes encourage the child to listen and talk more. Therefore, it supports language development (Ergül et al., 2016, Zevenbergen and Whitehurst, 2003, Storch and Whitehurst, 2002, Whitehurst and Lonigan, 2001, Whitehurst et al., 1999, Whitehurst and Lonigan, 1998b, Whitehurst and Lonigan, 1998a, Lonigan and Whitehurst, 1998, Whitehurst et al., 1994b, Whitehurst et al., 1994a, Arnold et al., 1994, Whitehurst, 1992, Whitehurst et al., 1988).

3.3.2 Theoretical Framework

DR, theoretically, dates back to the sociocultural perspective of Vygotsky (1978). According to the sociocultural perspective, all developments in human life happen through social interaction within cultural and social contexts. Vygotsky stated that all learning needs to go through a social process to become a mental function. Social mediation in the learning process constitutes a main theme of the sociocultural perspective.

The sociocultural perspective includes the concept of the zone of proximal development (ZPD), which refers to the importance of collaboration during the learning process and was introduced by Vygotsky (1978) to represent the distance in problem-solving between the child and adult or more capable peer. ZPD's premise is that the best way of learning a new skill is working with another more skilled person. Individuals learn new issues, rules and concepts by using this approach.

DR is related to the ZPD and the sociocultural perspective. During shared reading activity, the child has new social experiences and is exposed to new and challenging rules and concepts about books, prints, events, characters etc. To deal with the challenges, realize the concepts, and enjoy the activity, the child needs to interact with the more skilled person, and the more

skilled person shares their knowledge to help the child. This makes DR a collaborative activity that requires dialogue. The dialogue is sometimes performed by the child, sometimes by the more skilled person and sometimes by both.

3.3.3 Dialogic Reading as an Intervention

Adults or any more skilled person use various interactive behaviours to improve the language and literacy skills of preschoolers, such as paraphrasing or answering questions while reading (Haden et al., 1996). These behaviours were first incorporated systematically in a home-based intervention called DR by Whitehurst et al. (1988). It was developed to improve the expressive language skills of 30 children, aged between 21 and 35 months, by increasing the rate of open-ended questions, function questions and expansions. The participants were typically developing children from middle-SES families. The children were randomly assigned to intervention and control groups, and the parents in the intervention group implemented the intervention with their children over a period of one month, whereas the parents in the control group continued to read with their children as usual. Children's vocabulary knowledge was assessed before and after the intervention by the researcher in a university setting. Results showed that children in the intervention group scored significantly better than those in the control group in terms of the expressive vocabulary measure after the intervention.

DR was investigated, described, and documented as an intervention by Whitehurst and colleagues in the last decade of the last century (Arnold et al., 1994, Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1999). Although DR was first developed to enhance expressive language skills, Arnold et al. (1994) suggested investigating its effects on early literacy skills because of the relationship between language and early literacy skills. Therefore, DR was redeveloped and reorganized as an intervention programme for both language and early literacy skills, and implemented in different conditions, such as home, school and home plus school conditions (Whitehurst et al., 1999, Whitehurst et al., 1994b).

It became a common approach to support the development of language by questioning and giving feedback to children and by increasing interaction while book reading, involving diverse types of conversations and discussions across different settings, including one-to-one, small group and whole group. The main aim of DR is to change the roles of adult and child (Doyle and Bramwell, 2006). It is an attempt to make the child the storyteller and the adult an active

listener in order to expand and respond to the child's talks (Blom-Hoffman et al., 2007). DR employs some strategies to promote this switching of roles, these are introduced below.

3.3.4 Dialogic Reading Strategies

The DR strategies developed by Whitehurst and colleagues were reorganized systematically by Zevenbergen and Whitehurst (2003) with techniques divided into two sets for children aged two to three years and four to five years and implemented in accordance with ZPD principles (Zevenbergen and Whitehurst, 2003).

The techniques for children aged two to three years are further divided into two groups (Zevenbergen and Whitehurst, 2003). The first includes seven points, whereas the second involves three points to develop more competence (Zevenbergen and Whitehurst, 2003). The first group includes "*ask 'what' questions*", which refers to asking the child about the names of concepts, objects and pictures in the story; "*follow answers with questions*", which refers to asking following or related questions according to the child's answers; "*repeat what the child says*", which helps the child's verbal language skills and lets him/her listen to his/her talk; "*help the child as needed*", which includes helping the child when he/she deals with a difficult task such as learning the name of a new concept; "*praise and encourage*", which involves praising the child when he/she attempts to talk about the story; "*follow child's interest*", which refers to shaping the activity according to the child's interest, such as only talking about the pictures the child wants to talk about; and "*have fun*", which means increasing the child's enjoyment by playing simple games while reading (Zevenbergen and Whitehurst, 2003).

The second group involves three points. The first one, "*ask open-ended questions*", is a more difficult type of question than the "*what questions*" in the first group. This enables the child to talk more about the story. The second point is "*expand what the child says*", which refers to repeating the child's utterances with more words and asking the child to imitate it. This helps the child to improve their vocabulary knowledge. The third is "*have fun*", which has the same function in the first group, to maintain the child's interest over the whole session (Zevenbergen and Whitehurst, 2003).

The DR techniques employed for four- to five-year-old children are more challenging than those for younger children in terms of language and cognitive expectation. They are organized as two acronyms, CROWD and PEER, which include the first letters of the individual techniques. CROWD includes five types of questions than the adult can ask the child while

reading, whereas PEER includes four strategies with which parents can support child's language development (Zevenbergen and Whitehurst, 2003).

CROWD consists of five question types. The first is "*Completion prompts*" and involves asking the child to fill in blank questions; the second is "*Recall prompts*", which helps the child to remember the story; the third is "*Open-ended prompts*", which enables the child to retell the story in his/her own words; the fourth is "*Wh-prompts*" and includes what, why and where questions that help the child to realize the story; and, lastly, "*Distancing prompts*" includes questions that help the child to link the content of the story to the real world (Zevenbergen and Whitehurst, 2003).

PEER strategies include "*prompting*" the child to label objects in the story, "*evaluating*" the child's responses, "*expanding"* the child's talk by adding new comments, and "*repeating*" the expanded talks. When using these strategies, the adult should use constructive and sensitive behaviours, and praise the child about his/her responses or give alternative for incorrect responses (Zevenbergen and Whitehurst, 2003).

3.3.5 Dialogic Reading Conditions

DR has been implemented in different conditions: the home, school, and school plus home. The selection of the condition depends upon the research aims, types of intervention and participants. For example, Arnold et al. (1994) investigated the effectiveness of a five-week home-based DR intervention on the receptive and expressive language skills of 64 children with mid- to high-SES. Parents were randomly assigned to two interventions and one control group. The two intervention groups were a direct training condition and a video training condition. Parents in the direct training condition attended training sessions at a university laboratory, whereas parents in the video training condition watched video tapes of DR sessions. Parents in the control condition continued parenting as usual. The pre- and post-test levels of the children's receptive and expressive language were assessed by Form-L of the revised Peabody Picture Vocabulary Test and the Expressive Language Scale from the Reynell Developmental Language Scales. Results indicated that the receptive and expressive language skills of children in both intervention groups had significantly improved more than those of the children in the control group. Moreover, when the two interventions were compared, video training was found to be more effective than direct training for receptive and expressive language skills.

Lonigan and Whitehurst (1998) compared the effectiveness of home-based DR, school-based DR, school-plus-home-based DR interventions and no treatment (of the control group) on the language skills of preschoolers, with 90 preschoolers participating in the study that were randomly assigned to the four conditions. Children were pre-tested on three expressive language measures before the intervention, then parents and teachers implemented the interventions with children for six weeks. Parents did DR reading sessions one to one, while teachers did them in a small-group setting. At the end of the six weeks, children were post-tested with the same tests. Results showed that all the DR intervention conditions had a significant effect on expressive language skills compared to the control group. All intervention groups scored higher than the control group, and the largest one was the scores of children in the home condition.

The reason why the studies described in sections 3.3.3, 3.3.4 and 3.3.5 above were included in this literature review is that they were the first studies including DR interventions. These are the studies that have contributed to the evolution of DR from its initial emergence as an intervention program. DR was first explored in these studies as a systematic intervention, examining its effectiveness in different settings and testing whether its strategies were effective.

3.3.6 Effectiveness of Dialogic Reading on Language and Early Literacy Skills

DR has been shown to improve the early literacy and language of typically developing children (Chow et al., 2008, Lever and Sénéchal, 2011, Akoğlu et al., 2014), those with disabilities or language delays (Tsybina and Eriks-Brophy, 2010, Towson et al., 2016, Fleury and Schwartz, 2017) and those from low-SES families (Opel et al., 2009, Simsek and Erdogan, 2015a).

Although there is a significant number of studies in the literature which have shown that DR positively affects early literacy skills of preschool aged children, only four of them were included in this literature review. The main reason for choosing those four studies was that they were the samples that best represent all research and they were similar to the current research in many respects. First, that research has used DR with Whitehurst and colleagues' strategies as intervention programs. The current research also used this approach as intervention program. Second, they tried to improve children's early literacy skills including vocabulary, phonological awareness, letter knowledge and print awareness as dependent variables. The current research used the same dependant variables. Third, their sample were individuals from low SES groups as those in the current research. Fourth, that research was conducted in different parts of the world such as the US, Egypt, Bangladesh and Australia. This helps to

generalize the results of the effectiveness of the DR interventions to the current research and to the world. Especially, the research conducted in Egypt is close to the current research in terms of socioeconomic and historical background. Fifth, that research has been conducted in last decades. It means that their research findings are up to date. Lastly, the intervention structures, participant groups, and settings of these four studies varied. While choosing these, the researcher of the current research aimed to present the data that DR could be effective in different experimental conditions. The similarities and differences between them are discussed, and the strengths and limitations of each study were highlighted below.

For example, Elmonayer (2013) investigated the effectiveness of a DR intervention on phonological awareness among Egyptian preschoolers who spoke Arabic. Sixty-seven preschoolers participated in the study and were grouped into an intervention (n=35) and a control group (n=32). Children were measured in terms of three subskills of phonological awareness: phoneme awareness, syllable awareness and rhyme awareness. Children were pre-tested before the intervention and post-tested after the intervention by teachers using the Inventory of Phonological Awareness. The data collection tool was created by the researcher, and the intervention consisted of 28 picture books created for the research. Then, the intervention sessions were delivered in the children's classroom as whole group setting by the researcher. Results showed that the preschoolers in the intervention group improved significantly in all three phonological awareness skills when compared with those in the control group.

In another study, Opel et al. (2009) investigated the effectiveness of a DR intervention on the vocabulary of Bangladeshi preschoolers from a low-SES rural community, with 160 preschoolers enrolled in the study and randomly allocated to either an intervention (n= 80) or a control group (n= 80). The children's expressive vocabulary was measured before and after the intervention. The intervention itself lasted four weeks. Sessions were conducted by teachers, and it was the key difference between this and the previously discussed study. Both groups were read the same existing books each week, but the teachers in the intervention group read the books employing DR strategies, whereas those in the control group were read without any specific techniques. Results showed that the vocabulary of preschoolers in the intervention group improved significantly from pre- to post-test, whereas the vocabulary in the control group remained at the same level. Unlike the study by Elmonayer (2013), this was conducted with children with low SES who spoke Bangla and was conducted by teachers. Similar to Elmonayer (2013), it included DR strategies and was conducted in the classroom setting.

Huennekens and Xu (2016) investigated the effectiveness of a DR intervention on letter knowledge and phonological awareness among dual-language learners (Spanish and English) aged four and five years, with 15 preschoolers participating in the study. Multiple baselines were applied across the subject design, as a type of single-subject research design. The children's letter knowledge and phonological awareness were measured pre- and post-test using the "Get ready to read!" screening tool. Since there were versions of the data collection tools in English and Spanish, these skills were measured in both languages. The intervention was conducted in Spanish, because Spanish was spoken in all their homes, and included nine reading sessions conducted by the researcher. Results showed that the children's letter knowledge and phonological awareness significantly improved from pre- to post-test levels in both languages. Although the intervention was conducted in Spanish, the same developments happened in English as well. It meant that the development of the letter knowledge in one of the two languages spoken by the child supports the development of the letter knowledge in the other language. This finding was significantly important and unique for future studies on the development of early literacy skills of dual language learners.

Sim et al. (2014) compared the effectiveness of two forms of DR on Australian children's language and early literacy skills. A randomized controlled trial design was applied, and 80 parents of preschool aged children (42 boys and 38 girls) participated in the study. Parents were randomly allocated to three groups: two were intervention groups and one was control. The first intervention group completed DR, and the second completed DR plus print referencing, and the control group completed an attention-matched intervention. All intervention and control group sessions were conducted by parents at home. The intervention lasted eight weeks and included three sessions per week with six early literacy skills measured pre- and post-test: receptive language, expressive language, rhyme, syllable and phoneme awareness, and concepts about print. Results showed that compared to the control group, children in both intervention groups showed greater improvement in the post-test concerning concepts about print, rhyme awareness and expressive language. At a three-month follow-up assessment, the intervention groups had maintained this advantage only on the concepts about print measure. It meant that DR's effect was long-lasting only on print awareness.

Not all the existing findings converge. A contradictory study was conducted by Noble et al. (2020) investigating the effectiveness of DR on various language skills of children from different SES backgrounds. A set of 150 preschool-aged children (83 males and 67 females) were randomly allocated to three groups: two intervention groups, and one for control. The

first group did DR intervention, the second did paused reading intervention and the third was an active control group. Twenty storybooks were given to all the caregivers in the intervention and control groups with caregivers reading three books a week, each book was read twice. They read 60 sessions together over six weeks. Results showed that as predicted, dialogic reading behaviours increased among parents in the intervention groups more than those in the control group; however, the predicted result was not found in the expressive and receptive language and syntax comprehension and mean length of utterance. The language skills of children in the intervention did not improve and their scores were similar to the control group. Furthermore, there was no difference between the children's SES level, as children with low and high SES scored the same on language measures at the post-test. The result of this study has important implications for the current research as it includes the completion of a 60-session intervention programme over six weeks. The most important explanation for the apparent ineffectiveness of the intervention on language skills might be its short duration or the nature of the control groups.

3.3.7 Shared/Dialogic Reading Interventions in Turkey

Shared reading was mentioned first in a Turkish context by Uzuner (1996), then developed by Baydık (2004) as an important way in which early literacy skills could be supported. Several studies investigating the effect of shared and DR interventions on language and early literacy skills of preschoolers have been carried out in Turkey (Akoğlu et al., 2014, Şimşek and Işıkoğlu Erdoğan, 2015, Tetik and Işıkoğlu Erdoğan, 2017, Aslan, 2018). All those studies have been conducted within the last decade, and their effects have influenced language and early literacy skills such as vocabulary, phonological awareness, letter knowledge, print awareness and listening comprehension. Since the number of the studies in Turkey was limited, this section introduces all of those studies and compares them in terms of aims, methodology and findings. This section also explains the similarities between those studies and the current research.

3.3.7.1 Interventions for Language and Early Literacy Skills

The first DR intervention in the Turkish literature was conducted by Akoğlu et al. (2014), which examined the effects of a six-week DR intervention on the expressive and receptive language of children in an orphanage. A single-group pre-test/post-test design was employed and 10 four- and five-year-olds participated, selected from a nursery and a girls' orphanage in

a city in Central Anatolia. All the children had developmental delays according to the assessment results of the Denver Developmental Screening Test II (DDST II). Children's language skills were measured before and after the intervention using the Peabody Picture Vocabulary Test (PPVT) and a natural language sample analysis. The intervention was conducted in the children's nursery and orphanages and included three sessions per week. The sessions were delivered by a researcher, each lasting 35 minutes on average. All the children's receptive language (average age) increased pre- to post-test, and the mean length of utterance of all but one of the children improved significantly. The number of different receptive and expressive words used by all the children also increased significantly. The total number of words that children produced before the intervention increased for all but two children, and, although there was a sample size limitation and lack of control group, the DR intervention demonstrated positive effects on children's receptive and expressive language skills.

In time, the topic of the studies in the literature became diversified. Comparing reading styles, content, settings and other elements became to be research subject. For example, Şimşek and Işıkoğlu Erdoğan (2015) carried out an experimental study to compare the effects of DR and traditional reading interventions on children's language skills. The DR intervention included Whitehurst and colleagues' strategies (Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1988), whereas the traditional reading did not include any specific types of reading strategies. The study included 45 preschool children selected from two classrooms of a preschool in the city of Denizli, Aegean Region. Classrooms were randomly assigned to intervention and control groups, and the number of children in the intervention group was 22, with ages ranging from 66 to 75 months, while the control group included 23 children aged 65-69 months. The intervention group received the DR intervention, while the control group received a traditional reading intervention over a period of four weeks. For the intervention group, the sessions were conducted in the preschool by the researchers with small groups of 7-9 children. Two sessions were conducted per week and lasted about 20 minutes on average. The intervention included PEER and CROWD strategies (Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1988), while the control group received the intervention as traditional reading activities. The sessions were implemented by a classroom teacher. The traditional reading activities only included reading books and asking some questions about content at the end of the books. The teacher read the same eight books that were read for the DR group to children in two sessions per week. To assess the effects of both interventions, the Test of Early Language Development – Third Edition: Turkish Version

(TELD-3: Turkish) was used both pre- and post-test. Results showed that there was no difference in the receptive and expressive language scores of children in the control group pre- and post-test, whereas there was a significant improvement in those of children in the intervention group. Thus, the researchers concluded that DR intervention was significantly effective in improving preschool children's language skills. This is an important study for a few reasons. In this study, it was not only DR and traditional reading that were compared but also types of implementer and settings as well. The intervention conducted by the researcher in a small group setting was found to be more effective than the intervention conducted by the teacher in a whole group setting.

Similarly, Tetik and Işıkoğlu Erdoğan (2017) compared the effects of DR and traditional reading on preschool children's language skills, using a pre-/post-test experimental design including a control group with 104 children aged 48-60 months taking part. Children were selected randomly from four classrooms from two preschools in city of Uşak, Aegean Region and organized into two intervention and two control groups. Children were randomly allocated to the intervention and control groups with 50 and 54 in each group, respectively. All children were individually pre-tested using the PPVT "Peabody Picture Vocabulary Test" and the "Marmara Language Development Scale". Both intervention groups included 20 books and lasted over 10 weeks with two sessions conducted per week. The DR intervention, conducted by researchers, included strategies from Whitehurst and colleagues (Arnold et al., 1994, Whitehurst et al., 1994a, Whitehurst et al., 1994b, Lonigan and Whitehurst, 1998, Whitehurst and Lonigan, 1998a, Whitehurst et al., 1999, Whitehurst and Lonigan, 2001, Storch and Whitehurst, 2002, Zevenbergen and Whitehurst, 2003). In contrast, the traditional reading intervention, delivered by classroom teachers, did not include any specific DR techniques or strategies. DR sessions were implemented with small groups of 5-8 children, and the traditional intervention was implemented in the whole class group. After the implementation, all the children were post-tested using the same data collection tools as the pre-test. Results demonstrated that although the language skills of children in both groups improved from pre- to post-test, there was a statistically significant difference between the pre- and post-test scores of children in the intervention groups. Results also showed that small-group DR intervention was found to be more effective for language skills than whole-group setting.

The effects of DR were not only investigated in terms of language skills. Its effects on early literacy were also investigated. For example, Efe and Temel (2018) investigated the effects of DR on preschool children's print awareness, studying 23 typically developing children aged

48-66 months. A pre-/post-test design including a control group was applied. Children were selected from two preschool classrooms in Diyarbakır, South-Eastern Anatolia with one classroom selected to be an intervention group (N = 11), and the other a control group (N = 12). As data collection tools, the Demographic Information Form and the Print Awareness Subtest of Early Literacy Skills Assessment Tool (ELSAT) developed by Karaman and Güngör Aytar (2016) were used. The intervention was a 10-week, researcher-delivered DR programme that consisted of 10 books and 30 sessions. One book was read each week, and no intervention was given to the children in the control group. Results showed that children in the intervention group performed significantly better than those in the control group in terms of post-test print awareness.

Shared/dialogic reading interventions have also been conducted with children with disabilities. For example, Aslan (2018) investigated the effectiveness of the shared-reading intervention on print awareness, vocabulary knowledge and listening comprehension of children with mild intellectual disabilities (ID) and their classmates with low print awareness. To evaluate the effects of the intervention on print awareness, a multiple-probe design was employed across subjects as a type of single subject research design, in which the effectiveness of an intervention on a target behaviour was investigated in more than one subject with the same characteristic (Ledford and Gast, 2009). In this design, at least three subjects or groups should have been selected. When applied to the group, each group is considered as a single subject and the group average is taken. Furthermore, semi-structured interviews were held with children's parents and teachers to assess the social validity of the intervention. Three children with mild ID and their 15 normally developing classmates aged 48-72 months participated in the study. To select participants, firstly, three children with ID were identified, and then their five classmates were identified. Each group consisted of six preschool children selected from three preschools in Ankara. The PAT (Doğanay Bilgi et al., 2020a) was used for assessing children's print awareness, and the TEL (Kargin et al., 2015) was used for assessing their vocabulary and listening comprehension. The intervention was conducted in children's classrooms with each child with ID joining in the sessions with his/her classmates. The intervention was conducted by the researcher and consisted of five books and 10 sessions, with each book to be read twice. The data was then displayed on the line chart and tables and was analysed visually. Results showed that all the children's print awareness, vocabulary and listening comprehension significantly increased from baseline to the post-instruction test. Social validity results showed

that children had positive beliefs and attitudes towards the intervention, and parents and teachers mentioned that children's early literacy skills improved because of it.

3.3.7.2 Intervention Studies for Non-Linguistic Abilities

DR's effect has also been investigated in terms of extra linguistic variables in Turkish literature. For example, Öncü (2016) investigated the effects of DR on children's approach to social situations and context. Through a parent-delivered DR intervention, the aim was to help children to understand the main idea and social behaviours of the characters in the stories, and to support their views on friendship, helping and sharing. The study featured 40 children aged 60-66 months and their parents and used a pre-/post-test design including a control group. Children were allocated to intervention and control groups equally and randomly. The intervention group included 13 female children and 7 males, while 9 children in the control group were females and 11 were males. To assess children's views on friendship, helping and sharing, two picture cards were prepared and shown to children. In response to seeing the picture cards, children were asked "what they think", "how it should be" and "why they think this way" about the cards, and their answers were recorded on a "Dialogic Reading Evaluation Form". Then unfinished spoken stories were used to assess the children's understanding of the main idea and social behaviours of the characters in the story. Children were also asked to complete the spoken stories and their answers were recorded on the same form. Those data collection tools were used before and after implementation of the DR, and the intervention materials included three illustrated storybooks whose subjects were friendship, helping and sharing. Parents in the intervention group attended parent training and read those storybooks with their children. Each book was read by parents four times and all reading was completed over a period of three weeks. Results showed that children in the intervention group, compared to those in the control group, demonstrated a significant positive difference in understanding social situations which suggested a positive solution approach to understanding social problems. This study is important for the Turkish DR context as this is the first study of DR intervention implemented to improve non-linguistic skills. This is also important for the current research, which has focused on language and early literacy skills here but might focus on non-linguistic skills in future.

The research introduced and discussed above had some limitations in terms of their designs. For example, Akoğlu et al. (2014) and Aslan (2018) were designed as a single-group pre- post-test and single subject group, respectively. It means that they did not have the control groups

for comparing the intervention groups. Some external variables outside the control of the experimenter in both designs threaten to invalidate research efforts. The sessions of the intervention process were conducted by the researchers in classrooms. However, the children attended kindergarten during this time, and the teachers, the schools, the organization of the classrooms, the curriculum materials and their presentation and none of the other events that might occur in the kindergartens were not controlled by the researchers. Perhaps the developments measured in children's language and early literacy skills might have resulted from those uncontrollable variables. Therefore, designing the research with a control group would help control the external variables and increase the reliability of the research. Also, the research conducted by Efe and Temel (2018) and Tetik and Işıkoğlu Erdoğan (2017) had some limitations in terms of allocation of the participants to the intervention and control groups. When determined the intervention and control groups, the children were not randomly selected from different classrooms. It means that all children in the intervention groups were selected from one classroom, and all in the control groups were selected from another classroom. Since all the children in the intervention group were attended in the same classroom, it was not clear whether the improvements in their language and early literacy skills were because of the intervention or the activities in their classrooms. If the children in the intervention and control groups were randomly selected from different classrooms, the classroom activities could be controlled. Therefore, it could be clearly suggested that the differences between pre- and post-test scores the intervention groups were because of the intervention program. Lastly, the studies conducted by Aslan (2018), Efe and Temel (2018) and Şimşek and Işıkoğlu Erdoğan (2015) had another limitation. In those studies, post-tests were performed, and the interventions were found effective on the language and early literacy development of the children in the intervention groups. The sessions of the interventions were conducted in the isolated classrooms by the researchers. In those studies, no information about the interventions was shared with the teachers in both intervention and control groups. After the implementation processes, the teachers in both groups were not included in any training. Also, no follow up assessment was made after the post-tests. If follow-up assessments had been conducted a few months after the post-tests, perhaps it would have been determined that the children had lost their gains. If teachers were included in any training, they could continue to do DR activities themselves in their classrooms after the intervention. In this way, the children in the intervention group could maintain their gains and the children in the control group could also gain.

Chapter 4

Aims, Logic Model, and the Development of the Dialogic Reading Programme

4.1 Introduction

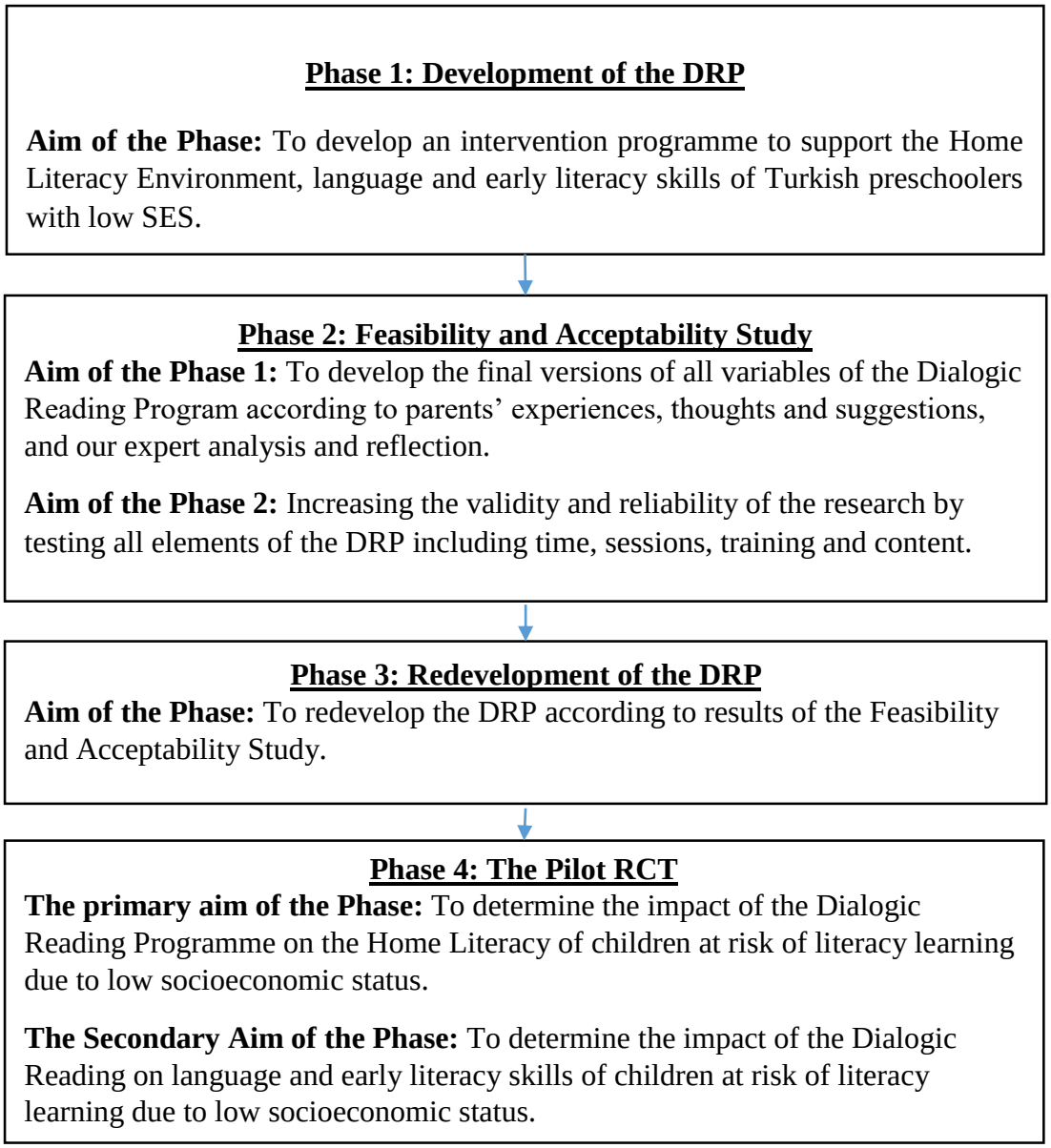
This chapter introduces the current research and explains the general aims and main phases (section 4.2) and logic model (section 4.3). It documents the initial development of the Dialogic Reading Programme (DRP) (section 4.4), before concluding with a consideration of the ethical issues (section 4.5).

4.2 Aims of the Current Research

The number of studies on the relationships between early literacy, HLE, SES and DR are limited in the Turkish context because developments in these areas are only recent. This limitation is similar in both descriptive and experimental studies. The limitation in intervention studies is seen as the most important issue in Turkish context. The study conducted by Ergül et al. (2017b) was evidence to suggest that there is a need for home-based interventions in the Turkish HLE context because there were no published studies examining effects of a DR intervention on HLE in Turkey (Yök, 2021, Ulakbim, 2021). Moreover, there is no experimental DR research into improving the language, early literacy and HLE of preschool children from low SES (Yök, 2021, Ulakbim, 2021), and there was no Randomized Controlled Trial (RCT) intervention in Turkish HLE and early literacy contexts (Yök, 2021, Ulakbim, 2021). The lack of intervention studies bringing all the aspects together is another of the important limitations seen in the Turkish context. This current research tries to bring together all aspects of the early literacy approach including language and early literacy skills, HLE, SES and DR. It aims to improve the language, early literacy and HLE of Turkish preschoolers with low SES using a home-based DR intervention. This research has tried to fill these literature gaps mentioned above. Figure 6 shows all the phases and aims of the current research below.

Figure 6

The Phases and Aims of the Current Research



4.3 Logic Model - Theory of Change for the Current Research

Logic models are used to organise information and display ideas, and as visual formats for conveying a scheme, project or programme (Knowlton and Phillips, 2012). They also describe plans and the expected outcomes of processes (Knowlton and Phillips, 2012). Moreover, they offer learning possibilities, document potential results, and clarify the question, "*What works and why?*". A theory of change is a view of evidence-based logic that is considered one type of logic model, and defined as "a general representation of how you believe change will occur" (Knowlton and Phillips, 2012, p.5). Additionally, a theory of change is conceptual, providing information about an idea, and presenting an opportunity to test plausibility (Knowlton and Phillips, 2012).

The logic model for the current research includes a theory of change for the DRP, i.e. the effectiveness of the DRP directly on the HLE and indirectly on the language and early literacy skills of children that are at risk literacy problems due to low SES. It also includes determining the effectiveness of the DRP directly on the language and early literacy skills of those children.

As mentioned in previous chapters, shared reading has been found to be effective in improving the language and early literacy skills of children at risk of literacy problems. This method has been found to be one of most important components of the HLE, which means that home-based parent-child reading is a potential causal factor in developing children's language and early literacy skills.

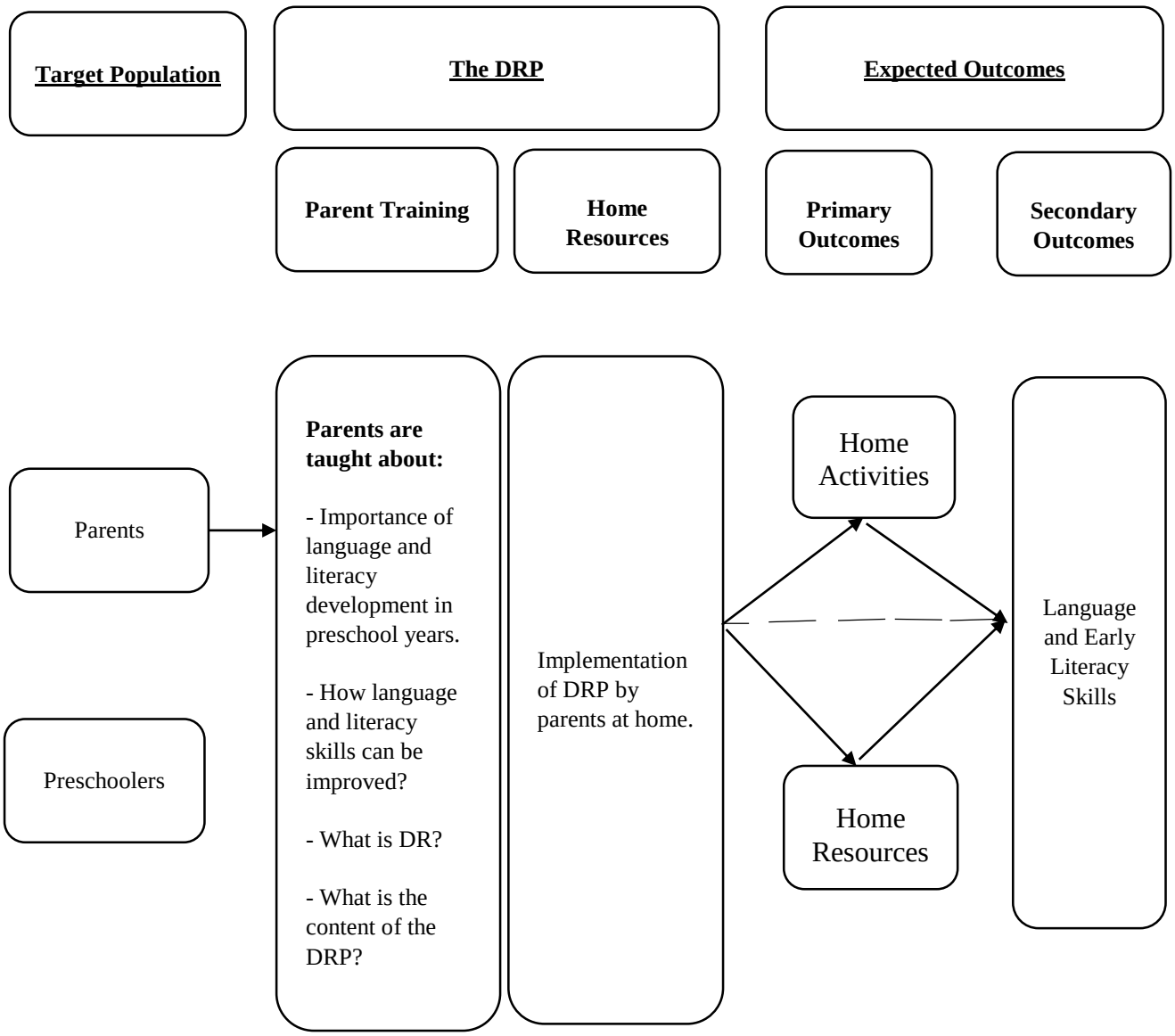
It was first predicted that parents who participated in the DRP would learn strategies for enriching home literacy materials and literacy activities through attending parent training sessions and weekly meetings. It was then expected that they would use those materials and activities themselves.

Second, it was predicted that those changes in the HLE would cause developments in the children's language and early literacy skills. The DRP might change the HLE directly and indirectly affect their language and literacy skills. It was predicted that parents would complete the DR sessions with their children, create a library for them, visit other libraries and complete some other activities including preparing a shopping list, and writing letters and shapes together.

Third, it was predicted that DR might directly affect language and early literacy skills without the need for mediation via the HLE. Figure 7 shows the DRP's logic model.

Figure 7

The Theory of Change, the Logic Model of the Current Research



4.4 Phase 1 – Development of the Dialogic Reading Programme

4.4.1 Aims of the Phase

The aim of this phase was to prepare an intervention programme to support the HLE, language and early literacy skills of Turkish preschoolers with low SES. The DRP was adapted from Burgoyne et al. (2018) language enrichment programme, which includes three parts: shared reading, vocabulary teaching and narrative skills. In an RCT, (Burgoyne et al., 2018) to evaluate the effectiveness of the programme, it was delivered by parents over 150 sessions in 30 weeks, meaning that five sessions were completed each week. Children's receptive and expressive language and grammar skills were measured by the CELF Preschool II (Semel et

al., 2006), the Renfrew Action Picture Test (Renfrew, 2003), and the BPVS3 (Dunn and Dunn, 2009). Their listening comprehension was tested with eight questions from each book and by the YARC (Snowling et al., 2009), while their narrative skills were measured by asking questions and scoring their expressive language and story grammar. Lastly, early literacy skills including letter-sound knowledge, sound deletion and regular and irregular word reading were measured using the YARC (Snowling et al., 2009). The language enrichment programme was found to be effective in improving both the language and early literacy skills of children with low and middle SES in the UK. The effect on language skills was d = .21 and on narrative skills d = .36, while the effects on early literacy skills were d = .35 and .42.

There were however some limitations to this study. First, the intervention was too long for parents, and they struggled to finish the programme. It was suggested that a shorter version of programme could investigate its effectiveness on language and early literacy skills (Snowling et al., 2009). Second, parents were expected to have at least basic literacy skills to participate in the intervention, and it was suggested that in further studies, parents with limited literacy skills could participate in the study (Burgoyne et al., 2018).

There are some reasons for choosing and adapting this research as the sample intervention. First, the sponsor of the current research (Turkish Ministry of Education) asked the researcher to adapt a large-scale intervention program from the country where he did his PhD to Turkey and develop it into a national project in the following years after the PhD. Therefore, the researcher chose the study of Burgoyne et al. (2018) as a large scale intervention conducted in the UK and it is suitable to be a national project in the future. Second, the researcher of the current research aimed to design the intervention as an RCT research. Therefore, the researcher chose Burgoyne et al. (2018) as an intervention program that had previously been run as an RCT and had proven positively effective. Third, the researcher of the current research aimed to study with children at risk of literacy learning problems because of low SES and their parents. Therefore, the researcher chose the study of Burgoyne et al. (2018) since it included low SES children and their parents as sample group. Fourth, the study of Burgoyne et al. (2018) was more understandable and repeatable than other studies in the literature. The content and materials of the intervention program were explained in detail and presented to the readers. Therefore, the study of Burgoyne et al. (2018) was seen easier to adapt than other studies. Sixth, the study of Burgoyne et al. (2018) involved not only reading books but also teaching vocabulary and sequencing picture cards. The researcher thought that these two additional parts made the intervention more powerful and effective. Therefore, the researcher aimed to develop

a more comprehensive intervention program than an intervention including only DR. Since the current research is considered to be expanded as a national intervention in the future, it was thought that it would be better if it was more comprehensive than an intervention program that only included DR. Lastly, in the literature, there are findings that have shown that both shared reading and direct instruction such as vocabulary activities and working on narrative conducted by parents in the home setting in the preschool period improve children's early literacy skills (Hamilton, 2013, Sénéchal and LeFevre, 2002). Therefore, the researcher of the current research aimed to bring all those home-based approaches together and try to design an evidence based intervention.

In the current research, DR strategies were added in reading sessions, and the length of the programme was shortened due to the PhD timeframe as well as the findings of the feasibility and acceptability study (F&A Study) and suggestions made by Snowling et al. (2009). The procedures of developing the DRP are explained below.

4.4.2 Preparing the Materials

The current research was adapted from Burgoyne et al. (2018). Although both programmes have shared reading as an element, the current research combined shared reading with the DR strategies of Whitehurst and colleagues (Arnold et al., 1994, Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1999). In addition, in the current research the length of the intervention was decreased to 12 weeks and the length of sessions increased to 30 minutes each. To prepare the intervention, first books were chosen, and then the vocabulary items and narrative activities were determined.

4.4.2.1 Storybook Selection

To determine the books to be used in the DRP, the Illustrated Storybooks Evaluation Scale (Deniz, 2018) (See Appendix 1) was used. The scale was developed for determining the appropriateness of illustrated storybooks for preschool-age children in Turkey and consists of one factor of 21 items, which are about the quality of the illustration and content of storybooks. The items are scored as “insufficient” (1 point), “partially sufficient” (2) and “sufficient” (3), and, therefore, the lowest and the highest possible scores are 21 and 63, respectively.

As for the candidate books involved in the DRP, at least 100 illustrated storybooks for preschool children were randomly selected from publishing houses in Ankara, Turkey. They

were then examined using the Illustrated Storybooks Evaluation Scale to determine which ones were suitable for preschool children and marked as "insufficient", "partly sufficient" and "sufficient" after comparing the illustration and content quality of the books with the items in the scale (Deniz, 2018). The books marked as "sufficient" in both illustration and content were potential candidates for the DRP and 60 of them were chosen for use in the DRP (Appendix 2) and divided into 12 groups of five books to be read each week. See the groups of books in Appendix 3.

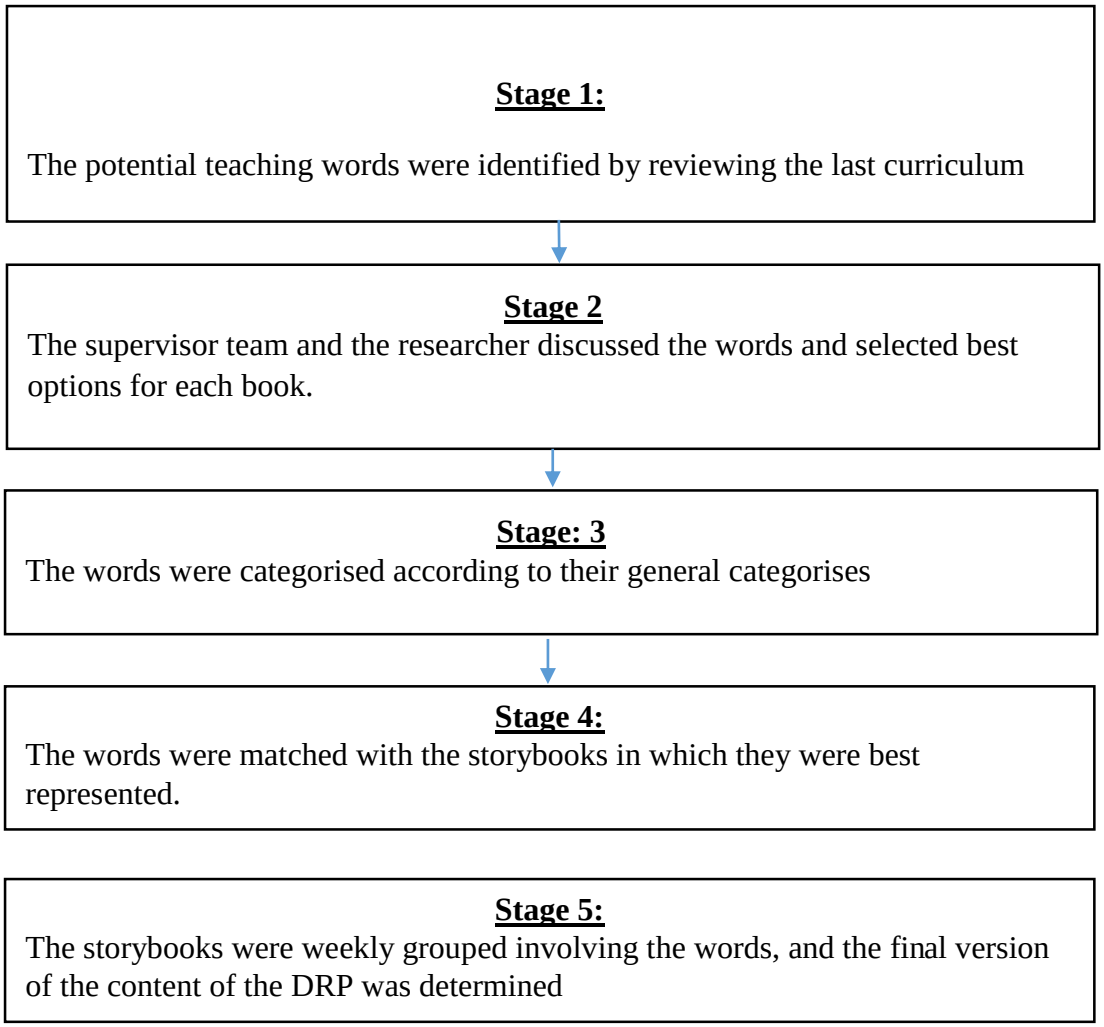
4.4.2.2 Vocabulary Selection

After selecting the storybooks, the words that could be taught to children in the DRP sessions were determined. The process of choosing words is explained below.

First, the potential teaching words were identified by reviewing the last curriculum (Meb, 2013). The curriculum of Meb (2013) presented a list of words should be known by children aged 36, 48 and 60 months. Since the sample group of the current research was between 48-56 months, the researcher presented to the supervisor team the list of words that should be known by children aged 48 months. Second, the supervisor team and the researcher discussed the words and selected the words that could be best illustrated. Third, the words were categorised according to their general categorises. For example, the words in which animal names were taught were grouped into one week, and the words of fruit names were grouped into another. Fourth, the words were matched with the storybooks in which they were best represented. The list of words involved in the DRP was presented in Appendix 2. Fifth, the storybooks were weekly grouped involving the words, and the final version of the content of the DRP was determined. The list of weekly groups of storybooks and words in the DRP was presented in Appendix 3. The appendices of 2 and 3 were presented to parents in the intervention group with the Intervention Instruction of the DRP which was presented in Appendix 6. The Figure 8 presents all stages of the vocabulary selection below.

Figure 8

The Stages of Vocabulary Selection



4.4.2.3 Vocabulary Teaching

Vocabulary teaching consisted of four steps. The first one was introducing the word; second was finding the word in the storybook; third one was saying the word; and the last one was matching the word and its picture. The word card used in vocabulary teaching was a quarter of a sheet of A4 paper. It is presented in Appendix 4. Vocabulary teaching was aimed to be similar as conducted in the Burgoyne et al. (2018) since it was the sample program and was found effective on language of children from low SES. While the DRP was introduced in the parent training sessions, the researcher taught the parents how to teach words. Vocabulary teaching was also explained in the Intervention Instruction of the DRP (Appendix 6). Table 6 shows an example of the vocabulary teaching in the DRP.

Table 4

The Process of Vocabulary Teaching in the DRP

Instruction 1	Take the card of the targeted word at the end of the book.
Sample Talk 1	- *Now, we are going to find our special word today. It is at the end of the story. Let's find it!*
Instruction 2	Introduce the new word. Prompt your child to say the word with you. Give your child lots of praise for trying. If he/she doesn't want to say it here, move on.
Sample Talk 2	*Our special word is Jungle. Now, tell with me! Well done! You said Jungle.*
Instruction 3	Find the word in the story and read the sentence which has the word in it. Use the picture in the book to explain the word.
Sample Talk 3	*Let's find our special word in the story. Here it is! It says: "…a little rabbit lives in a JUNGLE". A JUNGLE is where it lives. Look, the JUNGLE has flowers, trees and greens, (point to the pictures as you name them and pause to allow your child to name them if he/she can).*
Instruction 4	Show again your child the dictionary card of the "JUNGLE" and give your child a definition of the word.
Sample Talk 4	- *The "JUNGLE" is written like that. Let's stick it to its picture one the page.*

4.4.2.4 Narrative Skills

As the last part of the DRP, narrative activities were used to improve children's sequencing, summarising and retelling skills. Children were asked to explain what happened in the storybook. Three pages from the beginning, middle and end of each storybook were chosen. the numbers of pages selected from each storybook are presented in Appendix 2. Each picture card was a scaled-down version of a page in the book. In other words, three pages were reduced to three cards. Each picture was one-third of an A4 paper. They were printed in colour. They

were given to parents with the other materials of the DRP at the end of the second session of the parent training. An example of the picture cards is presented in the Appendix 5.

When selecting the pictures, the researcher analysed the story structure to make sure that each picture captured the events of the beginning, middle and end of the story. Table 7 below presents the narrative work of a session of the DRP.

Table 5

An example of Content of the Books, Vocabs and Narrative Skills in the Dialogic Reading Programme

Name of the Book	Author	Publisher	Vocab Item	Narrative	Pages
Red Apple	Feridun Oral	Yapı Kredi	Snow	Retelling, Sequencing, Summarising	2,16,28

Picture card were always presented to the children in a mixed sequence and they were asked to sequence events in the story and to retell the story. Questions included the following: Which picture did the story you read begin with? What happened next in the story? Which picture was at the end of the story? In the parent training sessions, parents were informed about how to support their children with verbal prompts to sequence the picture cards, and retell the story. If the child could not start the retelling, the parent asked a specific question about the first action of character or gave a partial sentence about the first action and waited for the child to complete it.

Narrative work consisted of four steps. The first one was introducing the activity; second was selecting the picture card of the beginning of the storybook; third one was selecting the picture card of the middle of the storybook; and the fourth one was selecting the picture card of the end of the storybook. The picture cards used in narrative works were a one-third of an A4 paper. It is presented in Appendix 5.

Narrative work was aimed to be similar as conducted in the Burgoyne et al. (2018) since it was the sample program and was found effective on language of children from low SES. When the DRP was introduced in the parent training sessions, the researcher taught the parents how to

work narrative. Narrative work was also explained in the Intervention Instruction of the DRP (Appendix 6). Table 8 shows an example of the narrative works in the DRP.

Table 6

The Process of Narrative Works in the DRP

Instruction 1	Mix up the 3 story sequencing pictures and put them in front of your child. Explain that the pictures are from the story and that they need to be put into the right order to show what happened in the story. Work with your child to put the pictures in order. Provide as much support as needed.
Sample Talk 1	- *These pictures are from our story. One of them shows what happened at the BEGINNING of the story which means it happened FIRST. One shows what happened NEXT, in the MIDDLE of the story. The LAST picture shows what happened at the END; this comes LAST. Choose a picture for us to look at FIRST.*
Instruction 2	After the child chose the first picture, ask him/her about the picture.
Sample Talk 2	- *What is happening in this picture?*
Instruction 3	Ask child to choose second picture.
Sample Talk 3	- *Well done you successfully chose the picture at the beginning of the story! Now choose the picture at the middle of the story.*
Instruction 4	After the child chose the second picture, ask him/her about the picture.
Sample Talk 4	- *What is happening in this picture?*
Instruction 4	Ask child to choose third picture.
Sample Talk 4	- *Well done you successfully chose the picture at the middle of the story! Now choose the picture at the end of the story.*
Instruction 5	After the child chose the third picture, ask him/her about the picture.
Sample Talk 5	- What is happening in this picture?

Instruction 6	When you have finished, look back in the book together to check if they are in the right order.
Sample Talk 6	- *Thank you for sequencing the pictures. Let's look at book to check pictures' order*

4.4.2.5 The Dialogic Reading Programme

The DRP included the materials outlined above. It was planned to be a 12-week intervention that consisted of 60 books, including 60 vocabulary items and narrative skills, as per Burgoyne et al. (2018). However, because the length of the DRP programme was reduced, the duration of the sessions increased from 20 to 30 minutes. When deciding the precise timings for the sessions of the DRP, the researcher first examined published intervention studies in the world and Turkish literatures (Aslan, 2018, Ergül et al., 2016) and then discussed with supervision team. The researcher and the supervision team decided on 30 minutes per session. Table 9 summarizes the content of each DRP session.

Table 7

Session Plan of the Dialogic Reading Programme

Session Plan of the DRP		
Steps	**Time – 30 Minutes**	**Action**
Introduction	2 minutes	Parent prepares the child for joining the session. H/she tries to make the child curious about the book.
Shared Reading	15 minutes	Parent uses suggested strategies before, during and after the shared reading. Parent and child discuss the event and characters in the story.
Vocabulary	5 minutes	Parent teaches the child the target word.
Narrative	5 minutes	The child summarizes or retells the story to develop language and cognitive skills (sequencing, summarising and retelling).

Plenary	3 minutes	Parent reviews the session and rewards the child.

4.4.2.6 Parent Training and Intervention Instruction

Training was designed for parents of the children in the intervention group. The main aim of the training was to inform and support parents to deliver the DRP to their children, and to ensure that parents understood the aims and methodology of the research. The training also aimed to provide parental motivation for implementation of the DRP. The training was delivered as two 90-minute sessions before the intervention began, in a meeting room at the children's preschool. The training included the explanations of the research aims, research design and time schedule, a brief overview of development of language and early literacy skills in preschool years, and the role of a rich HLE in development of those skills. It also emphasized the impact of well-developed early literacy and language skills in preschool years on later reading achievement and the DRP and its implementation. It lastly introduced all the materials of the DRP and Intervention Instruction (Appendix 6).

The Intervention Instruction was prepared before the intervention and were based on an example book Red Apple (Oral, 2016). Red Apple (Oral, 2016) is one of the books in the DRP. Intervention Instruction covered all stages of DRP (introduction, dialogic reading, vocabulary, narrative, plenary) and were presented to parents with the storybooks. The introduction stage, explained in detail how the child could be prepared for the session. The dialogic reading part, from the cover page to the last page of the Red Apple book, explained in detail how to ask questions to the child and how to expand his/her potential answers. In the vocabulary stage, parents were told how to teach the target word to child. The narrative part, explained how the child would summarize and retell the story. In the last part, giving the sticker reward to the child and ending of the session were explained in detail. (See the Intervention Instruction of the DRP in Appendix 6.)

All material of the DRP were scripted and given to parents at the end of the last session of the parent training sessions. The materials included 60 books and each book contained a word card presented in the appendix 4 and three picture cards presented in the appendix 5. Also, parents were given the Intervention Instruction (Appendix 6) that shows how to conduct the DRP sessions and Weekly Groups of the Storybooks and Vocabs (Appendix 3) that shows which book they would read on which day. Parents were recommended to follow the Intervention

Instruction (Appendix 6) and the list of Weekly Groups of the Storybooks and Vocabs (Appendix 3). In the list of Weekly Groups of the Storybooks and Vocabs, parents were directed to read one new book per day/5 a week.

4.5 Ethical Considerations

For this research, ethical approval was first provided for F&A study on 17 September 2019 (See Appendix 7 for approval from the Faculty Ethical Committee.) A second ethical approval was applied for the Pilot RCT because of the changes in the context of the research. It was obtained at the beginning of the pilot RCT on 15 December 2019. The pre-test measure and the first four weeks of the DRP were conducted following this approval. However, due to the COVID-19 pandemic some changes were made to the post-test measures, including changing data collection methods and revising data collection. The changes to the post-test are explained in Chapters 7, 8, 9 and 10. Ethical approval was applied for again because of those changes, and the third ethical approval was obtained for the beginning of the pilot RCT post-test on 20 July 2020. (See Appendices 8 and 9 for approval from the Faculty Ethical Committee.) Key ethical issues are explained below.

4.5.1 Key Ethical Issues

Because the research was conducted in a preschool in Ankara, the Turkish authorities were informed about data collection at the beginning of the project. The researcher applied to the Ministry of National Education for approval, and after that was approved, he sought permission from preschool leaders to contact the parents of their children.

Before the implementation process, an information sheet that included information about all parts of the research was delivered to parents to explain all aspects of the study, along with the informed consent form. Parents who may have had low literacy levels were called via phone by school management, who explained the study to them verbally. They then decided whether to sign the form.

After the consent of the parents, children were verbally informed about the aims of the research. Verbal assent was then requested for the pre-test. For ongoing assent, the aims of the research were explained to the children again and their verbal assent was sought again, post-test.

To provide anonymity, no participant names were used at any stage of the research. Only the researcher had access to the data before it was anonymized, and all information about the

participants and school and their videos or photographs used in the research were kept confidentially. All data obtained during the research was protected and kept in two different secure servers.

Parents were informed about video recordings being made on the consent form. The researcher explained on the form exactly how the training sessions, meetings, sessions and measurements would be videoed. He then explained why measurements and sessions should be recorded. He also ensured that these video records were only used in accordance with research purposes, and all records were deleted after the research was completed. Transcribed data will be kept for three years after the research is finished in case a follow-up study is needed that might require comparison or related publication.

This research was implemented by an official scholarship student of the Republic of Turkey Ministry of National Education. For that reason, all expenses during the research were covered by the Ministry.

Chapter 5

Feasibility and Acceptability Study: Introduction, Literature Review, Aims, Methodology

The F&A study was conducted to determine the final version of the DRP including content, time, training and other elements in the process. This chapter provides information about the design and implementation of the F&A study.

5.1 What Are Feasibility and Acceptability?

Feasibility is defined by Eldridge et al. (2016, p.1) as "whether something [an intervention] can be done, should we proceed with it, and if so, how". They also suggested that a feasibility study should be conducted using qualitative methods since it includes participants' thoughts and feelings in the process. The aim of a feasibility study is to evaluate the appropriateness of an intervention for further testing in full-scale research (Bowen et al., 2009). Acceptability is defined by Bowen et al. (2009, p.2) as "how the intended individual recipients—both targeted individuals and those involved in implementing programs—react to the intervention". An acceptability study is conducted to test the suitability, satisfaction or attractiveness of a new process, programme or idea for participants, both deliverers and receivers (Bowen et al., 2009).

5.2 Why Employ Feasibility and Acceptability Studies?

F&A studies are employed to test the potential success of interventions, especially RCT interventions. The aim for them is to reduce the risks that might jeopardize validity, and to build the foundation of the main studies (Tickle-Degnen, 2013). The main purposes of conducting an F&A study are explained by Arain et al. (2010, p.5): "They are used to estimate important parameters that are needed to design the main study". Thabane et al. (2010) also mentioned four main reasons for conducting feasibility and pilot studies: a) a process that includes assessing feasibility of the main study, b) resources that include assessing the problems around time and resources, c) management that includes assessing the problems about human and data management, and d) scientific that includes assessment of content and effectiveness of the intervention. For the current research, the F&A study was used to determine the potential success of the DRP and review all design parameters of the pilot RCT.

The F&A characteristics that were considered for the current research are listed in Table 10 with the examples used in the interview schedule.

Table 8

Aims of Feasibility and Acceptability Study by Thabane et al. (2010, p.4)

Aims of Conducting F&A Study	Questions for the Current Research
Process: This assesses the feasibility of the processes that are key to the success of the main study.	- Is the number of parents who consented to take place in the study enough for the pilot RCT? - Are the eligibility criteria useful in determining the potential sample? - Are the data collection tools feasible for participants? - Do participants enjoy the intervention?
Resources: This deals with assessing the time and resource problems that can occur during the main study.	- Is the training useful and sufficient? - Are the meetings useful and sufficient? - Are the materials useful and sufficient?
Management: This covers potential human and data management problems.	- What are the challenges, problems, and disadvantages that participants face? - How can personal and research data be stored safety?
Scientific: This deals with the assessment of treatment safely, dose, response, effect and variance of the effect.	- How can participants be protected? - Are the number and length of the intervention sessions enough?

5.3 Literature Review on Feasibility and Acceptability Studies

Since the current research is a F&A study of a parent-based DR intervention for language and early literacy skills, this literature review examines feasibility studies including reading and language interventions and parent/teacher engagement. These interventions were implemented with typically developing children, their peers with autism or LI, and those at risk of problems learning literacy because of low SES. When selecting the studies, the following keywords were used: feasibility, intervention, parent, teacher, child, shared reading, dialogic reading (DR), language development, and early literacy. After selecting the studies using these keywords, the studies that did not include language and reading intervention, and participation of teachers or parents as implementers were eliminated. Then, the feasibility studies including shared-reading interventions and parent or teacher engagement were selected. They are introduced in detail below.

Justice et al. (2005) conducted a feasibility study on parent-based phonological awareness intervention for preschoolers with LI, included randomly allocated groups 22 experimental and comparison groups. The intervention group had phonological awareness tasks whereas the comparison group focused on vocabulary knowledge. Both interventions aimed to increase those skills using shared reading. Children were pre- and post-tested on phonological awareness including rhyme detection, rhyme production, alliteration detection and alliteration production. No measures of vocabulary knowledge were conducted. In addition to the children's measurement, the parents were asked to complete a questionnaire including a five-point Likert-type scales which aimed to determine parental beliefs about the intervention. Parents were asked how much they and their children enjoyed the intervention and storybooks, and how much the intervention affected their children's development. All the parents in both groups completed the questionnaire anonymously. Also, parental treatment fidelity was determined by listening to their sessions' audio records by coders. Results showed that when comparing groups, the phonological awareness intervention significantly improved rhyme awareness of children but only affected their alliteration awareness very little. Parents reported that they and their children enjoyed the intervention, and its sessions were helpful for children's development. However, parents in the intervention group enjoyed the intervention more than those in the comparison group. Lastly, parents implemented the intervention with a high degree of procedural fidelity. No difference was found between the fidelity degrees of the groups. Results revealed significant evidence about the effects of the intervention for future studies.

Girolametto et al. (2007) conducted a feasibility of the two-day in-service education

programme for educators and children. It aimed to encourage educators to use early literacy strategies, and children to increase their responses to educators. Sixteen early childhood educators and 64 preschool children aged 36-72 months from the teachers' classrooms took part in the study. Educators were randomly and equally assigned into intervention and control groups. Educators in the intervention group implemented the two-day in-service education programme with small groups of four children in their classrooms, whereas those in the control group implemented an alternative programme with their small groups. Intervention sessions were watched, transcribed and coded for measurements, then educators' use of strategies and children's responses were measured by watching the videos, pre- and post-test. Results showed that educators in the intervention group used significantly more utterances than those in the control group. Children in the intervention group responded to educators' utterances every minute but those in the control group responded only once every three minutes. Results also showed that educators in the intervention group performed print referencing behaviours at significantly higher rates than those in the control group, and the rate of responses of children in the intervention group was one response per minute while children in control groups responded only once every three minutes.

Munro et al. (2008) investigated the feasibility of a hybrid language intervention that included oral narrative, storybook reading and drill-based games for improving vocabulary knowledge and phonological awareness among children with specific language impairments (SLI). Although 20 participants consented to take part in the study, only 17 children aged between 56 and 77 months met the SLI criteria, and children were pre- and post-tested on language and early literacy skills. There were some limitations of the design in that there was no control group or random allocation. Measurements were done in two settings. The first was a clinical assessment battery which included expressive vocabulary, listening comprehension, oral narrative production, phonological awareness and drawing skills with drawing skills assessed as a control variable. The second setting included the experimental assessment tasks which examined children's vocabulary knowledge in depth and included assessment of lexical-semantic and sub-lexical properties. The intervention was administered to children individually once a week with each session lasting one hour, and the intervention was delivered over a period of six weeks in total. The sessions were conducted by the same trainer, and in the last ten minutes of each session, the trainer and parent discussed follow-up activities at home. Results of the clinical assessment tasks showed that children's expressive vocabulary, listening comprehension, oral narrative production, and phonological awareness significantly improved

from pre- to post-test. No changes were found between pre- and post-test measurement in drawing performance. Results of the experimental assessment tasks indicated that significant improvements occurred. This study was found to be feasible and acceptable, and it suggested conducting large scale interventions for language and early literacy skills of children with SLI.

Justice et al. (2010) investigated the feasibility of the Read It Again (RIA) language and literacy curriculum for preschool children whose teachers did not have access to high-cost language and literacy curricula. It was hypothesized that the curriculum could be equally effective with children's skills post-test regardless of their initial language level. To implement the RIA, 20 preschool teachers and 137 preschool children deemed at risk academically from 14 preschools across four regions of the US participated in the study. All the classrooms received public funding and were in rural areas with incomes below the poverty line. Teachers were allocated to intervention and control groups in bunches of 11 and 9, respectively. Those in the intervention group implemented the RIA with children, whereas those in the control group continued the standard preschool programme, and the quasi-experimental pre- and post-test comparison-group method was employed for the study. The RIA was a 30-week curriculum consisting of 15 storybooks and 60 lessons including language and literacy supplements. All lessons were planned to be conducted in a whole-classroom setting, and consisted of three parts: before reading, during reading and after reading. Each session lasted 20-30 minutes. Teachers in the intervention group attended two training sessions: the first focusing on language and literacy development, and the introduction of the RIA materials; and the second on the expectations of teachers about the RIA implementation. Teachers in the control group attended different training that was not related to language and literacy development and practiced as usual during the period of the study. Children were pre- and post-tested in the autumn and spring of the study year on language and early literacy development, and the results showed that children attending the RIA curriculum scored significantly higher in language measurements than those in the control group. Children in the RIA group also performed significantly better than those in the control group in terms of rhyme, alliteration and print knowledge but not in letter knowledge. The results of the second hypothesis showed that initial language ability did not moderate gains in language but did moderate gains in alliteration, print and letter knowledge. Results of the feasibility study recommended that it is an acceptable curriculum for participants, both children and teachers.

Justice et al. (2011) investigated the feasibility, social validity and efficacy of a home-based shared-reading intervention for children with LI that was implemented by parents and aimed

to increase the print knowledge of preschool children. Sixty-two children with LI aged 48-60 months (43 boys, 19 girls) and their parents took part in the study, and the national and socioeconomic backgrounds of the participants were mixed. Parent-child dyads were allocated into three groups of 21, 19 and 22 people in which parents read storybooks with children over a period of 12 weeks with the intervention including 48 sessions. As for the group settings, the first (n=21) was the print-referencing group, in which parents had nine questions about print to ask their children during all the sessions; the second was the picture-referencing group (n=19), in which parents had nine questions about the story and illustrations to ask their children during the sessions; and the third was the sound-focused group, in which parents had nine questions about sound concepts to ask their children during the sessions. The main group was the first group, and others were alternative groups to compare effects. Measures were done in three stages. The first was the feasibility measure, during which parents were contacted by telephone each week and asked whether they continued to implement the intervention with their children. The second measure was the efficacy measure, in which children were pre- and post-tested in their homes on print awareness including print concepts and alphabet knowledge. The third measure was the social validity measure, which attempted to determine parental beliefs regarding the intervention. Parents were asked to complete a five-point Likert-type questionnaire, which included six items that investigated how much parents and their children had enjoyed the intervention and storybooks, and how much the intervention had affected the children's development. The result of the questionnaire demonstrated that 77 percent of parents had feasibly maintained the intervention to the end of the 12 weeks with only 14 parents failing to complete the study for various individual reasons. Secondly, the results of the efficacy analysis showed that children in the print-referencing group scored significantly better than the other groups on print knowledge but not on alphabet knowledge. Lastly, the results of the social validity analysis showed that the intervention was found to be acceptable by parents.

Fleury et al. (2014) conducted a preliminary study focused on the active participation of preschool children with autism spectrum disorder in shared reading. It aimed to determine the differences in the participation time and verbal participation of children with ASD in dialogic reading compared to usual storybook reading. It also aimed to examine the effects of dialogic reading prompts on children's verbal participation. There were three participation criteria: a) having an ASD diagnosis; b) participation in activities lasting five minutes; and c) communicating verbally with at least two or three words. Three male children (age 52, 71 and 40 months) met those criteria and participated in the study. The intervention consisted of five

illustrated storybooks limited to 30 pages or fewer, which included new potential teachable vocabularies. The storybooks also had coloured illustrations, were appropriate for preschool-age children, and their topics were not specifically about certain holidays. The intervention included DR strategies coded as CROWD: *completion, recall, open ended, wh-questions* and *distancing* (Zevenbergen and Whitehurst, 2003). Four types of measures were employed to assess the dependant variables: firstly, session duration was recorded using a stopwatch; secondly, children's behaviours were measured using momentary time sampling; thirdly, children's verbal utterances were measured by frequency count; and lastly, children's verbal responses to prompts were measured. A multiple baseline design was then employed across the participants. Results showed that the intervention was effective on both children's behaviours and length of intervention sessions because the sessions lasted longer than the baseline, and children demonstrated higher rates of behaviour during the sessions. Results also showed that the intervention significantly and positively affected children's verbal participation. Furthermore, the first subject responded equally to each CROWD prompt, the second one responded to most *distancing* and *recall* prompts, and third one responded to most *completion* prompts. This preliminary study suggested educators should make further explorations in this research area.

A feasibility study was also conducted with deaf children. For example, Andrews et al. (2017) investigated the feasibility of the *Adapted Little Book*, a shared-reading intervention to develop early reading skills among deaf children. It aimed to determine the differences between children's performances in letter, word, and story knowledge from pre- to post-test, and to determine development in writing skills and its relationship to shared reading scores. It also aimed to determine the relationship between background variables and post-test scores with 25 children from the third, second and first grades and kindergarten, as well as their five teachers, participating in the study. All the children attended a deaf school, 11 of them male and 14 females, and their hearing levels varied. Measurements were taken in two categories. The first included background measures like non-verbal, IQ, and early reading assessments, and the second was a naturalistic literacy assessment that included reading and writing skills. The intervention programme consisted of 20 picture books, each consisting of 6-8 pages and including 3-5 teachable words and many vocabulary items and simple sentences and phrases. Their topics were familiar to children in preschool and kindergarten. A pre- and post-test design was employed to conduct the study, which were conducted in August and May, respectively, with repeated measures done monthly. Ten storybooks were read by teachers in the classrooms:

10 in autumn and 10 in spring, with teachers conducting the intervention two or three times per week so that children were exposed to 60 hours of intervention during the process. Results showed, firstly, that scores across all the dependant variables including early reading and writing skills increased from pre- to post-test. Secondly, they showed that children's book reading and reciting improved significantly over a period of eight months. Thirdly, children's writing performance improved over the year, and their writing scores were found related to the book reading and reciting scores. All the children could write all the capital letters, and 90 percent of them could write all the lower-case. All of them could write their name and surname during the post-test. Lastly, the results showed that children's early reading, alphabet-naming and book-reading performances were significantly in-line with their ages. This study indicated that the *Adapted Little Book* was a feasible and acceptable programme for deaf children with different developmental features and history.

The studies of Justice et al. (2011), Fleury et al. (2014) and Andrews et al. (2017) were included in the literature review because of the possibility that there may be preschool children with autism, language-speech delay or hearing impairments in the current study's subject group. They included important clues and details for current research. Justice et al. (2005) demonstrated how a feasibility study of parent-based shared-reading intervention was implemented. All those studies (Justice et al. (2011), Justice et al. (2005), Fleury et al. (2014) and Andrews et al. (2017)) mentioned in the literature have examined the effects of shared reading intervention on early literacy skills. Since the current research also features a home-based shared-reading intervention, the earlier study provided important clues to the current researcher about how the studies were conducted, how the parents were directed, and how the measurements were completed. Fleury et al. (2014), Justice et al. (2011) and Andrews et al. (2017) conducted feasibility studies of shared book-reading interventions regarding the language skills of children with autism spectrum disorder, language difficulties and hearing impairments. Justice et al. (2010) included the feasibility study of an intervention programme developed for teachers of children whose literacy development was at risk due to their low SES. This is relevant to the current research, which also includes children whose literacy skills are at risk due to low SES as the subject group.

The studies presented above investigated the feasibility of various language and literacy interventions, and the current research has benefited from them in various aspects. For example, planning design, determining type of intervention and selecting samples represented

some of the benefits. The current research will contribute to the international literature and explore the feasibility of a DR intervention for preschool children with low SES in Turkey.

5.4 Aims of the Feasibility and Acceptability Study

The aim of this study was to determine the final versions of all variables of the DRP according to parents' experiences, thoughts and suggestions, and our expert analysis and reflection. This study also aimed to increase the validity and reliability of the research by testing all the elements of the DRP including time, sessions, training and content. Validity is about the accuracy of the study and generalization of the results (Cohen et al., 2018). Reliability is about dependability, consistency and replicability of the study over different times, instruments and participants (Cohen et al., 2018).

To determine parents' experiences, thoughts and suggestions, the questions below were translated into Turkish and sent out to them as semi-structured interviews. All the processes regarding semi-structured interviews were explained in section 5.8.

Questions about the Benefits of the Dialogic Reading Programme (Process)

- Is the DRP an enjoyable and interesting activity for children?
- Is the DRP a useful home-based activity for parent-child interaction?

Questions about the Disadvantages of the Dialogic Reading Programme (Management)

- Is there any disadvantage of the DRP for children?
- Is there any challenge when conducting the DRP?

Questions about the Parent Training (Resources)

- Is the parent training useful enough for implementing the DRP?
- Is the number of parent training sessions acceptable and feasible?
- Is the length of parent training sessions acceptable and feasible?

Questions about the Time (Scientific)

- Is the length (12 weeks) of the DRP acceptable and feasible?
- Is the number of sessions (60 sessions) acceptable and feasible?
- Is the length of sessions (30 minutes) acceptable and feasible?

Questions about the Content of the Dialogic Reading Programme (Resources)

- Is the content of the DRP (shared reading, vocabulary and narrative) acceptable and feasible?
- Is the sequencing of the elements of the DRP acceptable and feasible?

5.5 Methodology

5.5.1 Participants and Length of the Study

This study was conducted with eight parents and their preschool-age children over a period of three weeks. When deciding the number of participants and length of the intervention, the researcher first discussed with the supervisor team. The team advised the researcher to review the feasibility studies in the literature and consider the budget of the research that provided by the sponsor of the researcher. Second, the researcher examined the number of participants and length of previous feasibility studies in the literature review (section 5.3). Third, since this feasibility was a part of a PhD, both budget and time were limited. Therefore, the number of the participants and the length of the study had to be suitable to the budget of the research. Lastly, the supervisor team and the researcher met and decided to take the number as 30 percent of the intervention group in the main study (the pilot RCT) and 25 percent of the length of the main study according to literature review and budget of the research. The participants were recruited from one preschool. The participants were different from those in the pilot RCT, but the preschool was the same. The recruitment process is explained below.

5.5.1.1 Sampling

Sampling process was conducted in several steps. Since there is not a postcode system in Turkey and the Research Ethics Committee did not permit to receive data of parental income by data collection tool, the researcher, as first step, reviewed the Turkish Statistical Agency (Institute, 2018) website to determine low SES regions in Ankara. The agency provides the data of the average monthly income of people living in a home. Then, the researcher determined low SES regions in Ankara. Second, the researcher prepared a list of preschools that were easily accessible to himself in a low-SES region. Then, he contacted the geographically closest one first because of time and budget. Third, after the preschool management agreed to take part in the study, potential participants were identified with all parents with children aged between 48-56 months contacted to take part in the study. They were given an information sheet and

consent form via school management, but parents who might have had low literacy levels were called on the phone by school management and had the study explained to them verbally. Fourth, potential participants were given five working days to decide whether to participate in this research. After they decided to opt in, they signed the form and returned it to the preschool management, who then informed the researcher about parent consent by phone. Seventy parents out of 100 signed the form and returned it to the school, and eight parents were chosen randomly from among all the parents who wished to take part in the study. Fifth, eight parents who were chosen to attend the study completed the questions in Demographic Information Form which introduced in the section of 5.6.1. The questions for parents were about their names and surnames, ages, education backgrounds and occupations. Since the Research Ethics Committee did not permit to receive data of parental income by data collection tool, the researcher could not collect data on it. He tried to determine parental SES by collecting data on their education and occupation background and considering the data presented in Turkish Statistical Agency (Institute, 2018) website mentioned above. Table 11 and 12 show the demographics of the parents and their children in the study.

5.5.1.2 Parent Sample Demographic

Table 9

Summary of Parent Sample Demographic

Sample Characteristics	
Number	8
Means of Mother Ages	29,25 years
Means of Father Ages	34,62 years
Mothers' occupations	6 home makers, 1 cook, 1 hairdresser
Fathers' occupations	7 workers in factories, 1 officer
Mother's educations	5 high school, 3 secondary school
Father's educations	4 high school, 4 secondary school

5.5.1.3 Child Sample Demographic

Table 10

Summary of Child Sample Demographic

Participants	Characteristic
N	8
Sex	5 male, 3 female
Age (mean)	4 years 2 months

All eight parents and their children completed the intervention and attended weekly meetings. Table 13 presents the individual characteristics of an example of the parents and children in the study, with the code names. Tables with more details about the samples can be found in Appendices 10 and 11.

Table 11

An Example of the Parent and Child Demographic

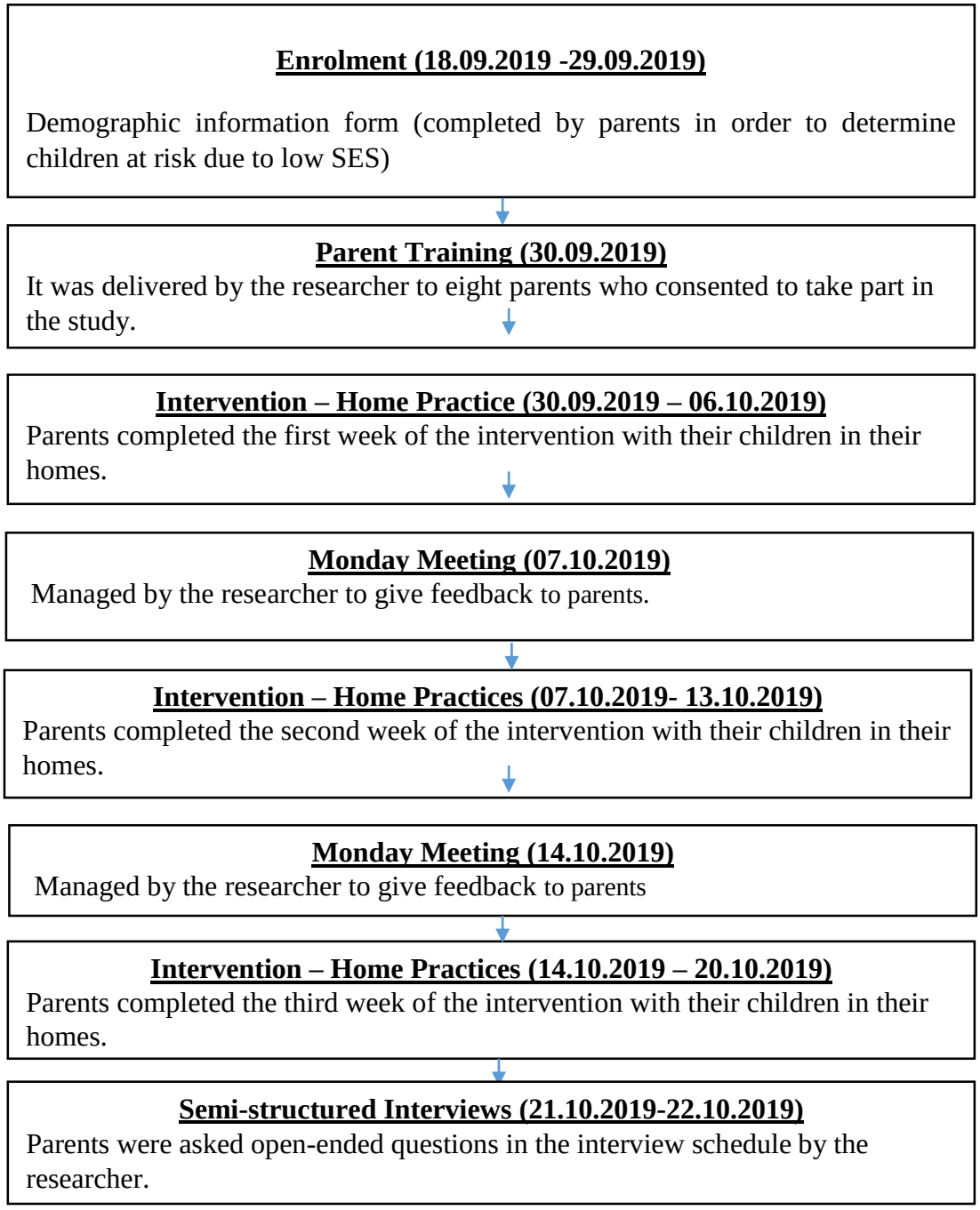
Mother Age	Father Age	Mother Occupation	Father Occupation	Mother Education	Father Education
30	34	Cook	Factory worker	Secondary school	Secondary school
Child's Code		**Child's Age**		**Child's Gender**	
1		49 months		Male	

5.5.2 Research Design

A case study of intervention implementation using a short form of the DRP was conducted. Training sessions for the intervention were given to participants and weekly meetings were held with them. Video recordings of participants were used for giving feedback, and qualitative data was collected through face-to-face interviews at the end of the study.

Figure 9

Implementation of the Feasibility and Acceptability Study



5.6 Measures

The F&A study used two data collection tools: the first was the demographic information form prepared by the researcher in consultation with the supervisory team for obtaining data about

personal parents' and children's personal details; and the second was an interview schedule prepared by the researcher in consultation with the supervisory team for collecting data on parental thoughts, experiences and suggestions about the intervention. Both are introduced below, and their full versions appear in Appendices 12 and 13.

5.6.1 Demographic Information Form

The form was prepared specifically for the purposes of this study and included questions to gather information about the demographics of the children and their parents. The questions about children were date of birth, gender and their school's name; the questions for parents were about their names and surnames, ages, education backgrounds and occupations. The reasons for choosing those questions were that they have been mentioned as indicators of SES in the literature (Sirin, 2005, Ensminger et al., 2003). The form was completed by the parents by reading the items and writing the answers before the F&A study. For the full demographic information form, see Appendix 12.

5.6.2 Interview Schedule

At the end of the F&A study, semi-structured interviews were held with eight parents (one for each child) in order to gather their thoughts, ideas and suggestions. The interview schedule included open-ended questions about the content, length and frequency of sessions, as well as all the advantages and challenges they found in the process. The schedule was prepared by the researcher in consultation with the supervisory team. For the full interview schedule, see Appendix 13.

5.7 Procedure

5.7.1 Parent Training

Parent training was delivered to the eight parents participating in the study with the main aim of informing and supporting them to deliver three weeks of the DRP to their children and to ensure that parents understood the aims and methodology of the research. In addition, providing parental motivation for implementing the DRP was seen as another aim of the training, which was conducted in a meeting/conference room in the preschool the children attended. It was completed one day before the implementation process in two sessions, each lasting 90 minutes.

The first session was conducted with a PowerPoint presentation, starting with an explanation of the research, including its aims, design and time schedule. The session continued with a brief overview of the development of language and early literacy skills in preschool years, and the role of a rich HLE in the development of those skills. It concluded by emphasising the importance of well-developed early literacy and language skills during preschool years for later reading achievement.

The second session focused on the DRP and its implementation. It started by introducing three weeks of DRP materials, then the researcher modelled it to parents, following the intervention instruction and demonstrating how to deliver the DRP to their children. At the end of the session, the books and materials needed for the three weeks were given to the parents, and the process began.

5.7.2 Implementation Process and Monday Meetings

The DRP was implemented over the next three weeks by the parents with their children in their homes, with each family starting together and reading the same books each week. The researcher met parents in the preschool's seminar room on Mondays to get news, watch their videos and give feedback them about their implementation. Those meetings were called Monday meetings. The Monday meetings were seen one of essential elements of the intervention. Those meetings provided feedback to the researcher on how parents conducted the sessions. Parents who were able to record one session of intervention on video per week shared their videos with the researcher. During the meetings, the researcher selected parents who had given verbal permission to share their session videos, and the parents and he watched the videos together. He managed the sessions and paused the video when needed. When the parent acted as intended, he paused and gave positive feedback or when the parent did not fully achieve what needed to be done, he paused and gave feedback in order to improve that behaviour. Parents also could ask anything they wanted about the intervention, and the researcher tried to respond to their questions. All parents attended all sessions of the Monday meetings. All the Monday meetings were completed in this manner.

5.8 Data Collection - Semi-Structured Interviews

The purpose of this study was to measure the F&A of the DRP developed for the current research. Semi-structured interview was considered the most appropriate method for this

purpose as it allows a questioner to update or change the question and to ask additional questions during the interview.

The interview is defined as an enjoyable and interesting method of gathering data from people about their experiences, thoughts and feelings (Fylan, 2005). It is also seen not only as a data collection method but also as a social encounter and a flexible process (Cohen et al., 2018). The interview gives an opportunity to both interviewee and interviewer to share and discuss their experiences and perspectives about events and situations in the world. Compared to surveys, the interview examines issues more deeply, reveals the ways in which people frame their views, and makes connections between them and the reasons of having those views (Hochschild, 2009). Cohen et al. (2018) mentioned five main types: structured, semi-structured, unstructured, non-directive, and focused. Because of the low SES background of the parents, they needed more descriptive regulatory and repeated sentences. Therefore, semi-structured interviews were held with parents, and they were asked the open-ended questions in the interview schedule to determine their views, ideas and suggestions about the conditions, length and frequency of sessions, and other elements of the DRP.

5.9 Data Analysis

The qualitative data was analysed using content analysis. The purpose of this analysis was to categorize parental views about the DRP and determine sustainable and unsustainable elements within the process. One of the methods that best categorizes the feedback from the participants and presents the data in the most transparent way is content analysis; therefore, content analysis was applied in this study.

Content analysis is defined as "the process of summarising and reporting written data" (Cohen et al., 2018, p.674), and its aim is to discover concepts and relations that can explain the data (Şimşek and Yıldırım, 2011). The key elements of content analysis are reduction and classification because these help to make data more manageable and comprehendible (Cohen et al., 2018). Coding is defined as the "major approach" to qualitative data analyses (Cohen et al., 2018), and code is defined as "a name or a label that the researcher gives to a piece of text that contains an idea or information" (Cohen et al., 2018, p.668).

For this study, semi-structured interviews were held with parents, and audio recorded, then the voice recordings were transcribed and translated into English. Another observer, a postgraduate researcher at Gazi University in Turkey, checked the accuracy between voice and text versions.

The data was then reduced and categorized for ease of analysis. When reducing and categorizing the data, first, content that was not related to the questions was removed. Then, among the remaining answers, those that were related, similar or close to each other were gathered under the same keyword title. Then, codenames were given to categories, and the frequency of the codes was counted. The symbol "*f*" in table below represents the number of parents who specified a response. Lastly, the data was analysed and interpreted. The results are presented and discussed in the next chapter.

Table 12

An Example of Data Analysing in the Feasibility and Acceptability Study

No	Response Type	*f*	Comments
1	Increasing motivation for reading	8 of 8	(F) "She is now more willing to read books"

5.10 Summary

This chapter began with an explanation of F&A terms and the reasons for why F&A studies are needed. It continued with introducing the aims of the study and literature review, then it presented the methodology of the study including research design, participants, measures, settings and implementation of the DRP. It ended with an overview of the methods of data collection and analysis used in the F&A study. The next chapter will present the findings obtained by following these methods.

Chapter 6

Feasibility and Acceptability Study: Results, Discussion, Conclusion and Implications

6.1 Results

To determine the final versions of all elements of the DRP, semi-structured interviews were conducted with the parents. The themes and codes are presented in the tables below.

6.1.1 Is the Dialogic Reading Programme Fun and Interesting?

The first and second questions asked parents whether the DRP is a fun and interesting programme, and parental views are presented in Table 15. Alphabetic codes were given to parents' names and numerical codes were given to the response types. The symbol ***f*** represents the number of parents who mentioned an example of this response type.

Table 13

The Dialogic Reading Programme is Fun and Interesting as Perceived by Parents in the Study

No	Response Type	*f*	Example Comment
1	Increased motivation for reading	8 of 8	(F) *"She is now more willing to read books."*
2	Read with enjoyment	8 of 8	(A) *"It is really a nice programme; my child loves reading because of it."* (E) "*My child wants me to read to him."* (B) *"He gets excited while reading."*
3	Read more	7 of 8	(B) *"We read books rarely in the past, but the DRP acquired us the habit of reading books. I am feeling lucky because of attending."*

4	Read with more comments and predictions	7 of 8	(G) *"He has started to make more guesses and commenting while reading."* (H) *"We have started reading more effectively."*
5	More detailed, careful and understanding reading	5 of 8	(A) *"Since she has started to love reading, she started to better understand what we read."* (A) "*Since she has loved the DRP, we started to read more carefully, in a regular programme and more enjoyable books."*
6	Linked the events in the book and real life	3 of 8	(C) *"He connects the story to real life events."*
7	Selected the book that will be read	3 of 8	(H) *"He decides which book to read."*
8	Read with imagination	2 of 8	(D) *"He imagines while we are reading together. I have started to discover my child's world."*
9	Gained the reward	2 of 8	(C) *"I did not know my child loves stickers. He starts to ask about the sticker as soon as we start to read."*
10	Curiosity about content	2 of 8	(F) "*He wonders about the contents of the book, and turns the pages before me."*
11	Loved the pictures in the book	1 of 8	(G) *"She loves the pictures in the book."*

It can be seen from Table 15 that all the parents reported that the DRP was motivating, interesting and fun. Regarding motivation, some parents reported that their children were enthusiastic about reading more and that they made a lot of comments and imagined while reading. They linked the events in the stories to their real lives, and they were enthusiastic about choosing the book to read. Some parents reported that their children were motivated to win the sticker reward after shared reading. The views suggested that the DRP is a fun and interesting programme.

6.1.2 Dialogic Reading Programme's Benefits for Parent-Child Interaction

The parents were asked whether the DRP improved their interactions with their children. Parental views about DRP's benefits on parent-child interaction are presented in Table 16.

Table 14

Parents Views Regarding the Dialogic Reading Programme's Benefits for Parent-Child Interaction

No	Response Type	F	Example Comment
1	Increased time spent together	8 of 8	(E) "*I started spending more time with my child*."
2	Improved quality of time spent together	5 of 8	(A) *"The DRP provided us with the opportunity to spend quality time together; I am feeling better than in the past. I am feeling like a better mom."*
3	Made activities together	4 of 8	(D) *"We started to plan and make new activities and games together. We visited the library together."*
4	Asked questions about everything new	4 of 8	(G) *"She began to ask more and more questions about the new things she saw around her."*
5	Talked about the book that has been read	4 of 8	(F) *"He talks about the books that we read to his father and our guests."*
6	Expressed his/her ideas to parents	2 of 8	(H) *"He was a self-enclosed child but began to express his own ideas."*
7	Increased affection towards parents	2 of 8	(B) *"He has started hugging and kissing me more than in the past. After the birth of his younger brother, that is the first time we have had a warm relationship."*

8	Asked parents to draw and read something	2 of 8	(A) *"He wants me to draw something such as letters and numbers."* (B) *"He wants me to read what he sees."*

It can be seen from Table 16 that all the parents reported that the DRP increased the amount of time they spent interacting with their children. Some of the parents described how the communication, sharing and affection between them and their children increased. These impacts were evident during the reading sessions but also some parents reported that they did some outside activities with their children such as visiting a library. The views suggested that the DRP might improve the interaction between parents and their children.

6.1.3 Dialogic Reading Programme's Benefits on Children's Language and Early Literacy Skills

The parents were asked whether the DRP improved children's language and early literacy skills, and their views on the potential benefits are presented in Table 17.

Table 15

Parents' Views Regarding the Dialogic Reading Programme's Benefits on Children's Language and Early Literacy Skills

Skills	No	Response Type	*f*	Example Comment
Language ability and vocabulary knowledge	1	Increased vocabulary knowledge	6 of 8	(B) *"I can observe that he learned new words."*
	2	Used longer sentences	2 of 8	(C) *"He started to build his sentences completely."*
	3	Used more words in daily language	1 of 8	(B) *"He started to use unfamiliar words in daily language, which I did not expect from him."*
	4	Learned new letters	6 of 8	(A) *"He learned the letters in his name and wants to talk about them when he sees them."*

Letter knowledge	5	Learned letter concepts	4 of 8	(G) *"She learned that our names are represented by letters in print."* (B) *"He learned what letters are, and the difference between small and big ones."*
	6	Drew letters	1 of 8	(C) *"He draws letters because he loves writing."*
Print awareness	7	became interested in print	4 of 8	(H) *"Her interest in the print in the book has increased."* (E) *"He makes predictions about the print."*
	8	Followed the print	1 of 8	(D) *"He follows the print with his finger while reading together."*
Phonological awareness	9	increased awareness and interest in sounds	2 of 8	(E) *"He started to be more sensitive to sounds: for example, he spells his name."*
Listening comprehension	10	Answered the questions and instructions with better understanding	2 of 8	(G) *"She began to express herself better in response to my questions."* (D) *"He can understand my instructions more quickly."*
Other concepts (number, shape etc.)	11	Learned new numbers	1 of 8	(F) *"She learned many numbers. One, two, three and more."*
	12	Learned new concepts	1 of 8	(F) "*She learned many new concepts such as letters, and shapes."*

Parents reported that the DRP improved children's vocabulary, print awareness, letter knowledge, phonological awareness and listening comprehension skills. These were evident language and early literacy skills but also some parents reported that the DRP helped children

to learn new concepts such as shapes and numbers. These views suggested that the DRP might improve language and early literacy skills.

6.1.4 Will Parents Continue the Dialogic Reading Programme?

The parents were asked whether they will continue to implement the DRP after the study. Their responses are presented in Table 18.

Table 16

Parental Views Concerning Continuity of the Dialogic Reading Programme after the Feasibility and Acceptability Study

No	Response Type	*f*	Example Comment
1	Yes, because time spent together increased	2 of 8	(B) *"I am planning to continue reading with my child, because we have started to spend more time together which is very special for both of us."*
2	Yes, because the quality of time spent together increased	2 of 8	(C) *"Yes, because the quality of the time I spent with my child increased. We have started to talk about books, concepts, characters etc."*
3	Yes, because parent-child interaction improved	2 of 8	(B) *"Yes, because my communication with my child has increased. I have started to understand him, and he has started to follow my directions better."*
4	Yes, because child has started to produce new ideas	2 of 8	(E) *"Yes, I think. He can express himself better and, produces new ideas and solutions to problems. He might be more self-confident."*
5	Yes, because child has started to love reading	2 of 8	(H) *"Yes, because she really wants to read with me."*

6	Yes, because child's imagination has expanded	1 of 8	(D) *"Yes, because his world in his mind has expanded. He talks about his dreams."*
7	Yes, because the time the child spends with electronic devices is reduced	1 of 8	(A) *"Yes, because he has started to spend less time with technological devices than in the past."*
8	Yes, because child's phonological awareness improved	1 of 8	(C) *"I hope to continue the programme as long as he loves it. I understand he has learned new sounds because he talks about them."*
9	Yes, because child's language skills improved	1 of 8	(C) *"Yes, because his language skills have improved. He can pronounce difficult words."*
10	Yes, because parent learned to choose the books that child loves	1 of 8	(G) *"As I mentioned before, I feel very lucky to attend this programme because I feel it makes my parenting better. I have learned to choose well-structured and funny books for my child."*
11	Yes, because parent has started to love reading	1 of 8	(A) *"Yes, because reading books is an activity that I love."*

All parents explained that they were willing to continue the DRP after the F&A study because of various reasons related to parent-child interaction, their child's development and promoting engagement with and enjoyment of books. These views suggested that parents would continue to conduct the DRP after the study.

6.1.5 Parental Needs for Improving the Dialogic Reading Programme

The parents were asked what else they might need to implement the programme more effectively, and their responses are presented in Table 19 below.

Table 17

Parental Views on Further Needs for Implementing the Dialogic Reading Programme More Effectively

No	Response Type	*f*	Example Comment
1	No additional needs	6 of 8	(A) *"It was a good opportunity for me and my child. It was highly effective. There is no need for anything else."*
2	Letter cards	1 of 8	(C) *"My child became interested in letters. There should be cards for letters."*
3	Toys	1 of 8	(H) *"Toys related to the book reading could be added. My child wanted to play with the toys of the concepts such as animals, cars etc. after reading the book.*"

These views suggested that most parents did not need any further elements to better implement the DRP; however, two parents reported that letter cards or toys would help with conducting the DRP more efficiently.

6.1.6 Difficulties and Disadvantages of the Dialogic Reading Programme

The parents were asked about the difficulties and disadvantages they found in the process of implementing the DRP, and their responses are presented in Table 20.

Table 18

Parental Views on Difficulties and Disadvantages of the Dialogic Reading Programme

Issues	No	Response Type	*f*	Example Comment
Difficulties	1	No difficulties	3 of 8	(B) *"We have not faced any problems during the process."*
	2	Initial resistance	2 of 8	(A) *"Actually, he didn't want to read at first because he thought that this programme was some homework he had to finish, but he loved it over time."*

	3	The number of questions for the child	2 of 8	(E) *"He had trouble when I asked many questions about a page."*
	4	Child concentration	1 of 8	(C) *"For the first time, he could not concentrate on the session, but then, he read books with me easily."*
Disadvantages	5	No disadvantages	6 of 8	(G) *"We did not experience any disadvantages; on the contrary, you know, he learned more words and letters. He faced the words that he did not know. He learned different things like seasonal features."* (F) "*No, I did not feel any disadvantage."*
		Initial reluctance	2 of 8	(D) *"He did not want to read during the first sessions but loved it over time."*

Most parents and their children did not experience any difficulties or disadvantages when conducting the DRP. However, some parents reported that they faced some initial difficulties when they started the sessions, and some of them faced difficulties in terms of the number of child-directed questions during the sessions. The difficulties that some children faced reduced over time.

6.1.7 Parent Training

Parents were asked about the clarity, number and length of the parent training sessions, and their views are presented in Table 21.

Table 19

Parental Views on the Clarity, Number and Length of Parent Training Sessions

Issues	**No**	**Response Type**	***f***	**Example Comment**

Clarity of the sessions	1	Adequate	8 of 8	(C) "*Parent training was clear and understandable. I read the instructions two more times after the training. After that, I imagined what you said at preschool while practicing at home. Although the instructions were very clear, I benefited more from the training*."
Number of sessions	2	2 sessions were enough	7 of 8	(G) *"I think I could get bored if there were more sessions. Because I have never been in something like that, the number of sessions could be more boring if increased. Also, I have a small child at home. I could not leave him alone."*
	3	Could be increased	1 of 8	(D) *"I attended the sessions with an extremely high motivation level. I could attend more sessions to learn and become better."*
Length of sessions	4	90 minutes were enough	7 of 8	(H) *"I think that it was long enough, that you already said in detail what we need. I mean we were getting enough information from you to read those books weekly. Also, there was a nice break for 10 minutes."*
	5	Could be increased	1 of 8	(A) "*Why not? I liked to attend the sessions because of learning new concepts and information."*

The parents were asked whether the clarity, number and length of the parent training sessions were enough to implement the DRP independently. Most parents reported that parent training sessions were clear, sufficient, and understandable. Most of them also reported that the number and length of sessions were enough for them to benefit from the DRP; however, some parents

reported that the number and length of sessions could be increased in order to make the DRP more sufficient.

6.1.8 Dosage of the Dialogic Reading Programme

The parents were asked whether the length of the DRP, and the number and length of the sessions were enough, or whether they should be increased or decreased. The parental views are presented in Table 22.

Table 20

Parental Views on the Length of the Dialogic Reading Programme, and the Number and Length of the Dialogic Reading Programme Sessions

Issues	No	Response Type	*f*	Example Comment
Length of the DRP	1	12 weeks were enough	4 of 8	(A) *"It could remain at 12 weeks. I think that, in order to gain a reading habit, 12 weeks are enough."*
	2	Could be increased	2 of 8	(C) *"It could be increased because I have more quality time with my child. Also, you already provided the books, and support us. So, I like the programme, and it would make me happy if the length was increased."*
	3	Not sure	2 of 8	(E) *"I am not sure. I can tell you something when we reach the 12th week."*
Number of sessions	4	5 sessions per week were enough	7 of 8	(F) *"I think five days a week is enough, because the other two days can be used to compensate for missed sessions. Also, sometimes my child does not want to read; so, we can take a break one day."*

	5	Could be increased	1 of 8	(B) *"My child and I love reading together. It could be six sessions per week, would be better for us."*
Length of the sessions	6	30 minutes were enough	6 of 8	(D) "*I think that 30 minutes is the best option because it is not too much or too little. My child could get bored if the time increased."*
	7	Could be increased	2 of 8	(C) *"Because we read, very detailed sessions sometimes take more than 30 minutes, so it could be increased."*

These views suggested that most parents were satisfied with the length of the DRP, though some of them wished that it could be longer because they liked it. The views also suggested that almost all parents were satisfied with the length and number of the sessions.

6.1.9 Content of the Dialogic Reading Program

The parents were asked about the content and sequencing of the DRP. Their responses are presented in Table 23.

Table 21

Parental Views on the Content and Sequencing of the Dialogic Reading Programme

Issues	No	Response Type	*f*	Example Comment
Content	1	Picture cards helped us to think, understand, remember, and retell the story.	5 of 8	(A) *"I think it is a good practice. For example, because he knows the pictures and the words are at the end of the book, he concentrates very well. Previously, when I read to him, I read it myself, but now he knows he will sequence the cards. A good practice to keep the child's attention on the book."*

2	Word cards helped with learning unfamiliar words.	3 of 8	(B) *"He learned unfamiliar words because of the vocab cards."*
3	Word and picture cards led child to read more carefully.	2 of 8	(C) *"Since he knows that he will repeat the vocab card, and sequence picture cards, he concentrates on reading."*
4	It was the perfect programme.	1 of 8	(G) *"I think all parts of the programme are perfect and well-organized."*
5	Word cards helped to realize the difference between picture and text.	1 of 8	(E) *"The content is good because it finishes by looking at the pictures at the end. So, he repeats and retells the story. He reviews the pages again, thanks to the picture cards and word cards. He pays more attention to the story. Also, he understands the relationship between text and pictures because of the word card. He likes the programme because he is curious about the pictures that are inside the book."*
6	Word cards provided to learn new letters	1 of 8	(F) *"I saw a programme like that for the first time, and I think it was very efficient. The content parts completed to each other. She learned three or five of the letters. She said, 'Mom, look, mom. Look, it is a letter'. The sequencing is very good. I like to complete them step by step."*

Sequencing	7	No need to change	8 of 8	(G) *"I think that it is a perfect programme. It is not necessary to change either the books or cards."*

These views suggested that all parents were satisfied with the content and the sequencing of the DRP. Regarding content, almost all parents reported that the word and picture cards were useful for their children. Moreover, all parents reported that the sequencing of the DRP was effective.

6.2 Discussion and Conclusion

This study investigated the F&A of the DRP according to the experiences, beliefs and suggestions of parents who were the main implementers. Data was collected from eight parents via semi-structured interviews and analysed using content analysis.

First, the results suggested that the DRP is a fun and interesting programme, and most themes and responses interpreted from parents' comments about the DRP were positive. Parents explained that children became more motivated to read, gained reading habits, and read with more dialogical behaviours such as making predictions and asking questions. Parents also mentioned that their children read with fun, excitement, imagination, and loved the pictures in the books. These findings align with those of Barnyak (2011), who conducted a qualitative study to investigate the attitudes, beliefs and interactions of parents and their children in a rural community in Western Pennsylvania in the US regarding shared reading. Semi-structured interviews were held with parents and their children to learn their experiences during shared reading sessions, and parents explained that shared reading experiences enhanced children's motivation towards reading books, and it increased parent-child conversation span. According to parents, children started to love shared reading, and got excited during the sessions. Parents also mentioned that aside from shared reading, they started to do new activities with their children while all the children had positive attitudes to shared reading and favourite book titles.

In addition to the predicted effects of the DRP, there might be other variables that positively affected parental beliefs towards the DRP. The parents had low educational backgrounds and had almost no career history or plan, and they regarded the implementation of the DRP as a type of individual success. As the relationship and communication between them and their children increased, their positive beliefs about the DRP and motivation for implementation

increased. For example, one parent explained that she had lost the interaction with her first child after the birth of second child, but with the implementation of the DRP, she found the opportunity to improve their relationship in the process.

Second, the data suggested that parents observed gains in their children development across a wide range of skills including vocabulary, print awareness, phonological awareness, letter knowledge and listening comprehension. They gave some examples about children's gains in those skills such as increasing vocabulary knowledge, using longer sentences, using more words in their daily language, drawing letters, becoming more interested in print, following the prints, increasing awareness and interest in sounds, answering the questions and instructions with better understanding, learning new numbers and concepts. Those parental observations were in parallel with the aims of the intervention because the intervention was designed to improve children's language and early literacy skills. As parents observed, children's early literacy skill might have improved. There could be several reasons of the gains in those skills. First, in the parent training sessions, the researcher focused on the definition of those skills and why they are important for the following years. Therefore, parents might have understood the importance of those skills and tried to teach their children them. Parents continued to ask questions about those skills in Monday meetings and through the pandemic period. The researcher continued to respond their questions, improve their information background and increase the quality of their activities. Also, the DR strategies (asking open-ended questions, expanding child's comments, and employing "wh-" and distancing questions) in the intervention might be another reason for children's gains in early literacy skills. The DR strategies led to children asking questions, making comments and several other acts on meaning of the words, letters, print rules or events in the storybooks. These strategies might have also given parents the opportunity to respond to children's questions, expand their comments, improve their skills and increase their information background on early literacy. Lastly, although the researcher focused on the definition and importance of print awareness, letter knowledge and phonological awareness for the following years, these skills were not targeted explicitly in the intervention. However, vocabulary and listening comprehension were explicitly targeted via the direct vocabulary teaching and narrative works which are two parts of the intervention. They might have helped children to learn the meaning of the new words, to understand better the events in the storybooks. As explained in sections 4.4.2.3 and 4.4.2.4 that one word was taught children for each storybook, and children were encouraged to listen the storybooks carefully and sequence the event cards in the right order and retell the events in

the storybooks from the beginning to the end. These might have improved children's vocabulary and listening comprehension. The gains observed by parent in early literacy skills are in parallel with the qualitative studies conducted by Elias et al. (2006) and Erdoğan et al. (2017) as feasibility studies.

For example, Elias et al. (2006) investigated the effectiveness of a DR intervention on children's language and early literacy skills, and on parental involvement in their children's education. Sixty-two parents in a low-SES region in Australia where English was not the first language in more than half of the homes, and their preschool children attended the study. The intervention programme lasted six months, and the results showed that, after the intervention, the amount of parent-child dialogic reading time increased from 38 minutes to 89 minutes per week, meaning that the time spent together more than doubled. Moreover, teachers and parents reported that children who attended the intervention were more motivated to participate in literacy-related activities and used more complex language than other children. Teachers also reported that non-English speaking parents became more self-confident about their children's education when they attended the programme. Parents also mentioned that children's language and early literacy skills including vocabulary, letter knowledge and print awareness and listening comprehension improved during the DRP's implementation.

Third, results suggest that parents would continue the DRP with their children because the parents directly reported that they were willing to continue. Reasons for continuing included increasing the amount and quality of time spent together, benefits for language and early literacy skills of children, and motivation and positive attitudes to reading. It is likely that parental fidelity to the procedures facilitated positive parental attitudes to the DRP. Although procedural fidelity was not measured quantitatively during the implementation, all parents attended all the parent training and Monday meeting sessions and completed the DRP weekly as intended.

In addition to the DRP's positive effects on relationships, communication and children's language and early literacy skills, there could be another reason that might have led the parents to continue the programme. Six of the eight parents were homemakers, which might have meant that they had enough free time to focus and implement the intervention effectively. Therefore, they had time for the DRP in the future.

Results suggested that parent training for the DRP was useful because almost all parents explained that the number and length of the sessions were sufficient to conduct the DRP

independently. Moreover, almost all parents explained that the length, session number, content, and sequencing of the DRP were quite useful for implementing the DRP independently at home.

Finally, one parent mentioned that her child was interested in letters, asking questions about them and willing to learn their names. Therefore, she thought that it would be better if letter cards were added to the intervention. Another parent explained that her child loved books, but she wanted her parents to buy toys of animals or other things mentioned in the books. It would be better if the toys of the animals or other things were added to the intervention for future studies.

6.3 Implications for the Pilot RCT

There were several implications for the pilot RCT. Some elements of the DRP were changed, while some stayed the same. These are explained below.

6.3.1 Elements Changed

First, the F&A study was conducted as a three-week, short-term intervention. Its length was increased because parents were enthusiastic about extending it to 12 weeks. They mentioned that the DRP should be increased to 12 weeks because it improved their children's language ability and increased the amount and quality of time they spent together. Therefore, they were willing to participate in the study for 12 weeks. Second, it was conducted with a group of eight parents and their preschool children, and the number of parents increased to 50 in the main study. Third, the number of books, vocabulary and narrative were 15, and they were increased to 60 in the main study. Fourth, the quantitative method was employed for assessing dependent variables in this study; however, in the pilot RCT, pre- and post-test were used for determining the intervention's effects.

6.3.2 Elements Not Changed

First, the content of the DRP consisted of shared reading, vocabulary, and narrative. It remained the same in the pilot RCT because parents did not have any problem with the content and mentioned that they liked it, saying it should remain the same in a future study. Second, the

DRP sessions were completed in 30 minutes, which remained the same in the pilot RCT because parents mentioned that 30 minutes was enough to complete the session. Third, the number of sessions remained five per week. Parents mentioned that it was quite sufficient, and it was not necessary to increase or decrease the number. Parents explained they needed two free days per week for unexpected situations or if their children get bored. Fourth, parent training sessions remained the same. Parents mentioned that they did not experience any difficulty with the content, clarity, and duration of the training.

6.4 Redevelopment of the Dialogic Reading Programme

The DRP was revised according to the results of the F&A study. Therefore, all the parts of the DRP, such as its aims, length, variables and conditions, were reviewed.

Table 22

The Elements Changed for the Pilot Randomized Controlled Trial

The F&A Study Characteristic	**Feedback from the F&A**	**The Pilot RCT Characteristic**
3-week intervention	The intervention period could be increased.	12-week intervention
8 parents and their preschool children	The number of participants could be increased.	50 parents and their preschool children
15 books	The number of books could be increased.	60 books
15 vocabulary items	The number of vocabulary items could be increased.	60 vocabulary items

Some elements of the DRP remained the same. In the F&A study, the DRP consisted of shared reading, vocabulary and narrative, and the sessions lasted 30 minutes. In addition, five sessions were completed per week and there were two parent training sessions. All these elements were unchanged for the main study.

6. 5 How the Feasibility and Acceptability Feed into the Pilot Randomized Controlled Trial

The F&A study fed into the main study in several aspects in terms of knowledge, experience, designing, motivation, implementation and time consuming. First, the researcher saw that an intervention program conducted in the United Kingdom could be implemented in Turkey successfully. This increased the motivation of the researcher and allowed the main study to be designed successfully. Second, the parents of the F&A study completed the study with a very high level of loyalty and motivation as mentioned in 6.1 and 6.2. They mentioned considerable number of effects of the intervention on themselves and their children's development. This high level motivation and contributions that mentioned by the parents increased the motivation of the researcher, and it contributed the researcher's belief in the research and the successful execution of the main study. Third, through The F&A study, the researcher learned how to select the participants for the main study. The process of identifying the participant group involved many stages. The researcher experienced these stages in the F&A, and this experience facilitated the process of selecting participants in the main study. For example, the school participated in the F&A study was selected to be part of the main study. Since the school administration recognized the research in the F&A study, they agreed to participate in the main study and worked in harmony with the researcher in determining the participant group. Fourth, it was important to determine the content of the parent training sessions. This training was two sessions of 90 minutes in total. It was important to plan which topics will be included in each session and how many minutes they will last. The researcher had the opportunity to experience the time planning of all these contents in the F&A study. Using these experiences, the researcher planned the content of the parent training of the main study. Also, the researcher let the parents in the main study to watch the session videos of the parents in the F&A study in parent training.

Chapter 7

The Pilot Randomized Controlled Trial: Introduction, Literature Review and Methodology

7.1 Introduction

This study was conducted to determine the effects of the dialogic reading programme (DRP) on the home literacy environment (HLE), language and early literacy skills of children from low socioeconomic status (SES) backgrounds. This chapter presents the study's aims, literature review, research design, and analytic approach.

7.2 Study Aims and Research Questions

The primary aim of the study was to determine the impact of the DRP on the HLE of preschool children. The secondary aims were to determine the effects of the DRP on the language and early literacy skills of children.

7.2.1 Question about Home Early Literacy Environment (Primary Aim)

- Does the DRP improve the HLE of preschoolers?

7.2.2 Questions about Early Literacy Skills of Preschoolers (Secondary Aims)

- Does the DRP improve the phonological awareness of preschoolers?
- Does the DRP improve the print awareness of preschoolers?
- Does the DRP improve the letter knowledge of preschoolers?
- Does the DRP improve the listening comprehension of preschoolers?

7.2.3 Questions about Language Skills of Preschoolers (Secondary Aims)

- Does the DRP improve the receptive language and vocabulary of preschoolers?
- Does the DRP improve the expressive language and vocabulary of preschoolers?

7.3 Literature Review

Since the current research is a pilot randomized controlled trial (RCT) of a parent-based DR intervention for language and early literacy skills, this section provides a summary of the comparable RCTs conducted to improve the language and literacy skills of young children. When selecting the studies, the following keywords were used: randomized controlled trial, pilot randomized control trial, early literacy intervention, early language intervention, parent, parent engagement, teacher, teacher engagement, child, shared reading, dialogic reading, language development and home-based intervention. After selecting the studies using these keywords, the studies that did not include language and reading intervention, and participation of parents as implementers were eliminated. Then the RCT studies including DR interventions and parent engagement were selected. Those studies were implemented with both typically developing (TD) children or their peers at risk of low literacy due to low SES. Those studies were conducted to determine the effects of DR on various dependent variables such as vocabulary, phonological awareness, print awareness, and letter knowledge. While most of these published studies report the interventions to be effective, some were not considered to be so. All studies reviewed included random assignment of participants and investigated the effects of DR on these variables. In this literature review, three individual studies were selected because of their similarities with the current research in terms of types of intervention, sample groups and measures. A meta-analysis is then presented since it includes DR interventions including RCT as research method. Lastly, a contradictory study is presented to discuss inconsistent results in the literature.

An RCT examining the effectiveness of an eight-week home-based DR intervention on improving the early literacy skills of Australian preschool children was conducted by Sim and Berthelsen (2014) with 80 children (42 boys and 38 girls) and their parents participating in the study. Parents were randomly divided into three groups. The first group used only DR strategies during reading, the second used DR and print referencing strategies, and the third was the control group, which did not use any type of strategies during reading. A range of reading and language measures was post-tested, and results showed that children in both intervention groups showed significant improvements in expressive language, rhyme awareness, and print concepts compared to those in the control group. After a three-month follow-up, children in the intervention groups only maintained their improvements in the print concepts.

A different study on a home-based DR intervention supported by teachers for improving the early language and literacy skills of preschool children was conducted by Kim and Riley

(2021a) with 82 children aged two to three years (36 males and 46 female), their parents or caregivers and 18 teachers taking part. Parents were supported by the teachers, who trained the parents on DR and then supported them to conduct the same techniques at home, and the children were allocated to intervention and control groups randomly. Parents of children in the intervention group were supported and encouraged for six weeks by teachers to conduct the intervention with their children. Teachers continued to support parents through following up until the 18th week, while parents of children in the control group were not supported by teachers. Results showed that word categorising of children in the intervention group significantly improved post-test than those in the control group. Moreover, their expressive vocabulary, print awareness and word categorising continued to increase during the follow-up.

Knauer et al. (2020) investigated the effects of DR on language acquisition of preschool-aged children in a rural community in Kenya. The sample included 510 children (265 males and 245 females) and their 357 caregivers with the parents randomly allocated to one of four intervention groups or to the control group after they completed a baseline survey. The first intervention group received six storybooks and tried to read them with their children, while the second received six storybooks and did DR training. They also received several text messages from researchers reminding them about the content of the intervention and encouraging them to continue with it. The third received the same intervention as the second group, plus "booster training" two weeks after the beginning of the intervention, which involved more practice and was implemented by the caregivers under the control of the trainer and lasted 90 minutes. The trainer presented the key takeaways from the first training session at the beginning of the study and the caregivers conducted the practices. The caregivers were watched, and their accurate execution of the procedure was checked. The fourth group received the same intervention as the third plus home visits three times a week during which caregivers could ask questions, discuss their concerns and refresh their understanding of the intervention. Data was collected through home interviews and direct child assessment at baseline and follow-up assessments of three dependent variables: book sharing, vocabulary, and interaction effects by caregivers. The storybook comprehension of all intervention groups significantly improved relative to the control group, and the frequency of interaction between caregivers and children in the second, third and fourth intervention groups also increased significantly. These three intervention groups included DR strategies; therefore, the frequency of interaction improved. Moreover, the book-specific expressive vocabularies (showing four pictures and asking about person, object and action in the book) in these groups improved compared to the first intervention and control

groups. However, interaction behaviours and vocabulary among participants in the first intervention group did not increase significantly when compared to the other groups. For almost all dependent variables, the skills of children of illiterate caregivers improved more the skills of those with literate caregivers. In conclusion, these results showed that all DR interventions, with or without additional components (home visiting, SMS), positively affected early literacy skills of preschool-age children. The same DR strategies used in these intervention groups and DR training were used in the current study's intervention group; however, booster training and home visiting were not included. In the current research, there were weekly meetings to come together with caregivers.

Barone et al. (2019) conducted a meta-analysis of 30 RCT studies including DR intervention on preschool-age children's language and early literacy skills. The inclusion criteria for the meta-analysis were as follows: a) shared reading intervention; b) parents of preschool-age children; c) children aged 0-6 years without any kind of disability; d) random allocation to conditions; e) measures of language and early literacy skills; f) English, Spanish or French language; and g) written between 1998 and 2018. The results of the meta-analysis showed that shared reading interventions without DR strategies showed a statistically limited effect on language and early literacy skills of preschool-age children. However, the studies including DR strategies were found to be effective in improving language skills and also found that the intervention studies were less effective on language skills of children with low SES (d= 0.097 and 0.21), which is an important finding for further studies in this area. In future studies conducted with low-SES groups, the content of the intervention would be different from the 30 studies in this meta-analysis. For example, in the current study we enriched the intervention by additional components to increase its effects, conducting a two-session caregiver training with parents in the intervention group. We also gave parents an intervention instruction for guidance at home. Lastly, we arranged weekly meetings to ensure parents watched their videos and got feedback from me. These components were added to increase the effects of the intervention on children with low SES.

Furthermore, the meta-analysis presented above included some limitations in terms of the quality of the evidence base. Firstly, in terms of the sample group, the children of parents in the lower SES group were younger. Therefore, the effectiveness of the interventions may have been found to be low. If the children were older, they have might made more interaction with the adults, and talked more, and became leaders in the sessions more than younger participants did. The interventions might have been more effective. The second limitation concerned

measures, in that only short-term outcomes were measured. If the longitudinal effects of the interventions were examined, it could be determined that they were more effective, as there are a considerable number of studies in the literature showing the long-term effects of DR (Zucker et al., 2013, Whitehurst et al., 1999, Ergül et al., 2017a). The third limitation involved the dependent variables, as only studies that assessed receptive and expressive vocabulary were included in the meta-analysis. Other skills such as phonological awareness and print awareness were not included, but the literature includes a considerable number of studies showing the effects of DR on those skills (Elmonayer, 2013, Sim et al., 2014, Huennekens and Xu, 2016) . The fourth limitation was about external validity, as the only studies included in the meta-analysis were based in the US and other Anglo-Saxon countries. The fact that it did not include countries in other regions is seen as an important limitation because of language and orthographic differences.

The studies explained above had several implications for the current study. Firstly, they showed that the DR was effective when conducted by parents at home; therefore, the current study was designed as a home-based intervention. However, unlike the studies above, the current study was designed as 12-week intervention; however, due to the COVID-19 pandemic, the intervention was extended to 20 weeks. This made the current study one of the longest DR interventions in the literature. Secondly, the studies above featured DR interventions including training and additional components such as home visits, SMS, booster training, videos, etc. Unlike the studies above, the current study was designed to follow parents in the intervention group with weekly meetings. During the weekly meetings, I watched videos of sessions with parents in the intervention group and gave them feedback. Thirdly, the outcomes in the studies discussed above included language and early literacy skills, and, in addition to these, the current study also included a measure of the HLE. In the light of the findings obtained from of all this research, I planned and conducted current research and aimed to add its results to the literature.

7.4 Methodology

7.4.1 Research Design

The RCT is said to be the most powerful, accurate and active experimental design (Gorard, 2013), which like other experimental designs, tries to show causality between outcomes and intervention (Cohen et al., 2018). There are some features of the RCT that researchers need to be aware of when conducting experimental research. First, participants are randomly selected

and allocated to intervention and control groups. Second, both groups are pre-tested for parity. Third, key variables are identified and isolated. Fourth, other variables are controlled as far as possible. Fifth, special treatment is given to the intervention group. Sixth, groups are entirely separated to prevent contamination. Seventh, both groups are post-tested, and their results are compared in order to look at differences from the pre-test results. Eighth, their results are compared to examine effects of the intervention on both groups' dependent variables (Cohen et al., 2018).

The current study is a pilot RCT. All components of the main study such as enrolment, randomization and measurements are tested in a pilot RCT (Arain et al., 2010). Moreover, Eldridge et al. (2016) identified the main feature of a pilot RCT: "It has a specific design feature: in a pilot study a future study, or part of a future study, is conducted on a smaller scale."

For this research a pilot RCT was employed with the purpose of determining the impact of the DRP on the HLE, language and early literacy skills of children from low-SES backgrounds. It included all the main features of a RCT but was smaller in scale. There were several reasons for using an RCT method in the current research. First, the research was an experimental study examining the effects of an independent variable on dependent variables; therefore, the RCT method was found to be an important option. Second, this study relied on the randomization approach in the selection of the participant group. It was seen that the best option using randomization is RCT method. Moreover, the sponsor of the researcher requested that this research should be adapted into a large-scale national project in the future. It was thought that the RCT method would be suitable for adaptation to a large-scale project in the future. Lastly, Burgoyne et al. (2018) which is the sample research was also designed as an RCT. Therefore, it was considered to design the research as similar to the sample research.

The current research was aimed to be designed as an RCT with a passive control group. There were two reasons of deciding a passive control group. First, since the current research was a doctoral thesis, the researcher was alone. Therefore, it was thought by the researcher and supervisors that it would be difficult for the researcher to conduct two studies together for the intervention and control groups. Second, in the sample research (Burgoyne et al., 2018) the intervention delivered to the control group was found ineffective. Therefore, it was considered unnecessary to be included in the current research.

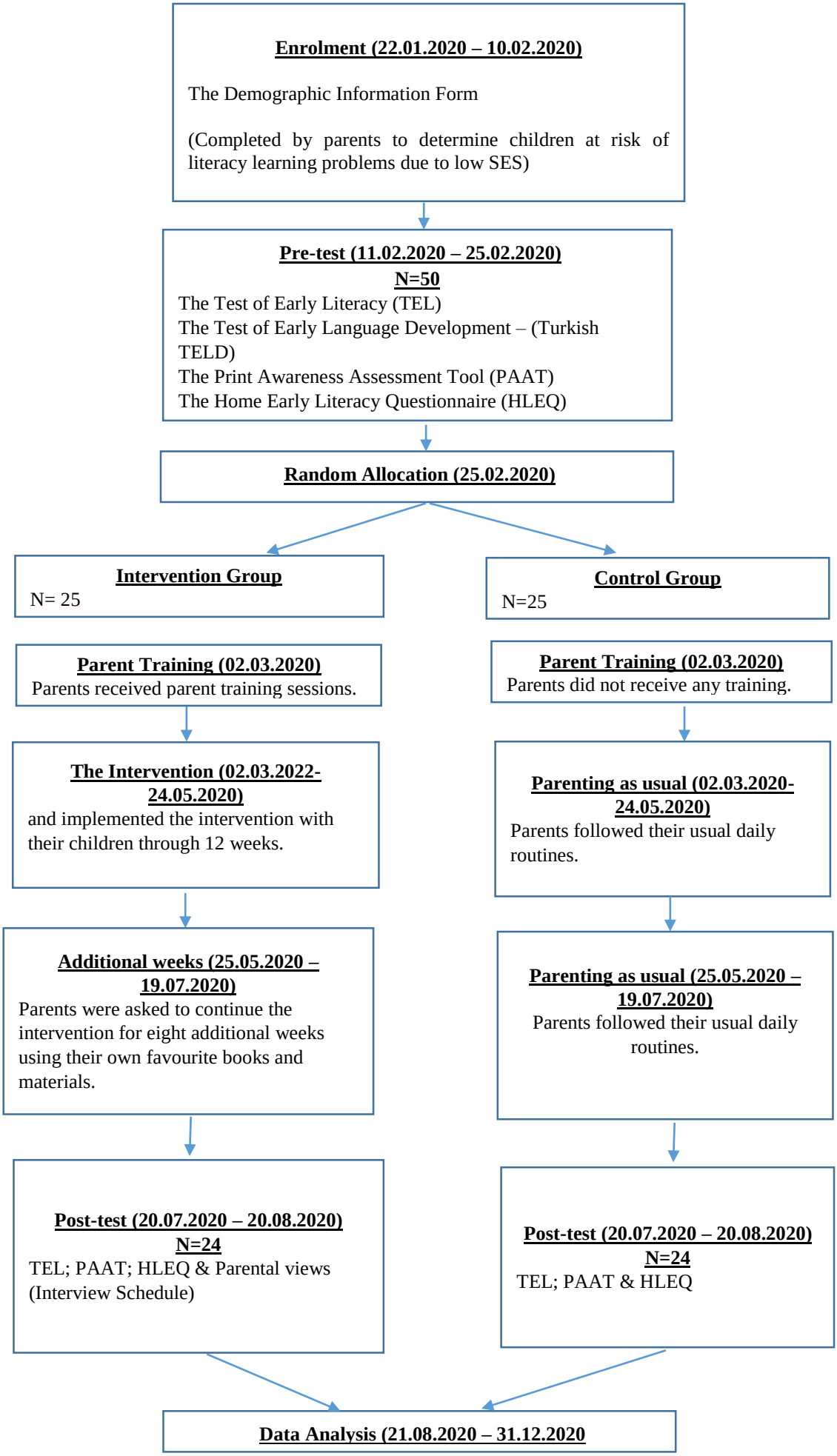
As an RCT with a passive control group, there might be ethical problems in the current research. It was thought that since the parents in the control group will not attend parent training

sessions and will not be given the materials of the intervention, they would disappoint. Therefore, they were explained at the beginning of the intervention that they will be involved in parent training and will be given all materials at the end. However, at the end of the intervention, parent training could not be organized due to the COVID-19 pandemic conditions. Also, almost all of the research budget was spent on remote completion of post-tests. Therefore, parent training and materials support could not be provided to those parents.

The CONSORT diagram shown as Figure 10 shows the steps of the RCT.

Figure 10

The Pilot Randomized Controlled Trial CONSORT Diagram


Enrolment (22.01.2020 – 10.02.2020)
The Demographic Information Form
(Completed by parents to determine children at risk of literacy learning problems due to low SES)
Pre-test (11.02.2020 – 25.02.2020)
N=50
The Test of Early Literacy (TEL)
The Test of Early Language Development – (Turkish TELD)
The Print Awareness Assessment Tool (PAAT)
The Home Early Literacy Questionnaire (HLEQ)
Random Allocation (25.02.2020)
Intervention Group
N= 25
Control Group
N=25
Parent Training (02.03.2020)
Parents received parent training sessions.
Parent Training (02.03.2020)
Parents did not receive any training.
The Intervention (02.03.2022-24.05.2020)
and implemented the intervention with their children through 12 weeks.
Parenting as usual (02.03.2020-24.05.2020)
Parents followed their usual daily routines.
Additional weeks (25.05.2020 – 19.07.2020)
Parents were asked to continue the intervention for eight additional weeks using their own favourite books and materials.
Parenting as usual (25.05.2020 – 19.07.2020)
Parents followed their usual daily routines.
Post-test (20.07.2020 – 20.08.2020)
N=24
TEL; PAAT; HLEQ & Parental views (Interview Schedule)
Post-test (20.07.2020 – 20.08.2020)
N=24
TEL; PAAT & HLEQ
Data Analysis (21.08.2020 – 31.12.2020

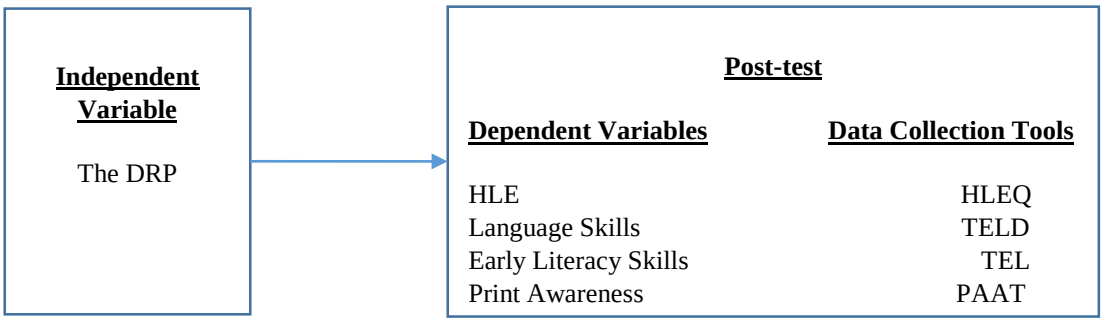
Fifty parents and 50 children from low SES area of Ankara took part in the study. During the intervention process one parent and child in the intervention group withdrew when they moved from Ankara to another city, and a parent and child in the control group withdrew at the post-test stage because they did not want to conduct post-test measurements at home. Therefore, the study ended with 48 parents and their children.

7.4.2 Dependent and Independent Variables

Dependent variables included the HLE, language ability and early literacy skills of children at risk of literacy due to low SES, and the independent variable was the DRP.

Figure 11

The Independent and Dependent Variables of the Pilot Randomized Controlled Trial



7.4.3 Internal and External Validities

Internal and external validities are two important issues for both qualitative and quantitative research because an invalid situation in one part of the research might permeate others. Therefore, a researcher needs to prepare and conduct all parts of the research consistently. Internal validity is concerned with whether experimental interventions make a difference under specific conditions, whether there are errors and validity violations in the research, and whether the research is secure (Cohen et al., 2018).

Threats to the internal validity of research include contamination, history, maturation, ambiguous temporal precedence, statistical regression, testing, instrumentation, selection,

experimental mortality, instrument reactivity, selection-maturation interaction and type 1 and type 2 errors (Cohen et al., 2018, Büyüköztürk et al., 2017).

External validity refers to the generalizability and transferability of results, i.e., how far the results of a study can be generalized to the rest of the population and different settings and populations (Cohen et al., 2018, Büyüköztürk et al., 2017). This means generalizing from a sample to different (broader or smaller) samples, and from one condition to similar or dissimilar conditions, and from one time to another (Cohen et al., 2018).

To ensure the validity of the research, the following aspects were incorporated into the design:

- Random allocation was used. Preschoolers were selected from the low-SES population and randomly allocated to intervention and control groups (see section 7.4.5.2 Sampling).
- Each data collection tool planned to be used in the research had undergone validity and reliability studies. When these data collection tools were originally developed in Turkish or adopted from another language, validity and reliability studies were conducted with Turkish children. Reliability and validity estimates are reported in section 7.4.6 Measures.
- Interrater reliability was calculated by Cohen's Kappa. It is explained in section 7.4.4.1 Interrater Reliability.
- During the data collection process, standard procedures were followed at pre-test. However, some standard measurement procedures changed for the post-test. Due to the risk of transmission of COVID-19, some data collection tools were completed by parents at home, some by the researcher via phone. All changes in procedures were explained in section 7.4.8.4 Post-Test.
- Appropriate statistical methods such as ANOVA and regression were used to analyse the data from preschoolers and their parents.

7.4.4 Reliability of the Current Research

Reliability is a fundamental issue in research. It is defined as: "[…]an umbrella term for dependability, consistency and replicability over time, over instruments and over groups of respondents" Cohen et al. (2018). Reliability in quantitative research is based on three principles: namely, stability, equivalence and internal consistency (Cohen et al., 2018). Stability means consistency between measures at different times, in different samples and during different uses of the same instrument (Cohen et al., 2018) and the main concern is inconsistency between pre-test and post-test outcomes for the same group, and between results

of similar samples (Cohen et al., 2018). For this research, stability across pre- and post-test results was assessed and tests for homogeneity and distribution were conducted.

To ensure reliability in the current study (stability, equivalence and internal consistency), the time between pre-test and post-test was 12 weeks, guided by a literature review. To reduce inconsistency between outcomes, as much between-group similarity across preschooler characteristics was provided as possible. To ensure similarity between preschoolers, children from the same SES region and the same preschool took part in the research, and parents completed a demographic information form for providing information about them and their children. The instruments used for gathering data from both parents and children had undergone validity and reliability studies and results. The results are shown in section of 7.4.6 Measures. Lastly, interrater and procedural reliabilities were calculated, and the results are shown in section 7.4.4.1 Interrater Reliability.

7.4.4.1 Interrater Reliability

Interrater reliability is considered one type of equivalence in the reliability of research (Cohen et al., 2018), and its definition and importance were explained by McHugh (2012, p.1): "Measurement of the extent to which data collectors (interrater) assign the same score to the same variable is called interrater reliability". Although it can be calculated in various ways, percent agreement, as it is the simplest version (McHugh, 2012) was used for this research. Interrater reliability was calculated using Cohen's kappa (Cohen et al., 2018). Thirty percent of all measurement records, pre- and post-test, were selected randomly. Unfilled answer sheets of tests and questionnaires were then provided to two observers doing PhDs at Gazi University. Next, observers watched the selected video records and marked the participants' answers again. After the second measure, the observers' results were documented in a matrix, and the percent agreement of observers was calculated. Interrater reliability was identified as 0.95 on average (min 0.90, max 1.00).

7.4.4.2 Procedural (Treatment) Fidelity (Reliability)

Procedural fidelity is an important issue for both validity and reliability, defined by Ledford and Gast (2014, p.2): "the degree to which a research plan was implemented as intended". According to Wolery (2011), there are four reasons for measuring procedural fidelity: allowing investigators to report their results with fidelity; presenting the ways that are useful to transfer

the intervention to the real world; providing necessary information for replication; and shedding light on the experiences of children in the research. It is calculated by dividing the number of correct steps of the implementer by the number of all steps of implementation and multiplying by 100 (Ledford and Gast, 2014).

For this study, procedural fidelity was calculated for parent training sessions using a procedural fidelity checklist (Appendix 14), and an observer doing PhD at Gazi University was asked to fill out the checklist while watching the training videos. Procedural fidelity for parent training sessions was calculated identified as 94 percent on average (the highest at 95 percent, the lowest 85 percent).

Also, to encourage loyalty of parents in relation to dosage and fidelity of the intervention, the Intervention Instruction presented in Appendix 6 was given to parents. Since some parents did not have the opportunity to video record the sessions, their loyalty during the session could not be measured. However, during the first four weeks of Monday meetings, all parents watched videos of some parents, and received feedback on how to increase their loyalty. Also, it was aimed to increase their loyalty in Monday meetings by responding their questions about the procedure of the intervention. After the preschool was closed due to the COVID-19 pandemic, the researcher tried to continue increasing parental loyalty by calling, sending email and messaging.

7.4.5 Participants and Length of the Study

The intervention was conducted in a low-SES area in Ankara, Turkey with 50 preschoolers, aged between 48 and 56 months, who attended preschool full-time, and their parents were included in the research. When deciding the number of participants and length of the intervention, the researcher first discussed with the supervisor team. The team suggested to have 50 parents in the study since it was a pilot RCT. The team, also, advised the researcher to review the studies in the literature conducted as RCT and pilot RCT and to review shared/dialogic reading intervention in Turkish context. The team, lastly, recommended to consider the budget of the research. The researcher examined the number of participants and length of studies in the literature reviews (sections 3.3.6 and 7.3). The researcher also considered the budget of the research and calculated expenses. The number of the participants and the length of the study had to be suitable to the budget of the research. Lastly, the supervisor team and the researcher met and decided to involve 50 parents in the study and 12 weeks as

length of the intervention according to literature review and budget of the research. The participants were recruited from same preschool of the F&A; however, they were not the same parents and children. The recruitment process is explained below.

The SES consists of different variables including parental income, parental education, occupation, and home resources (Sirin, 2005), and it is usually measured using a combination of at least two of them (Ensminger et al., 2003). For this study, parental education and occupation were considered as SES indicators, and the information is presented in section 7.4.5.3 Parent Sample Demographic. The Demographic Information Form included questions intended to measure those indicators for taking part in the study (See the Demographic Information Form in Appendix 15).

7.4.5.1 Sampling

There are two main types of sampling strategies mentioned in the literature – namely, probability and non-probability – and their use depends on the type of research conducted (Gorard, 2013, Cohen et al., 2018). For this research, random sampling (probability) was used for the selection of participants.

Random sampling is known as the best option sampling that is free from systematic bias because participants are not chosen by researchers (Gorard, 2013) and as the most advantageous strategy because it is the easiest and the cheapest option (Gorard, 2013). If an alternative method is used instead of random sampling, participants will meet specific criteria, and the researcher looks for specific participants who meet these criteria. This is more time-consuming. In random sampling, each individual in the population has an equal chance of being included in the research, and participants are selected from a population list including all potential sample candidates (Cohen et al., 2018). There are different techniques used in random sampling to select participants and allocate them to intervention and control groups: for example, drawing names from a hat, using software such as Excel or SPSS and using a table of random numbers in the matrix form (Cohen et al., 2018). Because of all those advantages and reasons for using random sampling, it is suggested by Gorard (2013, p.79) that “random sampling should be used whenever possible”.

For this research, the same sampling process of F&A study was conducted. First, a list was prepared of eligible preschools that were easily accessible in a low-SES region. The preschool (which was selected for F&A study) that was closest geographically to the researcher was

contacted first, then after the preschool management accepted the invitation to take part in the study, potential participants were identified. All parents with children aged between 48 and 56 months were contacted to take part in the study. School management delivered the documents to eligible parents in a letter, and parents who might have had low literacy levels were called via phone by school management, and they were then presented the study verbally in person. Participants were given five working days to decide whether they would be willing to participate in this research. After they decided to opt in, they signed the form and returned it to the preschool management, and 70 parents out of 100 signed the consent form and returned it. Fifty parents were chosen randomly by pulling their names from the box among all the parents' names who accepted to take part in the study. Parents who were chosen to attend the study completed the questions in Demographic Information Form which introduced in the section of 7.4.6.1. The questions for parents were about their names and surnames, ages, education backgrounds and occupations. Since the Research Ethics Committee did not permit to receive data of parental income by data collection tool, the researcher could not collect data on it. He tried to determine parental SES by collecting data on their education and occupation background and considering the data presented in Turkish Statistical Agency (Institute, 2018) website mentioned above. Table 24 and 25 show the demographics of the parents and their children in the study.

7.4.5.2 Child Sample Demographics

Fifty preschoolers from a low SES area of Ankara took part in the study; however, only 48 participated in the post-tests. Numerical codes were used for children's names and the information about the children is given in Table 25.

Table 23

Summary of the Child Sample Demographics

Samples	Intervention group	Control group
N	24	24
Sex (M, F)	15 male, 9 female	10 male, 14 female
Age (Y, M)	4 years 6 months	4 years 4 months

7.4.5.3 Parent Sample Demographic

Fifty parents from low SES area of Ankara took part the study, but only 48 parents participated in the post-tests. Alphabetical codenames were used for parents' names. Although Table 26 contains information about both parents, only mothers took part in the study.

Table 24

Summary of the Parent Sample Demographics

Samples	Intervention group	Control group
N	24	24
Mother age	31 years	32 years
Father age	37 years	37 years
Mother occupation	21 home makers, 1 technician, 1 cook, 1 hairdresser	18 home makers, 2 officers, 2 workers in factories, 1 hairdresser, 1 technician
Father occupation	14 workers in factories, 6 officers, 1 security, 1 tailor, 1 unemployed, 1 technician	13 workers in factories, 4 unemployed, 3 shop keepers, 1 farmer, 1 officer, 1 teacher, 1 chauffeur
Mother education	13 high school, 6 secondary school, 3 primary school, 2 college	11 high school, 6 college, 4 primary school, 3 secondary school
Father education	9 high school, 8 secondary school, 3 primary school, 2 college, 1 university, 1 master's level	12 high school, 5 colleges, 4 secondary school, 3 primary school

During the intervention process one parent and child in the intervention group withdrew when they moved from Ankara to another city, and a parent and child in the control group withdrew at the post-test stage because they did not want to conduct post-test measurements at home. The detailed tables about the samples are given in Appendices 16, 17, 18 and 19, including the children's gender and age and parental age, occupation and education, individually.

7.4.6 Measures

The current research investigated the effects of the independent variable (the DRP) on various dependent variables (HLE and early literacy skills of children from low SES). To collect data for each variable, different measures were completed by children and their parents, explained below.

7.4.6.1 Demographic Information Form

The form was prepared specifically for this study, asking about the demographic information of the children and their parents. The questions about children asked for their date of birth, gender and school name, and the questions about parents requested their name and surname, age, educational background and occupation. The form was completed in person by parents before the pre-test. For the full the Demographic Information Form, see Appendix 15.

7.4.6.2 Home Early Literacy Environment Questionnaire

The HLEQ was developed by Sarıca et al. (2014) with the purpose of creating valid and reliable measures of HLE among Turkish preschoolers. The HLEQ consists of four factors: 1) reading, 2) writing, 3) phonological and print awareness, and 4) shared book reading. Some questions about the first factor include the following. How many books do you have at home? How many books does your child own at home? How much do you like to read? How often do you read to your child? These first factor questions relate to reading activities at home and try to determine whether parents and children have books at home and do reading activities together.

Some questions in the second factor include the following. How often does your child ask you to write something for her like a letter or note? How often does your child draw? How often does your child write words? These second factor questions relate to writing activities at home and try to determine whether children have writing materials and whether they use them.

Some questions about the third factor include the following. How often does your child try or play rhyming word games with you or others? How often does your child ask you for help reading the words on food packages or street signs? These third factor questions relate to print and phonological awareness skills and try to determine whether children do activities that improve phonological and print awareness skills.

Some questions about the fourth factor include the following. When reading to your child, how often does your child spontaneously show or talk about the pictures? When reading to your child, how often does your child ask questions about characters or events in the book? These fourth factor questions relate to shared reading process and try to determine whether interaction happens in shared reading sessions.

The questionnaire includes 23 questions, each with five options except for two; one question has three and another has six options. The options are listed from least to most, and parents are asked to choose the option that best suits them. The lowest and highest scores that can be taken from the HLEQ are 23 and 114, respectively. For the full HLEQ, see Appendix 20.

7.4.6.3 Test of Early Literacy

The TEL was developed by (Kargin et al., 2015) to evaluate the early literacy skills of preschoolers in Turkey. In all, 403 preschoolers were evaluated, and their results were analysed for validity and reliability. Content validity was assessed by gathering opinions from four experts across various universities in Turkey. Next, to assess construct validity, exploratory and confirmatory factor analyses were done, and internal consistency (KR-20), two half-test reliability (Spearman Brown) and test-retest reliability coefficients were calculated for the reliability analysis. As a result, the TEL was found to be a valid and reliable data collection tool.

The TEL consists of seven subtests, naming Receptive Vocabulary, Expressive Vocabulary, Category Naming, Functional Knowledge, Letter Knowledge, Phonological Awareness and Listening Comprehension. For this study, these subtests were used to measure preschoolers' early literacy skills before and after the DRP. All the details and research findings regarding the validity and reliability of the TEL were explained in 3.3.4.3.

7.4.6.4 Test of Early Language Development – Turkish

The TELD-T was adopted from Hresko et al. (1991) Test of Early Language by Güven (2009) as TEDİL within the Turkish context to measure the receptive and expressive language skills of children between the ages of 0 and 7 years 11 months. TEDİL consists of two parallel forms, A and B, with each form including items in order to measure semantics and syntax/morphology. In form A, the receptive language subtest contains 24 items for semantics and 13 for syntax/morphology, while the expressive language subtest includes 22 items for

meaning and 17 for syntax/morphology. In form B, the receptive language subtest includes 25 items for semantics and 12 for syntax/morphology, while expressive language involves 24 items for semantics and 15 for syntax/morphology.

To prove the validity of the TEDİL, content, construct and criterion validities were measured, while, on the other hand, reliability coefficients, internal consistency analyses, stability analyses and equivalence analyses were assessed to ensure reliability. Results showed that TEDİL is a reliable and valid instrument to measure language levels of Turkish children (REF) (Güven, 2009). For this study, it was used for determining the effects of the DRP on children's expressive and receptive language.

7.4.6.5 Print Awareness Assessment Tool

The PAT was developed by Doğanay Bilgi et al. (2020a) to evaluate print awareness of 48- to 72-month Turkish preschoolers across the SES. In total, 216 children (109 girls and 107 boys) with typical development aged 48-72 months participated in the validity and reliability study, selected randomly from six preschools in four different SES districts in Ankara province. In order to provide validity and reliability, content and construct validities as well as the KR-20 reliability were completed. Content validity was measured by taking opinions from 10 experts, then exploratory and confirmatory factor analyses were done to assess construct validity. For the reliability analysis, internal consistency (KR-20) was calculated. As a result, it was determined that the PAT is a valid and reliable tool for evaluating the print awareness of preschool children aged 48-72 months.

The PAT consists of three factors naming print direction, print concepts and book concepts, which include 23 items expected to be known by preschoolers. The range of points that could be taken from the PAT is 0-23. For this study the PAT was used to determine the DRP's effects on children's print awareness skills. All the details and research findings regarding the validity and reliability of the PAT were explained in 3.3.4.2.

7.4.7 Procedures

7.4.7.1 Pre-test

All dependent variables (HLE, early literacy skills and language ability) were assessed by the data collection tools introduced above, and the measurements were completed with both

intervention and control groups. All children were first assessed at pre-test, then allocated in the intervention and control groups. The pre-test data was not used for randomisation. The HLE was evaluated by the HLEQ, the early literacy skills were evaluated by the TEL, expressive and receptive language skills were evaluated by the TELD, and print awareness was evaluated by the PAT. Their assessment processes are explained below in detail.

Children's expressive and receptive language were assessed using the TELD. The test was administered by the researcher in the seminar room that parent training done. During the assessment, the researcher and the child were in the seminar room. All sessions were video recorded. Each session lasted 31 minutes (24 – 35 minutes) on average and each child was assessed one session. The session included two parts. In the receptive language part, the child was asked to point the name of the pictures shown to him/her or to perform the action he/she was asked. In the expressive language part, the child was asked to say the name of the picture shown to him/her.

Children's vocabulary knowledge, phonological awareness, letter knowledge and listening comprehension were assessed using the TEL. The test was administered by the researcher in the seminar room where parent training was done. During the assessment, the researcher and the child were in the seminar room. All sessions were video recorded. Each session lasted 30 minutes (26 – 38 minutes) on average and each child was assessed one session. The session included three parts. First, in the vocabulary part, the child was asked to point the right picture among all pictures shown to him or asked to say the name of the picture shown to him/her. Second, in the phonological awareness part, the child was asked to find rhymed words, break sentences into words, separate words into syllables, separate syllables into sounds, find the first and last sounds and replace the sounds. Third, in the listening comprehension part, the child was read a story and asked to answer the questions correctly at the end.

Children's print awareness was assessed using the PAT. The test was administered by the researcher in the seminar room that parent training done. During the assessment, the researcher and the child were in the seminar room. All sessions were video recorded. Each session lasted 12 minutes (9 – 14 minutes) on average and each child was assessed one session. In the assessment, the child was asked to point the concepts on the cover page of the book, show the direction of the page and text, point upper and lower case letters, point punctuation marks, and point the spaces between the words.

Children's HLE was assessed using the HLEQ. It was completed by the parents when their children were pretested. The parents completed it in the waiting room of the preschool that their children attended. The researcher gave parents the HLEQ as printed and a pencil and an eraser. Parents were asked to answer the questions about the number and diversity of the materials and activities about reading, writing, phonological and print awareness and shared reading.

7.4.7.2 Parent Training

Parent training was delivered by the researcher to parents of the children in the intervention group. The main aim of the training was to inform and support parents to deliver the DRP to their children, and to ensure that parents understood the aims and methodology of the research. The training also provided parental motivation for implementation of the DRP and was conducted in a meeting/conference room in the children's preschool. It was completed one day before the implementation process in two sessions lasting 90 minutes each.

The first session started with an explanation of the research, including aims, design and time schedule, and continued with a brief overview of the development of language and early literacy skills in preschool years, and the role of a rich HLE in the development of those skills. It then concluded with emphasizing the impact of well-developed early literacy and language skills in preschool years on later reading achievement.

The second session focused on the DRP and its implementation, starting with introducing all the materials. The researcher then became a model to parents, following the intervention instruction on how to deliver the DRP with their children, and he gave feedback to parents based on the videos recorded during the feasibility study. Next, to ensure the validity and reliability of the research, parents were asked not to share information with parents in the control group. At the end of the session, the books of first week and all materials were given to parents, and the process was started.

7.4.7.3 Implementation Process

The DRP was implemented by parents with their children in their homes. All parents started to conduct the implementation in the same week and read the same storybooks each week. The storybooks selected for the study were explained in section 4.4.2 (Preparing the Materials). The researcher aimed to meet the parents in the preschool every Monday throughout the 12-week

implementation period to receive and provide feedback, and to increase the efficacy of the process. He also planned to give out weekly materials at these meetings. However, due to the COVID-19 pandemic, he met parents only on four Mondays. No more Monday meetings could be done. The researcher sent all storybooks of the intervention to parents via a courier.

After, the COVID-19 pandemic emerged, the researcher contacted to parents regularly via mobile and email. Some parents sent video recordings of their sessions weekly, and the researcher watched them alone and gave feedback to parents. At the end of the twelfth week, as the COVID-19 pandemic continued, and schools were closed in Turkey, the researcher made some changes to the research methodology, which required another application for ethical approval.

Parents were asked to continue the intervention for eight additional weeks using their own favourite books and materials, and over the additional eight weeks, the researcher continued to follow parents' implementation and gave them feedback as he did during the first twelve. However, the researcher did not review any of their materials. Although parental fidelity in those additional weeks was not measured, most of parents continued with the intervention as they had done through the first twelve weeks. During this additional period, the researcher revised the methodology, prepared materials and gained ethical approval from the Faculty Ethical Committee, then, after the extension period, post-test measures were completed.

7.4.7.4 Post-Test

The same testing protocol was planned for the pre- and post-tests. However, since the data collection protocol changed, some changes were also made to the post-test protocols and tools. Three revision strategies were considered: suitability, difficulty and necessity. The implementation was planned to be conducted by parents at home, while the post-test was planned to be conducted at the preschool. All data collection tools were printed and sent to parents via a courier. After all the parents received the materials, post-tests were started from the parents in the intervention group and ended with those in the control group. After post-tests completed, parents sent back all data collection tools and documents via the courier sending by the researcher.

At the beginning of the implementation, it was planned that HLE would be collected using the HLEQ, language scores with the TELD-T, early literacy scores with the TEL and print awareness with the PAT. However, at the post-test stage, new data collection tools were added

and some removed, and these changes were the same for parents in both groups. All changes in measures are explained below.

The TELD was removed from post-test since it was not suitable to be conducted by parents face to face or by the researcher via phone, as it is a data collection tool which needs comprehensive training. Therefore, its pre-test data was removed from the study.

Children's vocabulary knowledge, phonological awareness, letter knowledge and listening comprehension were assessed using the TEL as done in pre-test. However, one part of the vocabulary (functional knowledge) of the TEL was removed since it was not discriminatory at pre-test, meaning that all the children answered all items correctly. Lastly, two parts of the phonological awareness section (deleting first and last sounds) were removed since they were very difficult and could not be done by any of the children at pre-test. On the contrary to pre-test, the test was administered by the parents in their homes at post-test. It was ensured that the parent and the child were in a quiet room without anyone. During the session, the parent's phone was on and the researcher was listening to the assessment. The researcher directed the parent to avoid any trouble that would jeopardize the reliability of the assessment. Each session lasted 40 minutes (38 – 46 minutes) on average and each child was assessed one session. The session included three parts. First, in the vocabulary part, the child was asked to point the right picture among all pictures shown to him or asked to say the name of the picture shown to him/her. Second, in the phonological awareness part, the child was asked to find rhymed words, break sentences into words, separate words into syllables, separate syllables into sounds, find the first and last sounds and replace the sounds. Third, in the listening comprehension part, the child was read a story and asked to answer the questions correctly at the end.

Children's print awareness was assessed using the PAT as done in pre-test. On the contrary to pre-test, the test was administered by the parents in their homes at post-test. It was ensured that the parent and the child were in a quiet room without anyone. During the session, the parent's phone was on and the researcher was listening to the assessment. The researcher directed the parent to avoid any trouble that would jeopardize the reliability of the assessment. Each session lasted 17 minutes (13 – 20 minutes) on average and each child was assessed one session. In the assessment, the child was asked to point the concepts on the cover page of the book, show the direction of the page and text, point upper and lower case letters, point punctuation marks, and point the spaces between the words.

Children's HLE was assessed using the HLEQ as done in pre-test. It was completed by the parents in their homes. The researcher sent the HLEQ to parents with other materials. Parents were asked to answer the questions about the number and diversity of the materials and activities about reading, writing, phonological and print awareness and shared reading.

An interview schedule was also added to the data collection tools. To determine the effects of the DRP on children's language and early literacy skills and to determine effects of the COVID-19 pandemic on implementation of the DRP and on the parent-child interaction, eight open-ended questions were asked to parents in the intervention group. Interviews were conducted by phone, and all questions were asked by the research in the same sequence. For the full interview questions, see Appendix 21.

All changes in data collection process and tools are summarized in Table 27 below.

Table 25

Summary of the Pre- and Post-test Measures

Data Collection Tool	Dependent Variable	Pre-test	Post-test	Explanation
HLEQ	HLE	Done	Done	It was completed by parents during the pre- and post-test of the implementation. The researcher gave it to them in person at pre-test but sent it to their homes by courier for post-test.
TELD-T	Language development	Done	Removed	It was conducted by the researcher pre-test with children. It was removed from post-test.
TEL	Early literacy skills	Done	Not totally	It was conducted by the researcher at pre-test with children at preschool. The researcher sent copies to parents for post-test. Some subtests of it were conducted by the researcher via phone, and some of them were conducted by parents face-to-face with children.
PAT	Print awareness	Done	Done	It was conducted by the researcher with children pre-test at preschool but conducted by parents with children at home post-test.

Interview Schedule	Parental views	No	Done	Added at post-test and conducted via phone.

This chapter began by defining the study aims and research questions. It then introduced the literature review on RCT studies including shared reading intervention. Next, it explained the research design, dependent and independent variables and validity and reliability processes, then continued with introducing participants and the sampling process. It provided information on data collection tools and concluded by explaining all the stages of the pilot RCT including pre-test, parent training, implementation and post-test. In the next chapter, the results of the quantitative data collected via the HLEQ, the TEL and the PAT are presented.

Chapter 8

The Pilot Randomized Controlled Trial: Quantitative Analysis and Results

8.1 Introduction

This study was conducted to determine the effects of the DRP on the HLE, language and early literacy skills of children from low SES backgrounds. This chapter starts with a presentation of the results of the Shapiro-Wilk test for score distribution and Levene's test for the homogeneity of the variances. It includes the results of mixed-design ANOVAs employed to determine the effects of the DRP on the HLE and early literacy skills and presents the results of regression models used to determine the mediated effects of the HLE between DRP and early literacy skills. The chapter presents the results of the Bonferroni test for post-hoc analysis. Also, it is important to note that raw scores that have not been weighted, transformed, or converted into any other form were used for all types of the analysis.

8.2 Analytical Approach

To investigate the effectiveness of the intervention in enriching the HLE as well as improving vocabulary, phonological awareness, letter knowledge, listening comprehension and print awareness, a series of statistical analyses were performed. In line with the experimental design, a mixed-design ANOVA was used, while regression equations were used to determine the mediated effects of the HLE between the intervention and other dependent variables (MacKinnon et al., 1995).

8.2.1 Results of Assumptions for Tests and Questionnaire Data

Certain assumptions must be met before mixed-design ANOVA can be used as a parametric test. Data must be normally distributed and demonstrate homogeneity of variance (Howell, 2012). A test of normality was applied to determine the distribution, and since the number of individuals in the groups was lower than 50, the Shapiro-Wilk test was used (Razali and Wah, 2011).

Table 26

Shapiro-Wilk Test Results for Score Distribution

Dependent Variable	Test point	Skewness	Kurtosis	Statistic	df	p
HLE	Pre-test	-.06	-.50	.98	48	.737
	Post-test	-.59	.98	.96	48	.128
Vocabulary	Pre-test	-.06	-.31	.98	48	.672
	Post-test	-.24	-.62	.97	48	.242
Listening Comprehension	Pre-test	-.40	-.44	.92	48	.003*
	Post-test	-.44	-.88	.89	48	.001*
Print Awareness	Pre-test	-.33	.02	.97	48	.254
	Post-test	.24	-.93	.95	48	.072
Phonological Awareness	Pre-test	-.10	-1.02	.93	48	.015*
	Post-test	-.03	-1.13	.94	48	.025*
Letter Knowledge	Pre-test	1.68	3.75	.82	48	.000*
	Post-test	.90	.20	.91	48	.001*

The results of the Shapiro-Wilk test revealed that pre- and post-test HLE, vocabulary and print awareness scores were normally distributed. On the other hand, pre-test and post-test listening comprehension, phonological awareness and letter knowledge were not normally distributed. However, the skewness and kurtosis values of all measurements were between -1 and +1, except the letter knowledge scores (Hair et al., 2006). Therefore, all measurement scores except letter knowledge were accepted as normally distributed. The Shapiro-Wilk test histograms involving skewness (measuring the symmetry in distribution) and kurtosis (measuring whether the data is heavy-tailed or light-tailed) values were examined to visually inspect the normality of the distributions.

The skewness and kurtosis values and the histograms (Figures 12-23) show that the distributions of pre- and post-test scores in HLE, vocabulary, phonological awareness, print awareness and listening comprehension are close to the normal distribution.

Figure 12

Histograms of the Home Literacy Environment Pre-Test Scores

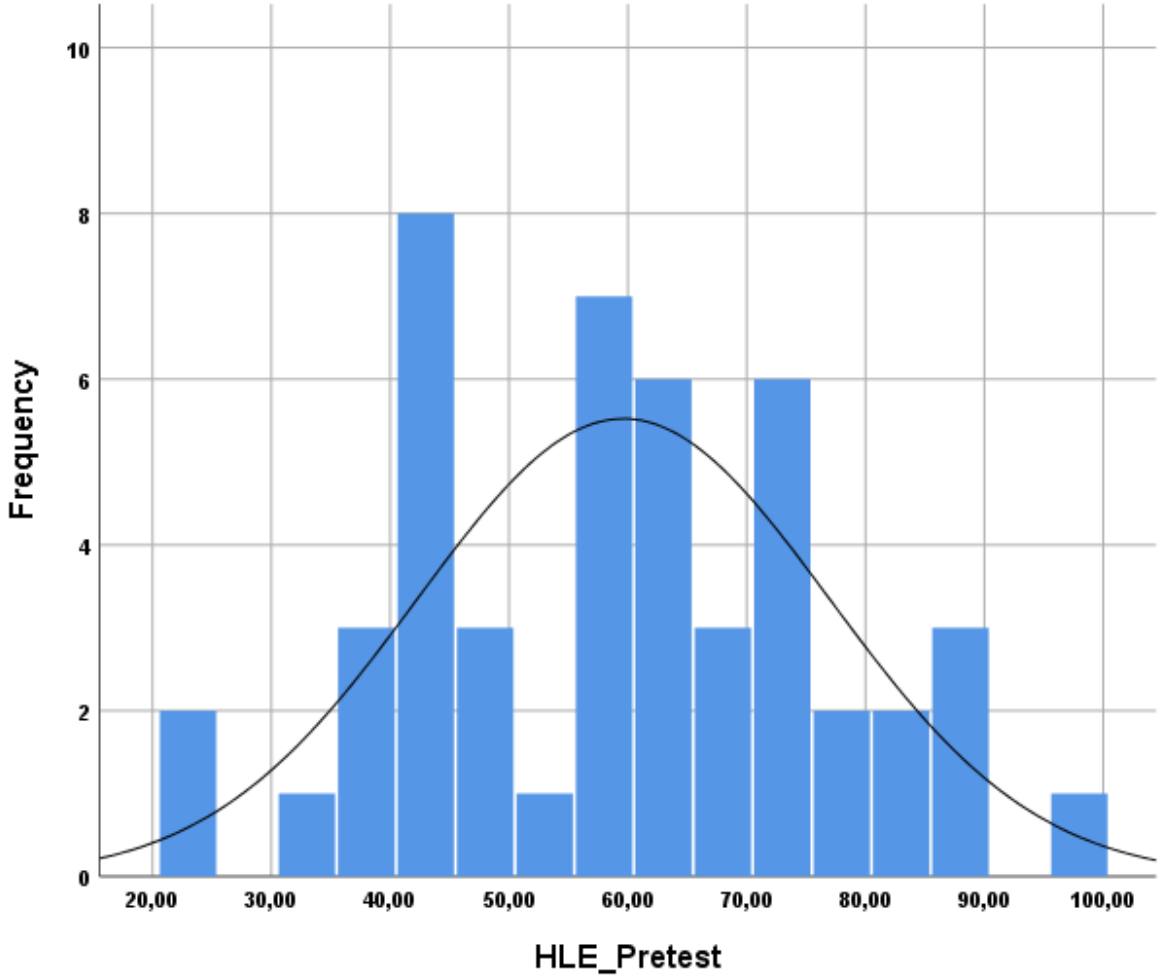


Figure 13

Histograms of the Home Literacy Environment Post-Test Scores

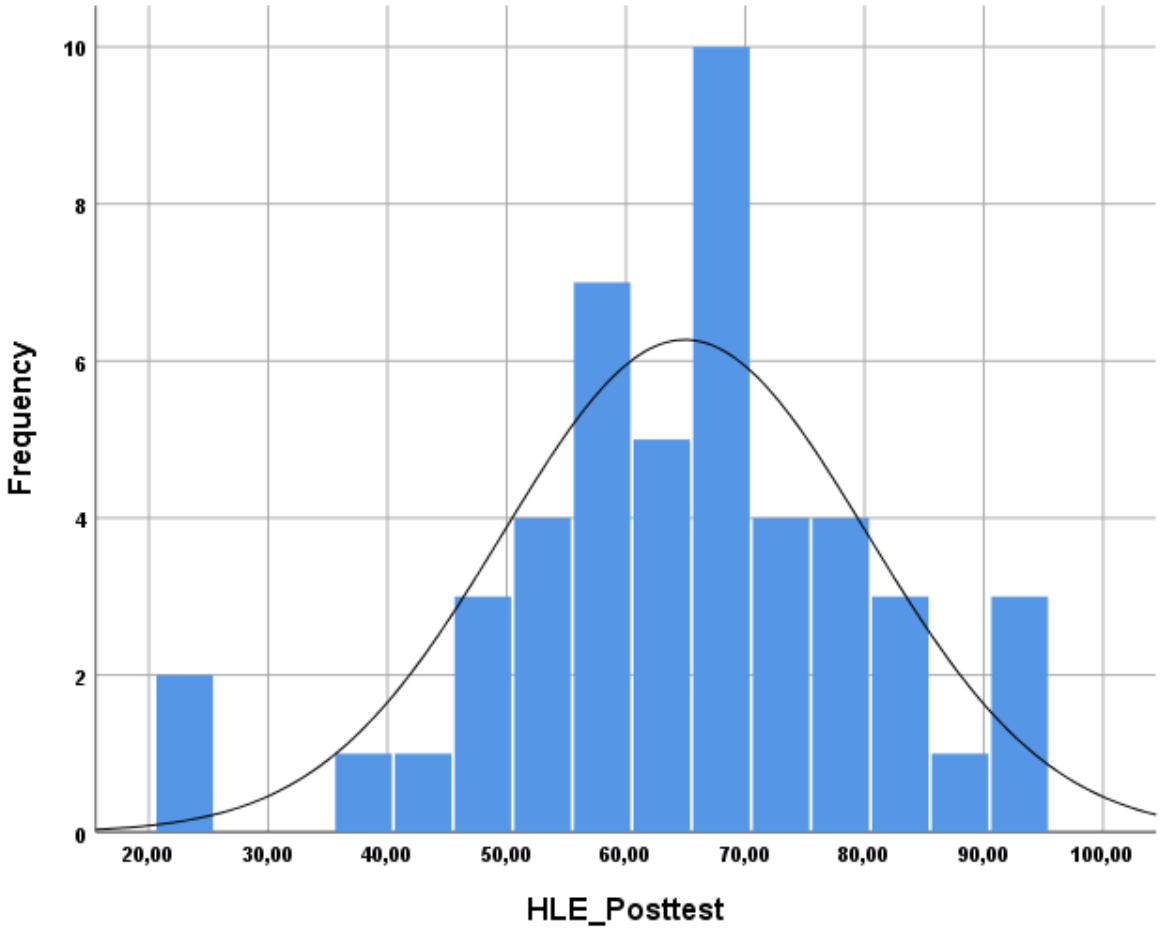


Figure 14

Histograms of Vocabulary Pre-Test Scores

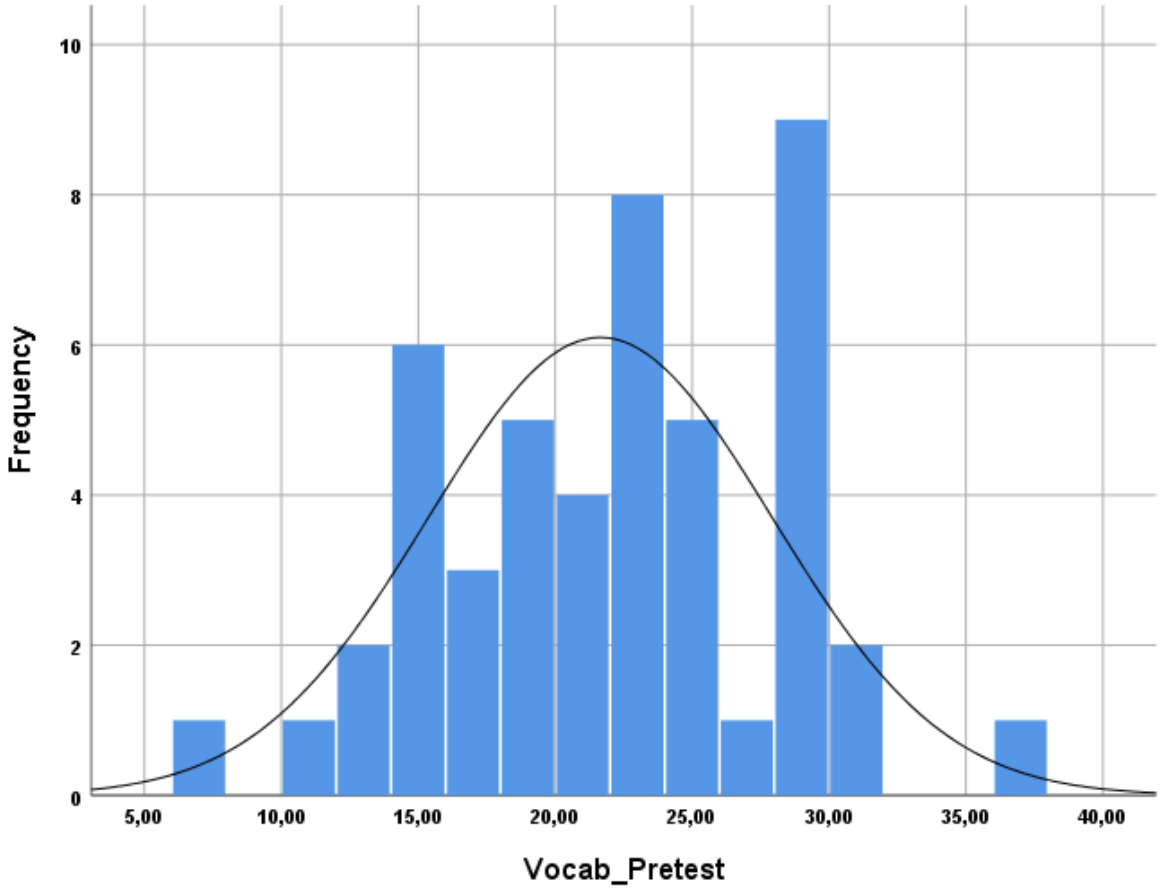


Figure 15

Histograms of Vocabulary Post-Test Scores

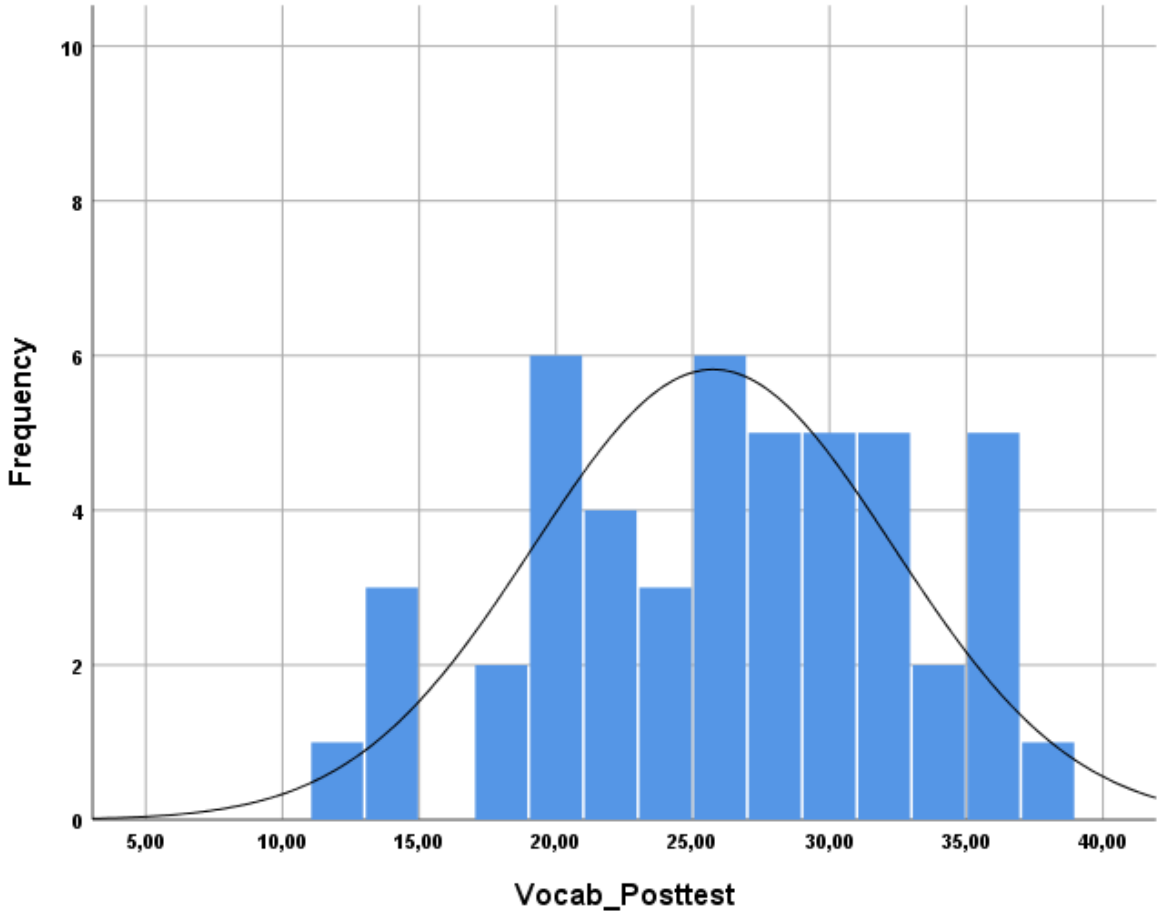


Figure 16

Histograms of Listening Comprehension Pre-Test Scores

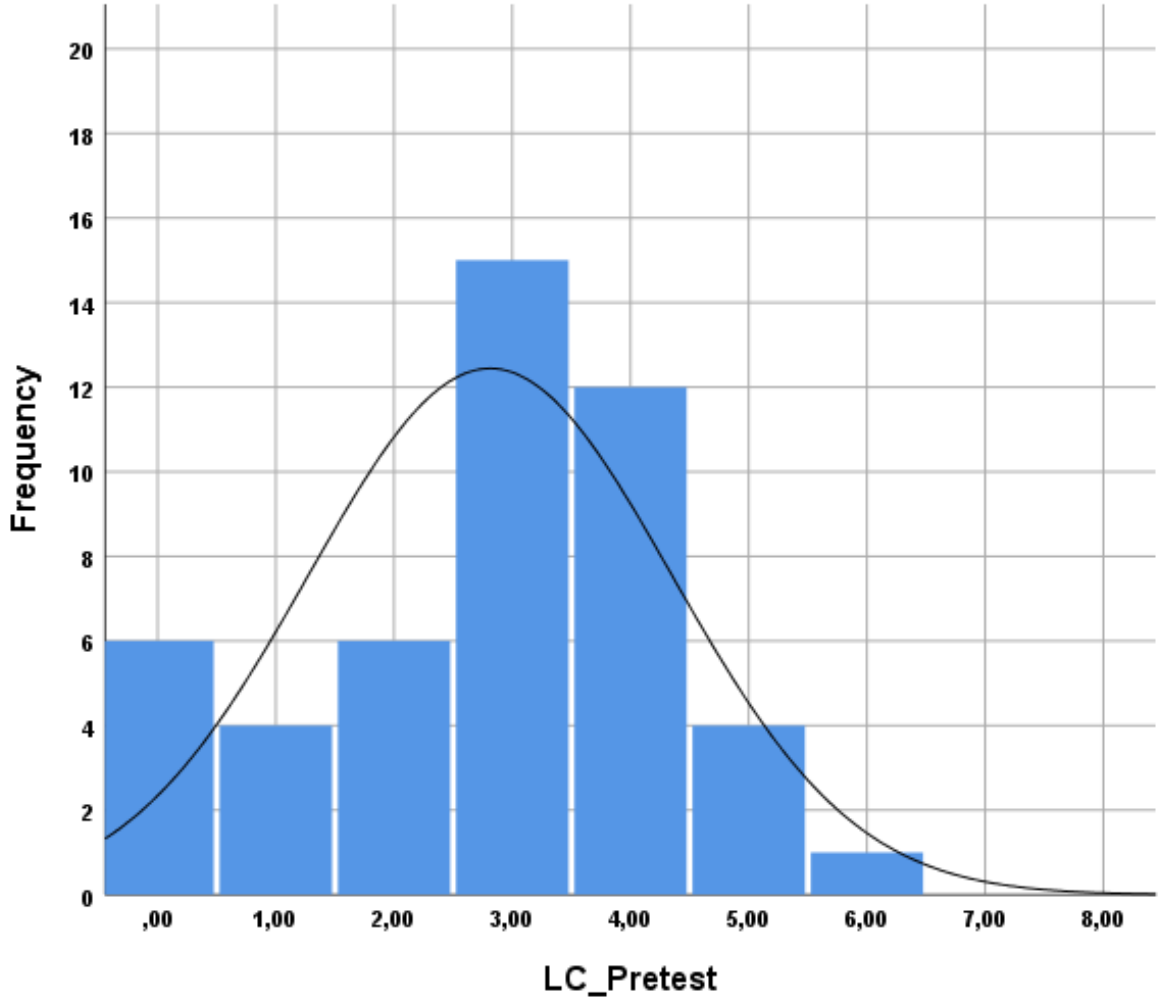


Figure 17

Histograms of Listening Comprehension Post-Test Scores

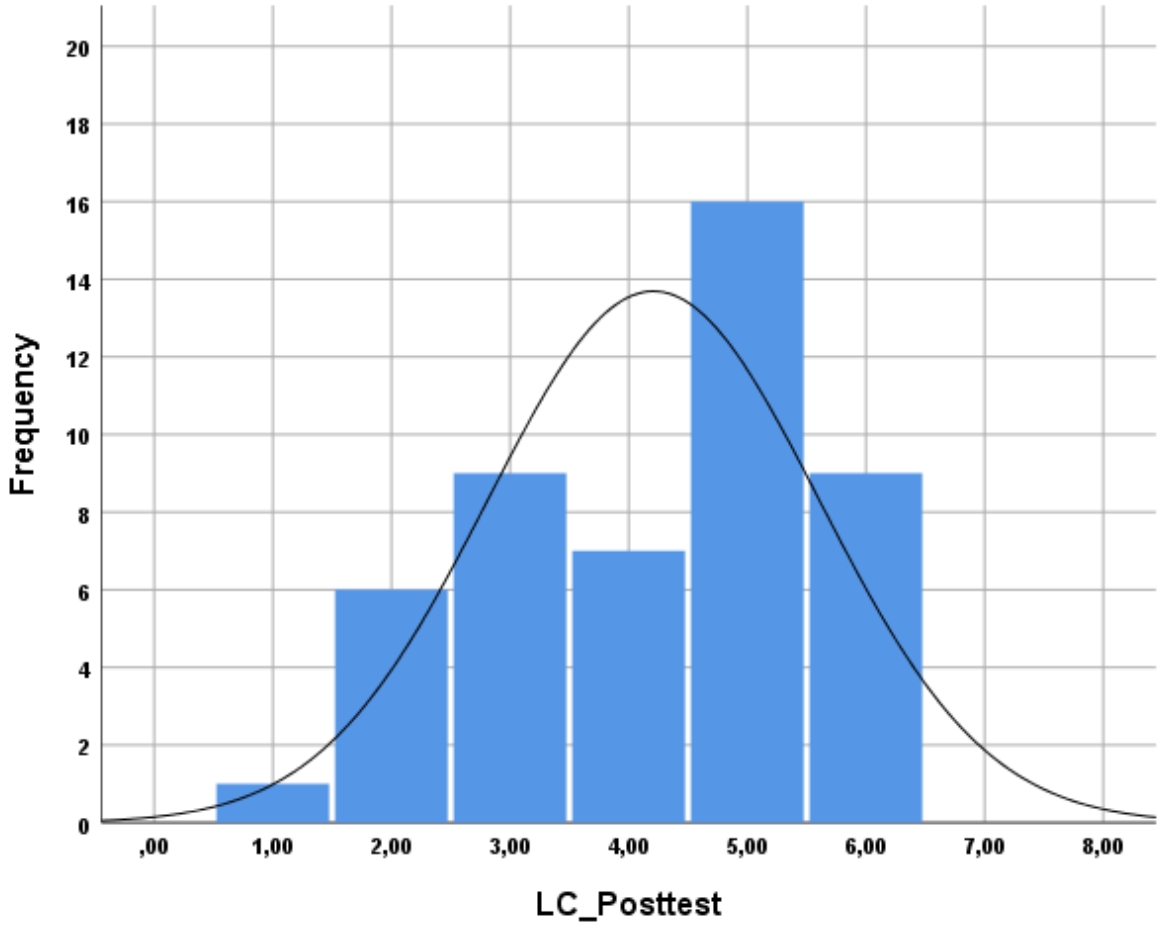


Figure 18

Histograms of Print Awareness Pre-Test Scores

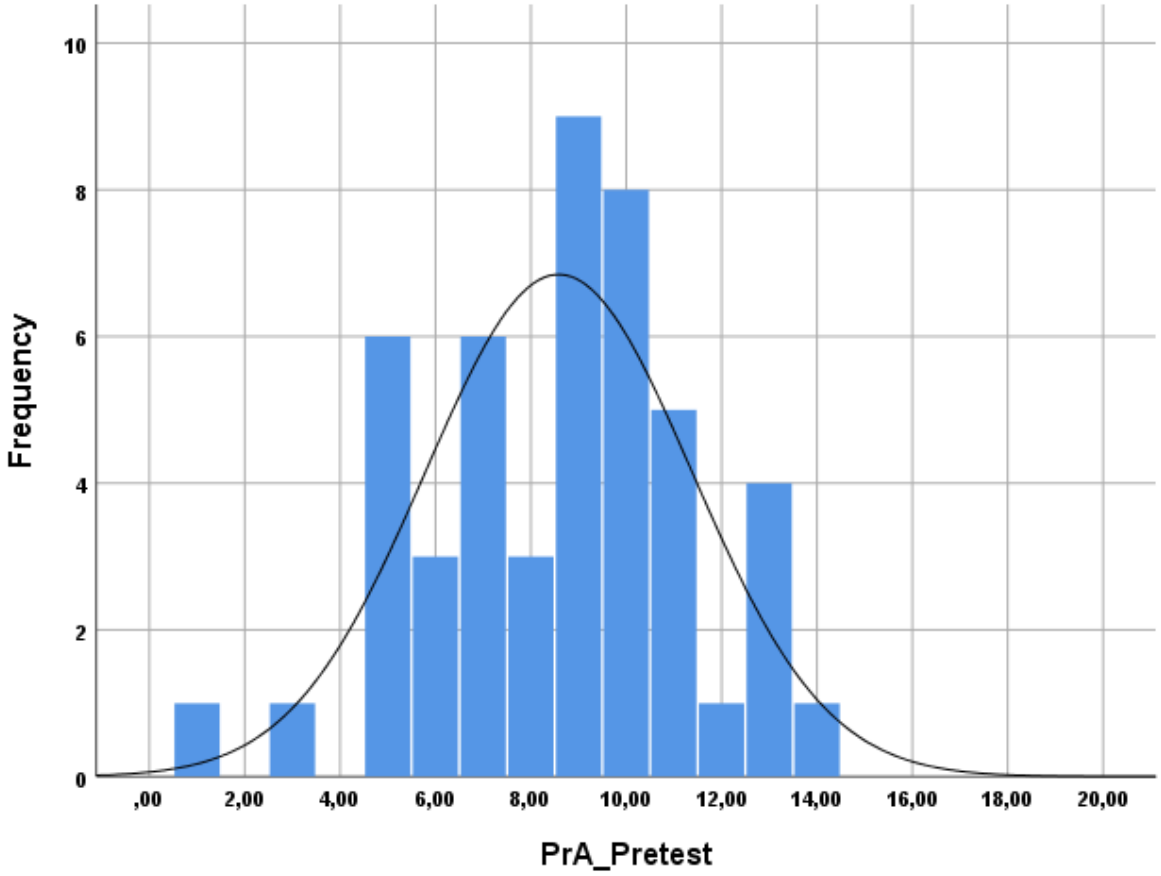


Figure 19

Histograms of Print Awareness Post-Test Scores

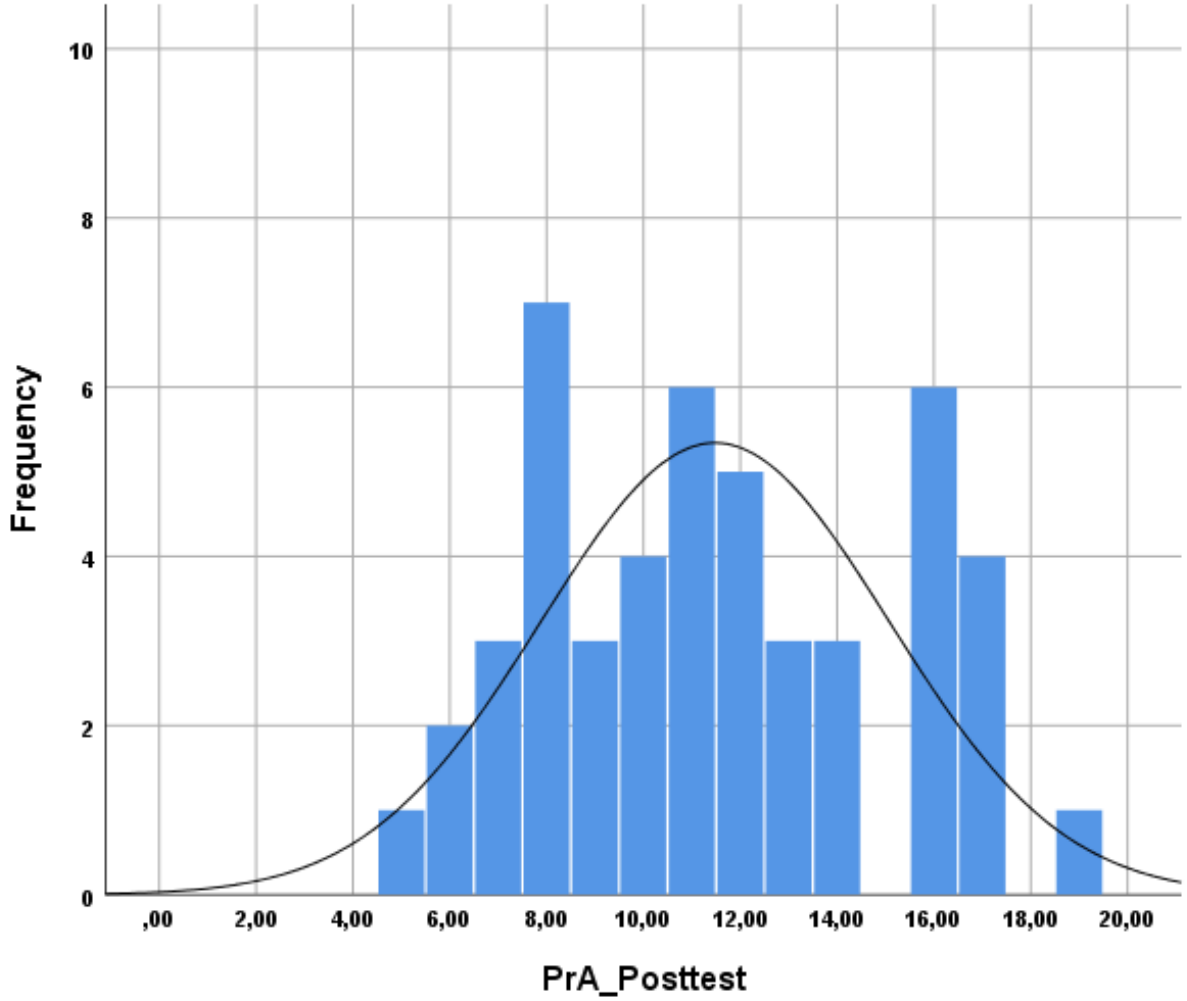


Figure 20

Histograms of Phonological Awareness Pre-Test Scores

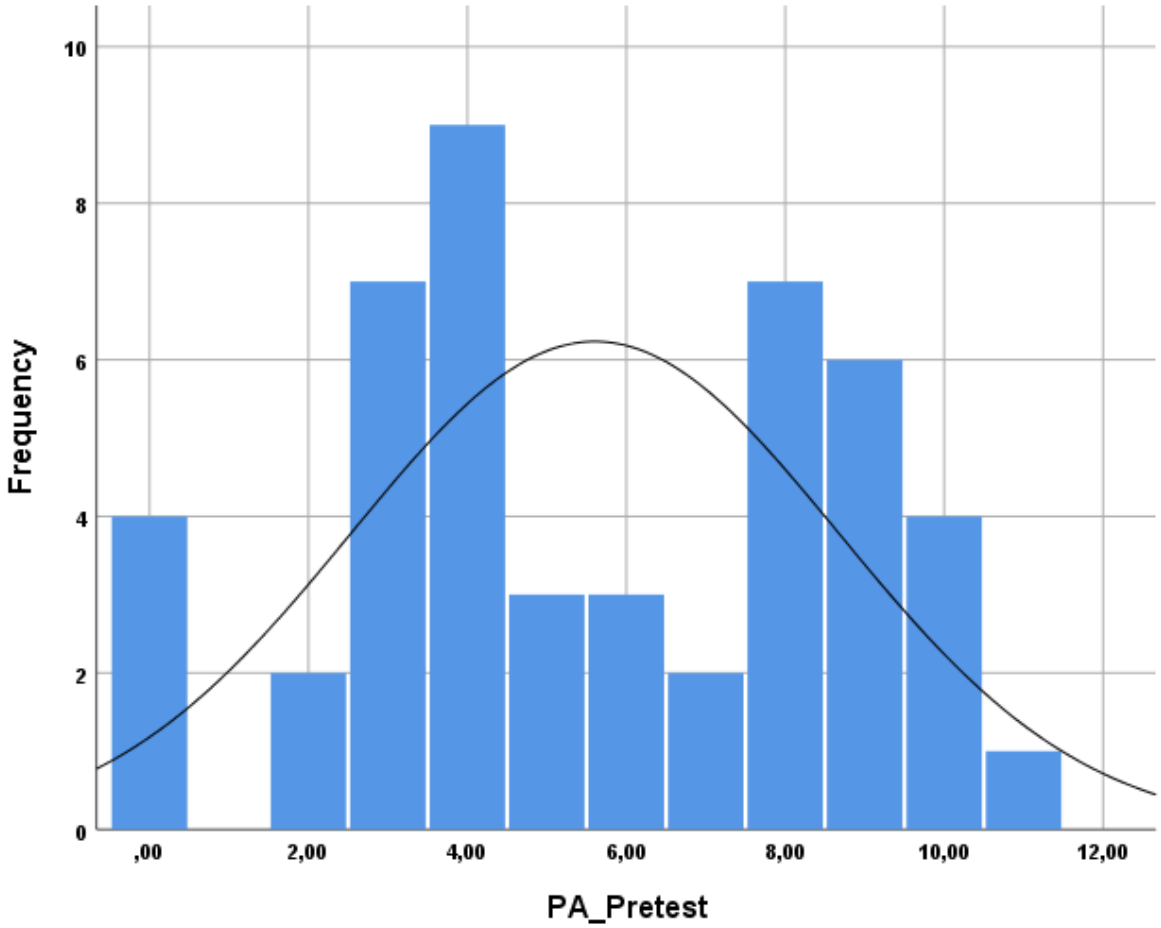


Figure 21

Histograms of Phonological Awareness Post-Test Scores

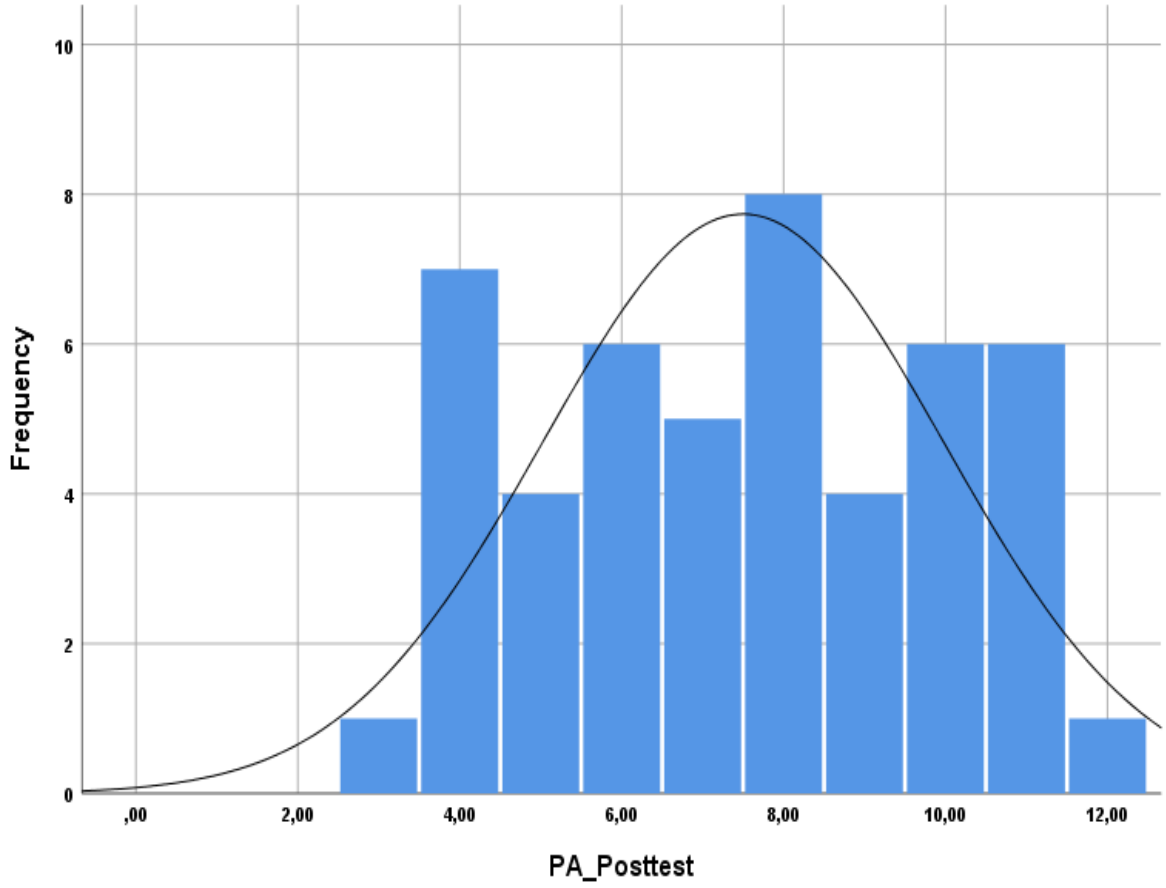


Figure 22

Histograms of Letter Knowledge Pre-Test Scores

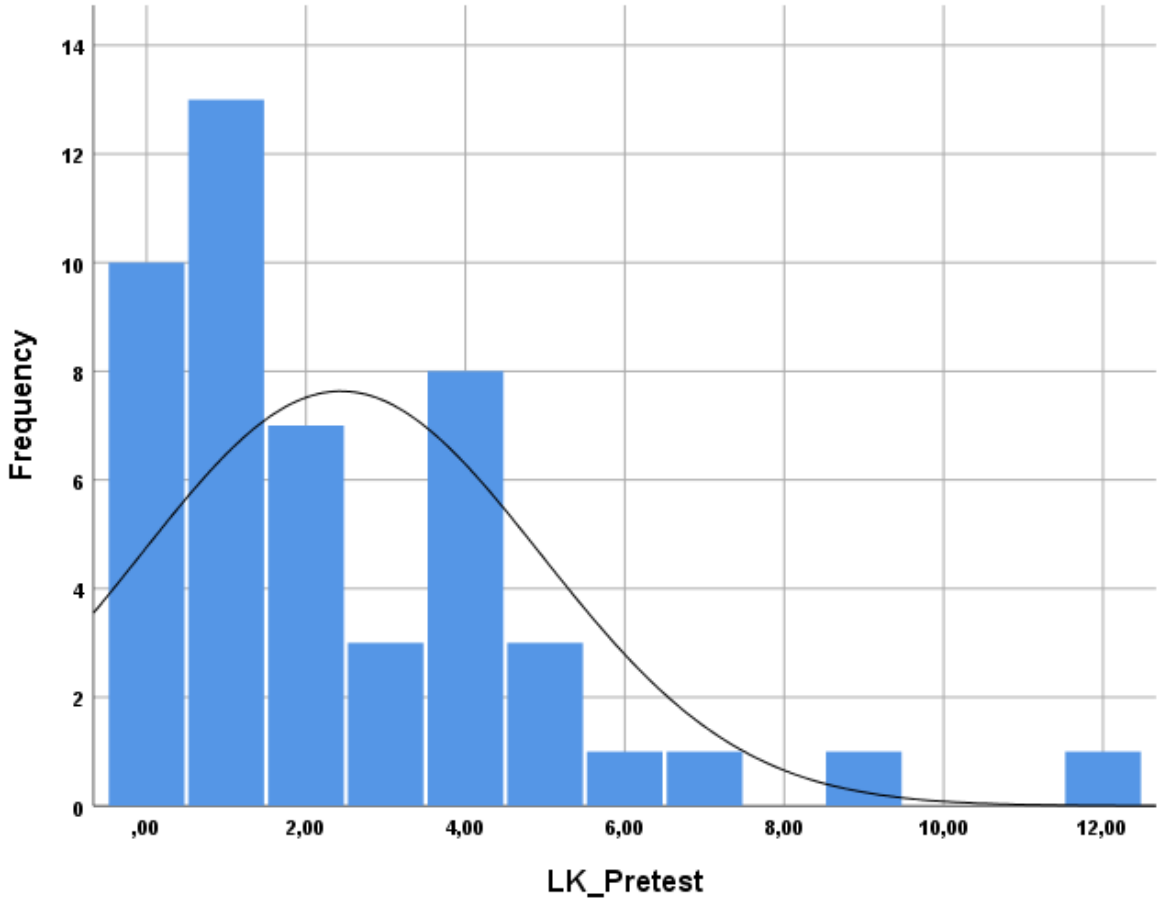
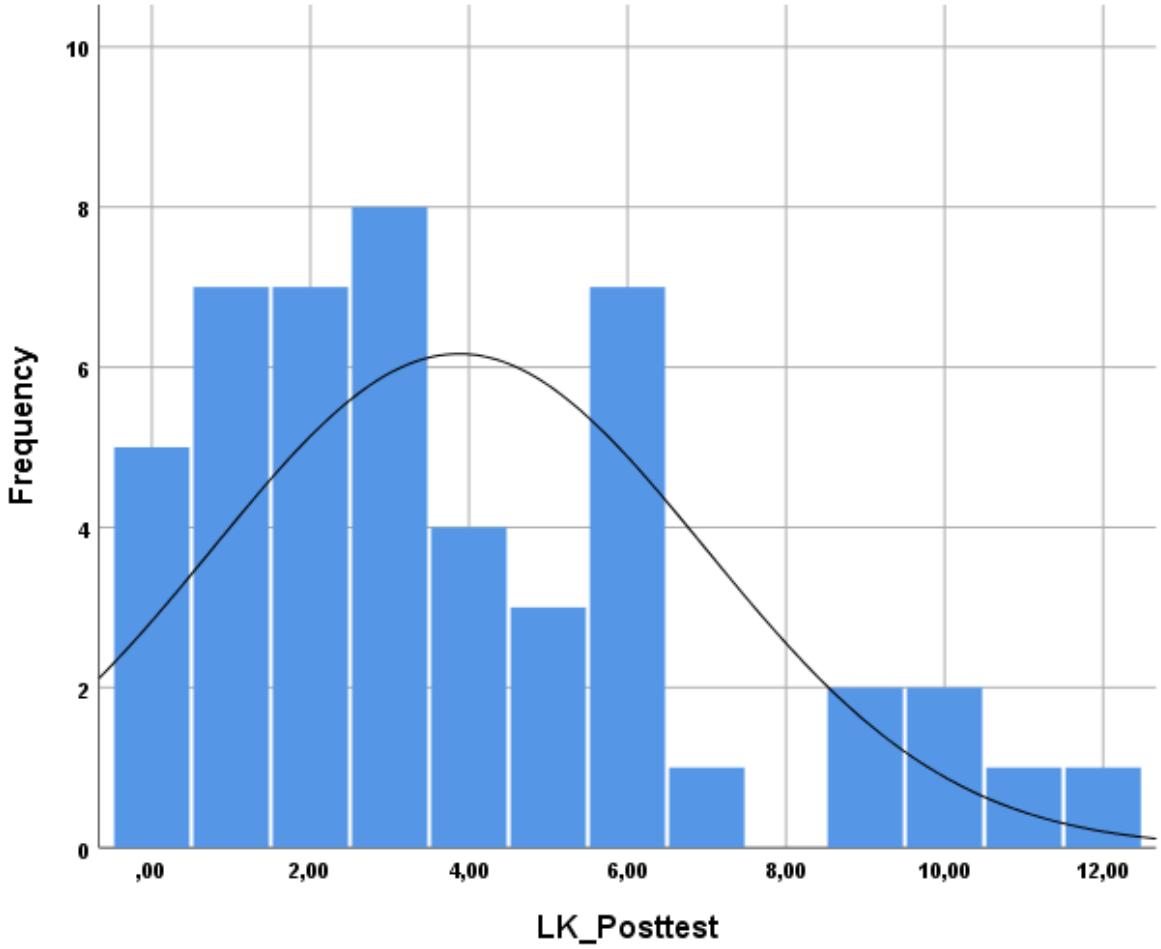


Figure 23

Histograms of Letter Knowledge Post-Test Scores



The histograms and skewness and kurtosis values and the distributions in Figures 22 and 23 show that the distributions of pre- and post-test scores of letter knowledge are not close to normally distributed but skewed towards the floor.

8.2.2 Test of Homogeneity of Variances

In order to test the error variance homogeneity in which the population variances of two or more samples are considered equal, Levene's test was used. It revealed that the error variances of HLE, vocabulary, phonological awareness and letter knowledge pre- and post-test scores could be accepted as homogenous. However, the error variances of listening comprehension and print awareness pre- and post-test scores did not meet the homogeneity assumption.

Table 27

Levene's Test of Equality of Error Variances

	Measure	F	df1	df2	p
HLE	Pre-test	1.44	1	46	.236
	Post-test	2.28	1	46	.138
Vocabulary	Pre-test	0.29	1	46	.594
	Post-test	0.26	1	46	.610
Listening Comprehension	Pre-test	5.25	1	46	.026*
	Post-test	5.60	1	46	.022*
Print Awareness	Pre-test	4.53	1	46	.039*
	Post-test	4.60	1	46	.037*
Phonological Awareness	Pre-test	1.79	1	46	0.187
	Post-test	0.21	1	46	0.648
Letter Knowledge	Pre-test	2.14	1	46	0.150
	Post-test	2.74	1	46	0.104

When both the test of normality homogeneity and Levene's test were considered together, the group sizes were sufficient to use a mixed-design ANOVA for pre- and post-test scores and the distributions did not deviate significantly from normality. However, nonparametric statistical methods (the Mann Whitney-U test) were used in the analysis of listening comprehension and print awareness because these scores did not meet the assumption of homogeneity. Although distribution of letter knowledge was not close to normal distribution, its scores met the assumption homogeneity.

8.3 Results

8.3.1 Effects of the Dialogic Reading Programme on the Home Literacy Environment

Descriptive statistics for the pre- and post-test HLE for both participant groups are presented in Table 30.

Table 28

Home Literacy Environment Pre- and Post-Test Scores

Group	N	Pre-test				Post-test			
		Min.	Max.	M	SD	Min.	Max.	M	SD
Intervention	24	31.00	76.00	56.08	14.06	47.00	93.00	68.58	11.75
Control	24	23.00	98.00	63.16	19.75	23.00	91.00	61.29	17.63

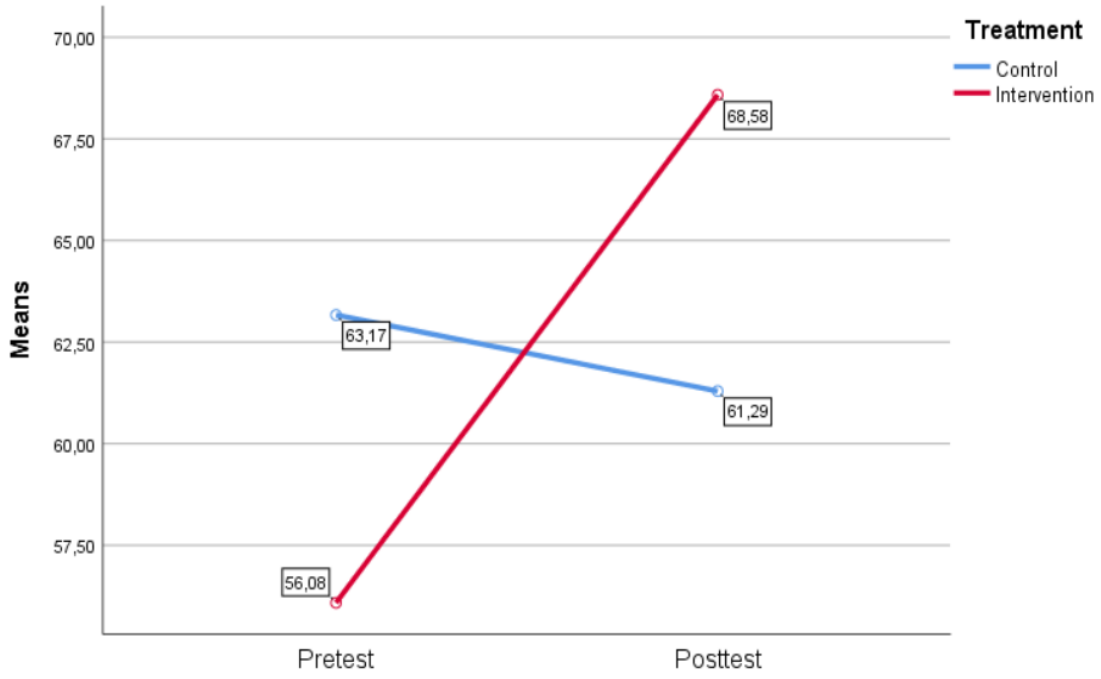
N= Number of participants, Min=Minimum score, Max=Maximum score, M=Mean, SD=Standard deviation

It shows that mean descriptive scores in the control group did not change from pre- (63.16) to post-test (61.29) but increased in the intervention group from pre- (56.08) to post-test (68.58). The HLE post-test scores of the intervention group increased, on average, by 12.5 points, but this ranged across individuals by 1 to 30 points. Only two participants' HLE scores in the intervention group did not increase.

To determine whether these differences were statistically significant, a mixed ANOVA was conducted. There was a significant main effect of time $F(1,46)=15.07$, $p<.05$ but not of group $F(1,46)=0,001$, $p>.05$. There was also a significant time x group interaction $F(1,46)=27,59$, $p<.05$. The interaction effect size (.6) was medium (Cohen, 1988). Figure 24 shows the crossover interaction.

Figure 24

The Graph of the Change in the Home Literacy Environment Pre- and Post-Test Scores



The HLE score was higher in the control group at pre-test, but this switches at post-test, where it was higher in the intervention group. Bonferroni multiple comparison test was performed to test the *p* value for multiple comparisons. Four comparisons were conducted for the variable in multiple comparisons. Therefore, the alpha value (.05) was divided by four and adjusted to .013. There was a significant difference in the pre-test and post-test scores of the intervention group (*t*=-6,46; *p*=.000<.013; Cohen's *d*=.50). As presented in parentheses *p* value was .000 and effect size was medium effect as .50. However, there was no significant difference in the pre and post-test scores of the control group (*t*=0.970; *p*=1.00>.013). There was no statistical difference between the pre-test (*t*=1,43; *p*=.095>.013) and post-test (*t*=-1,68; *p*=.595>.013) scores of the intervention and control groups.

8.3.2 Effects of the Dialogic Reading Programme on Vocabulary

Descriptive statistics for pre-test and post-test vocabulary, for both intervention and control groups are given in Table 31.

Table 29

Vocabulary Pre- and Post-Test Scores

Group	N	Pre-test				Post-test			
		Min.	Max	M	S.D	Min.	Max.	M	S.D
Intervention	24	7.00	31.00	20.96	6.55	13.00	36.00	28.42	5.81
Control	24	13.00	37.00	22.33	6.05	12.00	37.00	23.08	6.31

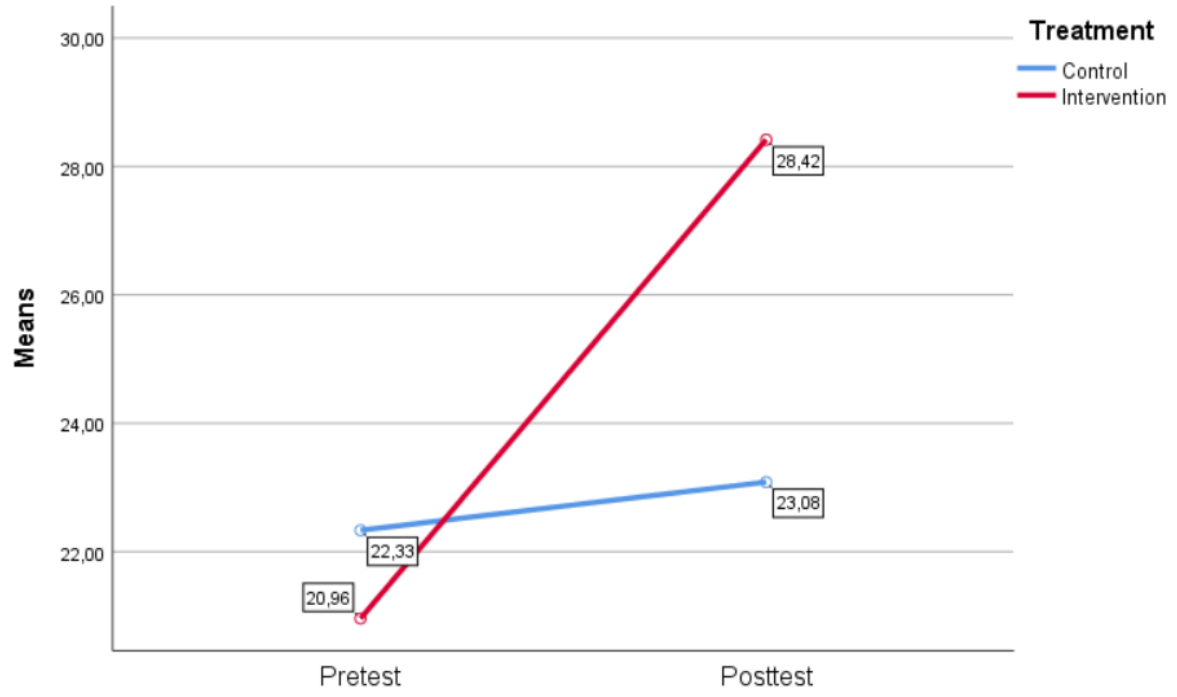
N= Number of participants, Min=Minimum score, Max=Maximum score, M=Mean, SD=Standard deviation

The descriptive statistics show that mean scores did not change from pre- (22.33) to post-test (23.08) in the control group but increased in the intervention group from pre- (20.96) to post-test (28.42). While vocabulary scores of the intervention group increased by an average of 7.5 points from pre-test to post-test, the control group vocabulary pre-test and post-test average scores remained flat. The vocabulary score increased for all but one of the participants in the intervention group.

To determine whether these differences were statistically significant, a mixed-design ANOVA was run, and the results supported the descriptive trends. There was a significant main effect of time $F(1,46)=50.92$, $p<.05$ but not of group $F(1,46)=1,37$, $p>.05$. There was also a significant time x group interaction $F(1,46)=34,01$, $p<.05$. The interaction effect size was .6. This value shows that the obtained impact was medium (Cohen, 1988). Figure 25 shows the nature of the interaction, which was a cross over interaction.

Figure 25

The Graph of the Change in Vocabulary Pre- and Post-Test Scores



A Bonferroni multiple comparison test was performed to test the *p* value for multiple comparisons. Four comparisons were conducted for the variable in multiple comparisons. Therefore, the alpha value (.05) was divided by four and adjusted to .013. A statistically significant difference was obtained between the pre-test and post-test scores of the intervention group (*t*(-9,169); *p*=.000<.013; Cohen *d*=1,26). As presented in parentheses *p* value was .000 and effect size was high effect as 1.26. However, there was no significant difference between the pre and post-test scores of the control group (*t*(-0,92), *p*=1.00>.013.) Also, there was no statistical difference between the pre-test scores of the intervention and control groups (*t*(0,78), *p*=1.00>.013) or between their post-test scores (*t*(-2,99); *p*=.023>.013).

8.3.3 Do Changes in the Home Literacy Environment Mediate the Impact of the Dialogic Reading Programme on Vocabulary?

Regression models were established to determine whether changes in the HLE mediated the impact of the intervention on vocabulary. Regression results are shown in Figure 26 and Table 32.

Figure 26

Mediator Role of the Home Literacy Environment in the Relationship between Dialogic Reading Programme and Vocabulary

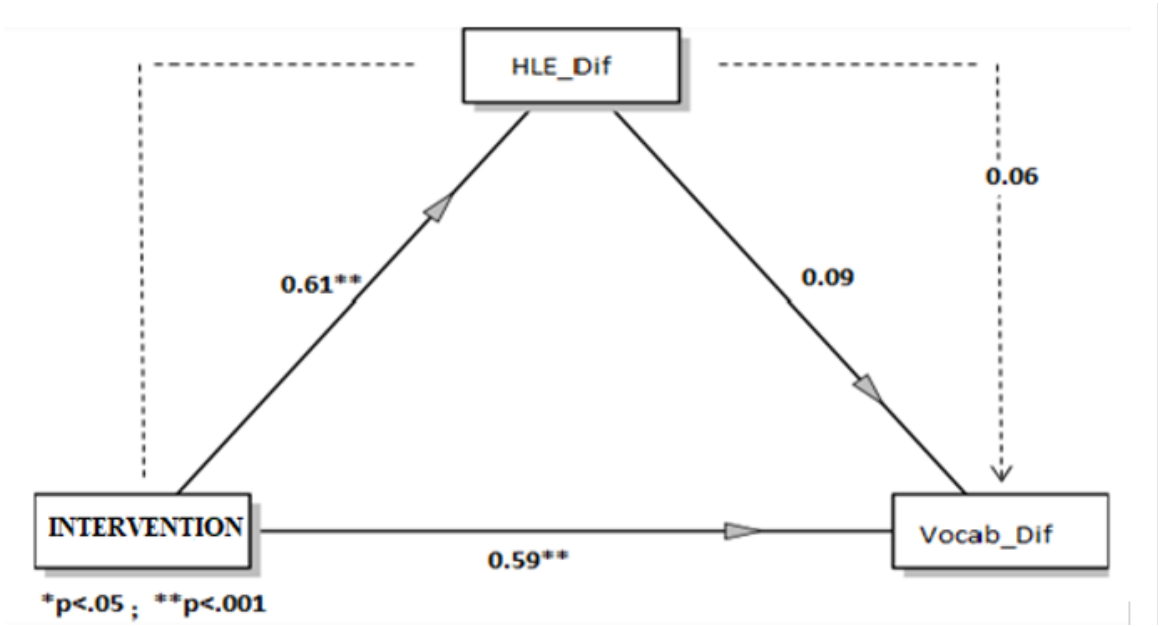


Table 30

Indirect and Total Effects of the Dialogic Reading Programme on Vocabulary

					95% CI				
Type	**Effect**		**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**P**
Indirect	Intervention HLE_Dif Vocab_Dif	⇒ ⇒	0.59	0.87	-1.12	2.31	0.06	0.68	0.496
Component	Intervention HLE_Dif	⇒	14.37	2.68	9.12	19.63	0.61	5.37	0.000*
	HLE_Dif Vocab_Dif	⇒	0.04	0.06	-0.08	0.16	0.09	0.69	0.493
Direct	Intervention Vocab_Dif	⇒	6.11	1.42	3.33	8.89	0.59	4.31	0 .000*

Total	Intervention ⇒ Vocab_Dif	6.70	1.14	4.48	8.94	0.65	5.90	0 .000*

HLE Dif = Home Literacy Environment difference, Vocab Dif = Vocabulary Difference

Figure 26 and Table 32 show that the intervention had a statistically significant effect on the HLE and vocabulary, but there is no evidence of an indirect effect on vocabulary via HLE.

8.3.4 Effects of the Dialogic Reading Programme on Listening Comprehension

Descriptive statistics for the pre-test and post-test listening comprehension for both the intervention and control groups are given in Table 33.

Table 31

Listening Comprehension Pre- and Post-Test Scores

Group	N	Pre-test				Post-test			
		Min.	**Max.**	**M**	**S.D**	**Min.**	**Max.**	**M**	**S.D**
Intervention	24	0.00	6.00	2.42	1.77	3.00	6.00	5.08	0.88
Control	24	1.00	5.00	3.20	1.17	1.00	6.00	3.33	1.27

N= Number of participants, Min=Minimum score, Max=Maximum score, M=Mean, SD=Standard deviation

The descriptive statistics show that the mean scores did not change from pre- (3.20) to post-test (3.33) in the control group but increased in the intervention group from pre- (2.42) to post-test (5.08). Since listening comprehension pre-test and post-test were not normally distributed and did not meet the assumption of homogeneity, the Mann Whitney-U test was applied to determine whether the differences were statistically significant. Findings are presented in Table 34.

Table 32

Listening Comprehension Change Scores

Group	N	Median	Mean Rank	Sum of Ranks	U	Z	p
Intervention	24	2.00	34.71	343.00	43.00	-5.15	.000*
Control	24	0.00	14.29	833.00			

The analysis shows that the intervention group scored statistically significantly higher in the post-test for listening comprehension than in the pre-test. On the other hand, there was not a significant change between pre- and post-test scores of control group.

8.3.5 Do Changes in the HLE Mediate the Impact of the Dialogic Reading Programme on Listening Comprehension?

Regression models were established to determine whether or not the HLE difference score mediated the listening comprehension difference scores of the intervention group and the control group.

Regression results are given in Figure 27 and Table 35.

Figure 27

Mediator Role of the HLE in the Relationship between Intervention (DRP) and Listening Comprehension

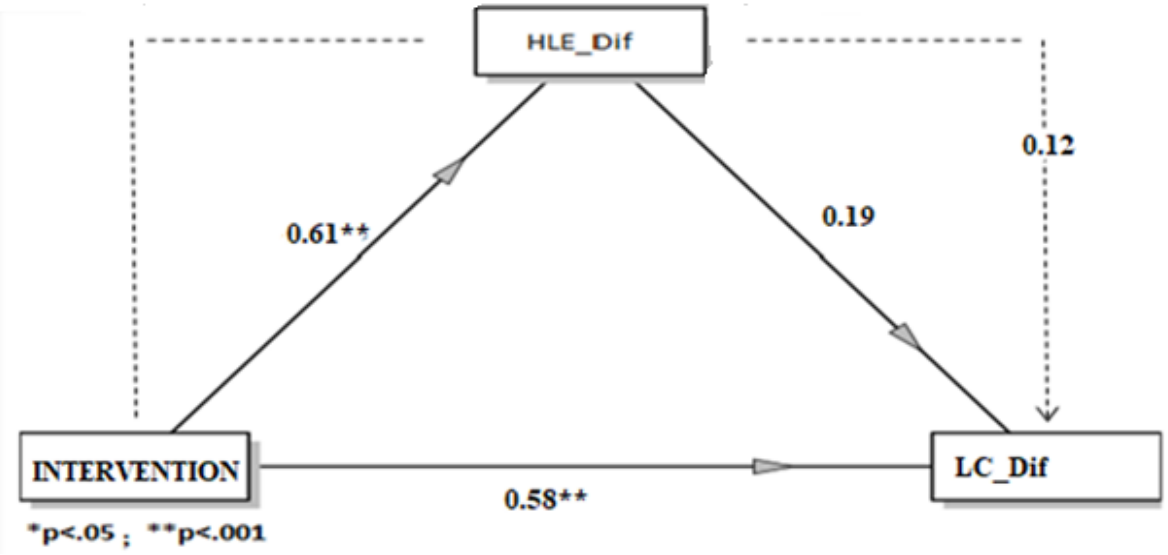


Table 33

Indirect and Total Effects of the Dialogic Reading Programme on Listening Comprehension

				95% CI				
Type	**Effect**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**p**
Indirect	Intervention ⇒ HLE_Dif ⇒ LC_Dif	0.43	0.29	-0.16	1.00	0.12	1.43	0.154
Component	Intervention ⇒ HLE_Dif	14.38	2.67	9.12	19.63	0.61	5.37	0.001*
	HLE_Dif ⇒ LC_Dif	0.03	0.02	-0.01	0.07	0.19	1.48	0.139
Direct	Intervention ⇒ LC_Dif	2.12	0.46	1.20	3.03	0.58	4.54	0 .001*

Total	Intervention ⇒ LC_Dif	2.54	0.38	1.80	3.29	0.70	6.67	0.001*

HLE Dif = Home Literacy Environment difference, LC Dif = Listening Comprehension Difference

Figure 27 and Table 35 show that the intervention had a statistically significant effect on the HLE and listening comprehension, but there is no evidence of an indirect effect on listening comprehension via HLE.

8.3.6 Effects of the Dialogic Reading Programme on Print Awareness

Descriptive statistics for the pre-test and post-test print awareness for both the intervention and control groups are given in Table 36.

Table 34

Print Awareness Pre- and Post-Test Scores

		Pre-test				**Post-test**			
Group	**N**	**Min**	**Max.**	**M**	**S.D**	**Min.**	**Max.**	**M**	**S.D**
Intervention	24	1.00	14.00	7.96	3.25	6.00	19.00	13.71	2.36
Control	24	5.00	13.00	9.21	2.15	5.00	14.00	9.25	2.15

N= Number of participants, Min=Minimum score, Max=Maximum score, M=Mean, SD=Standard deviation

The descriptive statistics show that mean scores did not change from pre- (9.21) to post-test (9.25) in the control group but increased in the intervention group from pre- (7.96) to post-test (13.72). All children in the intervention group showed increased scores. Since print awareness pre-test and post-test did not meet the assumption of homogeneity, the Mann Whitney-U test was used to determine whether the differences were statistically significant. Obtained findings are given in Table 37.

Table 35

Print Awareness Change Scores

Group	N	Median	Mean Rank	Sum of Ranks	U	Z	p
Intervention	24	5.50	35.73	857.50	18.50	-5.60	.000*
Control	24	0.00	13.27	318.50			

The analysis shows that the intervention group scored statistically significantly higher in the post-test for print awareness than in the pre-test. On the other hand, there was not a significant change between pre- and post-test scores of control group.

8.3.7 Do Changes in the HLE Mediate the Impact of the Dialogic Reading Programme on Print Awareness?

Regression models were established to determine whether the HLE difference score mediated the print awareness difference scores of the intervention group and the control group. Regression results were given in Figure 28 and Table 38.

Figure 28

Mediator Role of the HLE in the Relationship between the Dialogic Reading Programme and Print Awareness

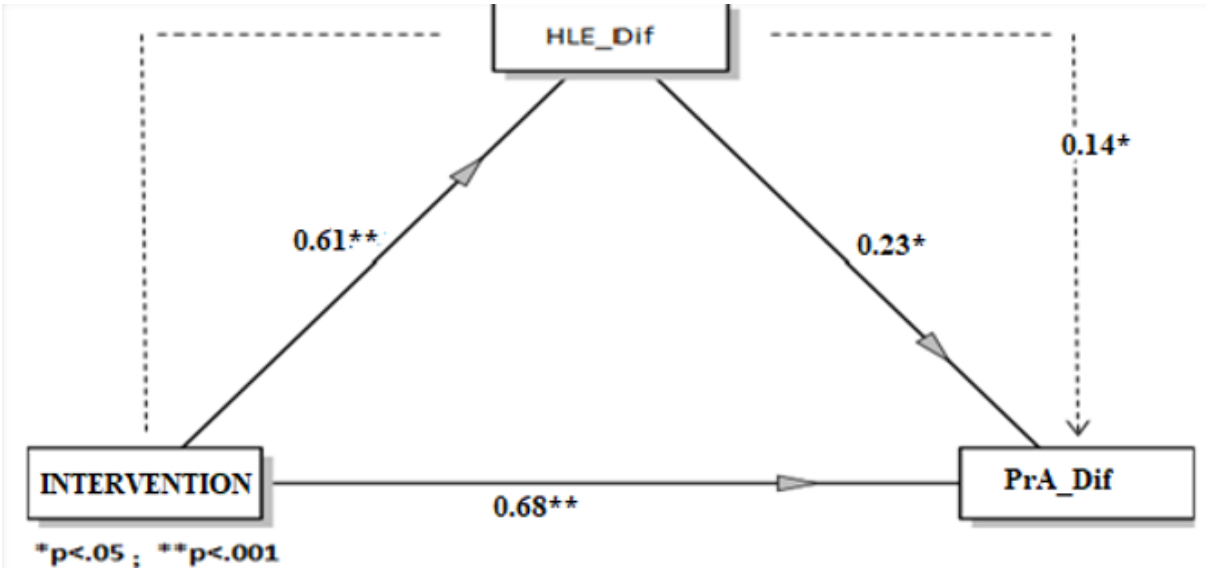


Table 36

Indirect and Total Effects of the Dialogic Reading Programme on Print Awareness

				95% CI				
Type	**Effect**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**p**
Indirect	Intervention ⇒ HLE_Dif ⇒ PrA_Dif	0.97	0.47	0.05	1.89	0.14	2.06	0.039*
Component	Intervention ⇒ HLE_Dif	14.38	2.68	9.12	19.63	0.61	5.37	0 .001*
	HLE_Dif ⇒ PrA_Dif	0.07	0.03	0.01	0.13	0.23	2.24	0.025*
Direct	Intervention ⇒ PrA_Dif	4.74	0.71	3.35	6.13	0.68	6.69	0 .001*
Total	Intervention ⇒ PrA_Dif	5.71	0.60	4.54	6.87	0.81	9.60	0 .001*

HLE Dif = Home Literacy Environment difference, PrA Dif = Print Awareness Difference

Figure 28 and Table 38 show partial mediation, as there is both a statistically significant direct effect of the intervention on print awareness and a statistically significant indirect effect via increases in HLE.

8.3.8 Effects of the Dialogic Reading Programme on Phonological Awareness

Descriptive statistics for the pre-test and post-test phonological awareness for both the intervention and control groups are given in Table 39.

Table 37

Phonological Awareness Pre- and Post-Test Scores

		Pre-test				Post-test			
Group	**N**	**Min.**	**Max.**	**M**	**S.D**	**Min.**	**Max.**	**M**	**S.D**
Intervention	24	0.00	10.00	5.17	3.37	3.00	12.00	8.08	2.59
Control	24	3.00	11.00	6.04	6.04	4.00	11.00	6.92	6.92

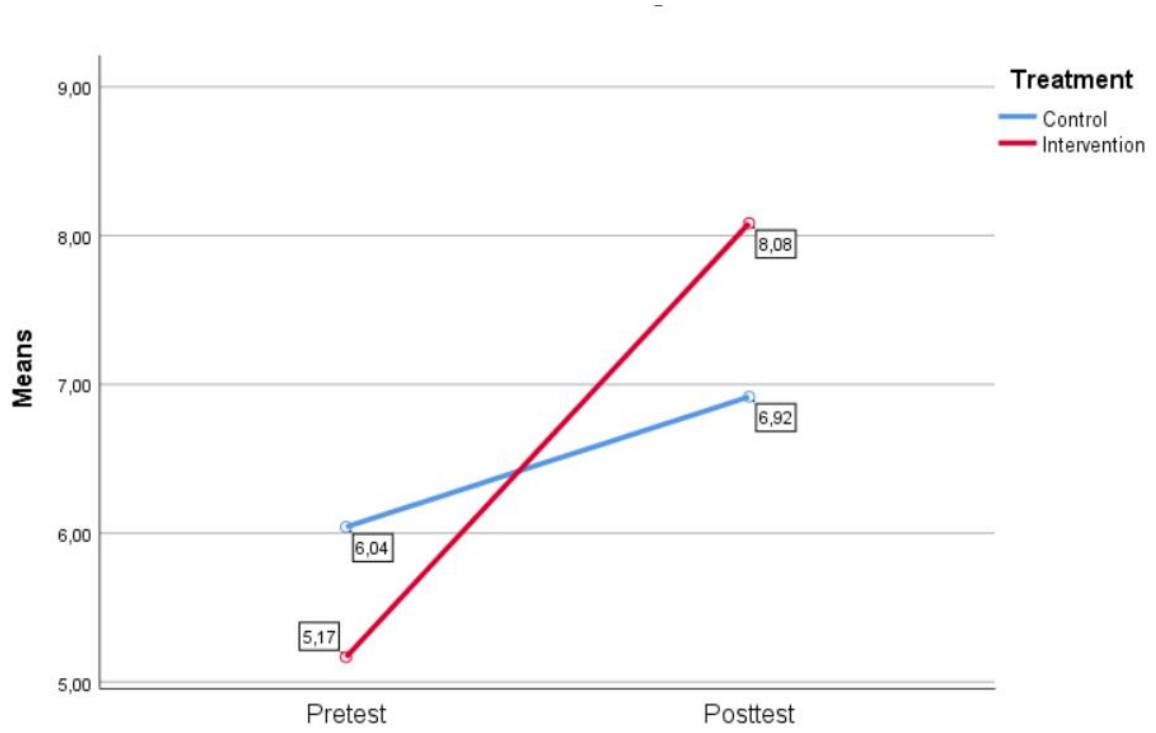
N= Number of participants, Min=Minimum score, Max=Maximum score, M=Mean, SD=Standard deviation

The descriptive statistics show that mean scores did not change from pre- (6.04) to post-test (6.92) in the control group but increased in the intervention group from pre- (5.17) to post-test (8.08). Only one child in the intervention group returned a decreased phonological awareness score and all other children returned increased scores. The pre-test phonological awareness score of four children in the intervention group was zero, which shows that the children had no phonological awareness level in the pre-test. However, a significant increase was seen in these children's scores at post-test with all four gaining phonological awareness skills and a full score in the TEL.

To determine whether the obtained finding was statistically significant, a mixed-design ANOVA test was conducted with the results supporting the descriptive trends. There was a significant main effect of time $F(1,46)=30.24$, $p<.05$ but not of group $F(1,46)=0,04$, $p>.05$. There was also a significant time x group interaction $F(1,46)=8,77$, $p<.05$, and the Time*Group interaction effect illustrated that at pre-test, the mean score of the control group was better than the intervention group. However, the control group pre-test and post-test means score remained almost flat, while the mean scores of the intervention group increased significantly from pre- to post-test. The interaction effect size was .3, which shows that the obtained impact was small (Cohen, 1988). Figure 29 shows the nature of the interaction, which is a cross over interaction.

Figure 29

The Graph of the Change in Phonological Awareness Pre- and Post-Test Scores



The Bonferroni multiple comparison test was performed to test the *p* value for multiple comparisons. Four comparisons were conducted for the variable in multiple comparisons. Therefore, the alpha value (.05) was divided by four and adjusted to .013. A statistically significant difference was obtained between the pre-test and post-test scores of the intervention group (*t*(-5,98); *p*=.000<.013; Cohen *d*=0,97). As presented in parentheses *p* value was .000 and effect size was high effect as .97. There was no significant difference between the pre- and post-test scores of the control group (*t*(-0,48); *p*=.476>.013). Also, there was no statistical difference between the pre-test scores of the intervention and control groups (*t*(-0,60); *p*=1.00>.013) and between their post-test scores (*t*(-3,81); *p*=.619 >.013).

8.3.9 Do Changes in the HLE Mediate the Impact of the Dialogic Reading Programme on Phonological Awareness?

Regression models were established to determine whether the HLE difference score mediated the phonological awareness difference scores of the intervention group and the control group.

Regression results were given in Figure 30 and Table 40.

Figure 30

Mediator Role of the HLE in the Relationship Between Intervention (DRP) and Phonological Awareness

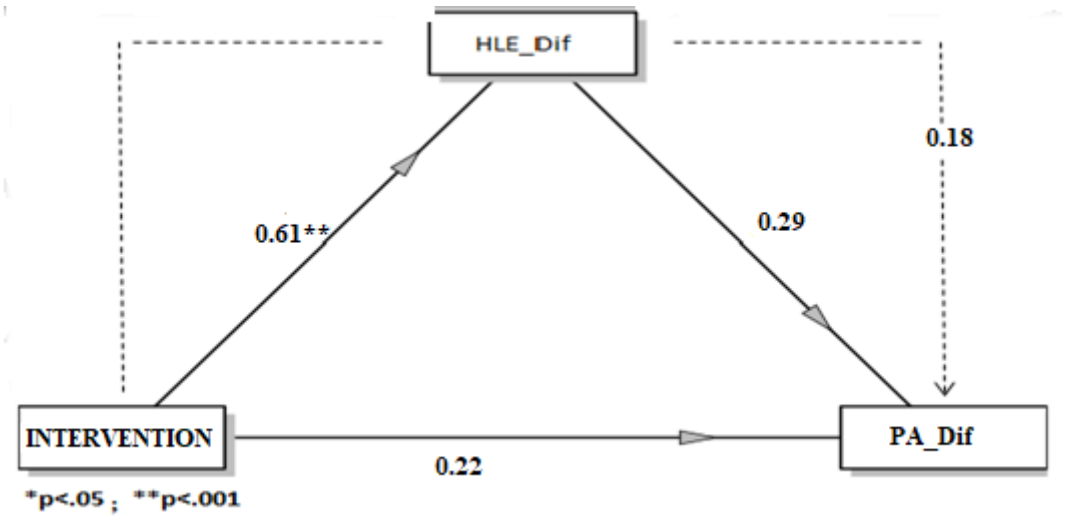


Table 38

Indirect and Total Effects of the Dialogic Reading Programme on Phonological Awareness

				95% CI				
Type	**Effect**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**P**
Indirect	Intervention ⇒ HLE_Dif ⇒ PA_Dif	0.91	0.53	-0.14	1.96	0.18	1.70	0.089
Component	Intervention ⇒ HLE_Dif	14.38	2.68	9.12	19.63	0.61	5.37	0 .001*
	HLE_Dif ⇒ PA_Dif	0.06	0.04	-0.01	0.13	0.29	1.80	0.073
Direct	Intervention ⇒ PA_Dif	1.13	0.83	-0.49	2.75	0.22	1.37	0.170

Total	Intervention ⇒ PA_Dif	2.04	0.68	0.71	3.38	0.40	2.99	0.003*

HLE Dif = Home Literacy Environment difference, PA Dif = Phonological Awareness Difference

Figure 30 and Table 40 show that the total effect from intervention to phonological awareness was statistically significant; however, when the intervention is taken together with the HLE difference, the effect from intervention to phonological awareness difference score was not significant. Furthermore, the indirect effect from intervention to phonological awareness is not statistically significant when adding the HLE variable to the model as mediator variable. The findings show that the intervention influences the participants' phonological awareness change scores, but the HLE score does not have a mediating effect between HLE and phonological awareness.

8.3.10 Effects of the Dialogic Reading Programme on Letter Knowledge

Descriptive statistics for the pre-test and post-test letter knowledge for both the intervention and control groups are given in Table41.

Table 39

Letter Knowledge Pre- and Post-Test Scores

		Pre-test				**Post-test**			
Group	**N**	**Min.**	**Max.**	**M**	**S.D**	**Min.**	**Max.**	**M**	**S.D**
Intervention	24	0.00	12.00	2.67	2.99	0.00	12.00	5.33	3.14
Control	24	0.00	7.00	2.21	1.96	0.00	10.00	2.42	2.32

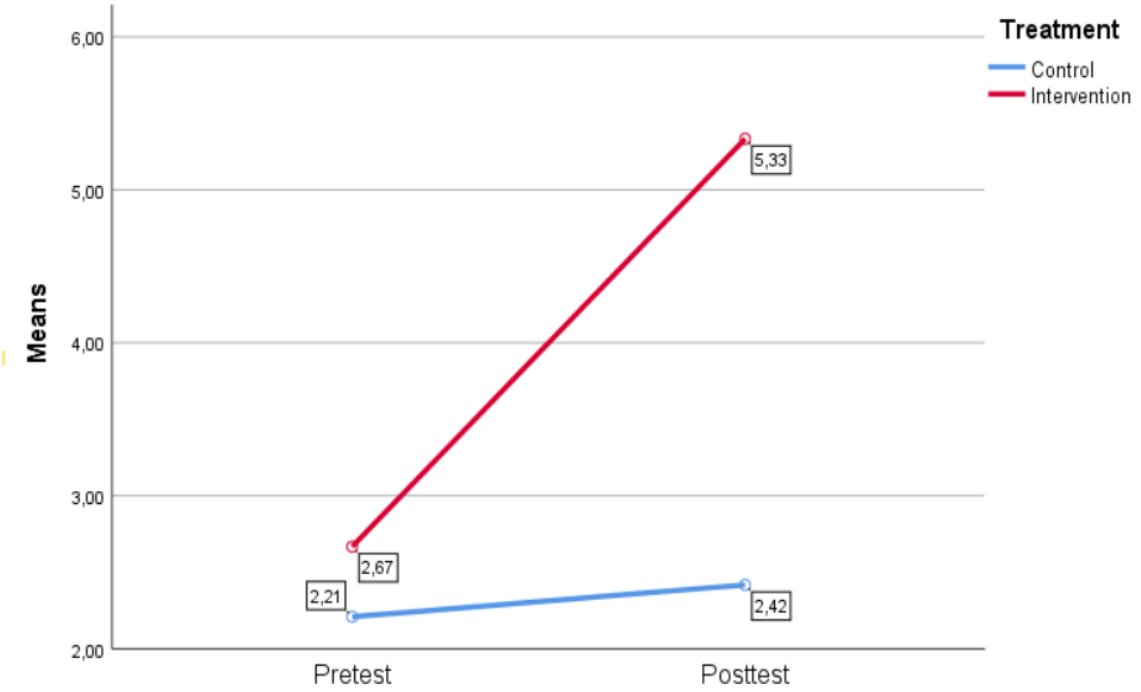
N= Number of participants, Min=Minimum score, Max=Maximum score, M=Mean, SD=Standard deviation

The descriptive statistics show that mean scores did not change from pre- (2.21) to post-test (2.42) in the control group but increased in the intervention group from pre- (2.67) to post-test (5.33). To determine whether the obtained finding was statistically significant, a mixed-design ANOVA test was applied, and the results in Table 38 support the descriptive trends. There was a significant main effect of time ($F(1,46)=22.67$, $p<.05$) but not of group ($F(1,46)=5,78$, $p>.05$). There was also a significant time x group interaction ($F(1,46)=16,57$, $p<.05$). The Time*Group interaction effect showed that, while letter knowledge mean scores of the intervention group increased approximately three points from pre-test to post-test, the control group letter

knowledge pre-test and post-test means scores remained almost flat. The interaction effect size was .5, which shows that the obtained impact was almost medium (Cohen, 1988). Figure 31 shows the nature of the interaction.

Figure 31

The Graph of the Change in Letter Knowledge Pre- and Post-Test Scores



A Bonferroni multiple comparison test was performed to test the *p* value for multiple comparisons. Four comparisons were conducted for the variable in multiple comparisons. Therefore, the alpha value (.05) was divided by four and adjusted to .013. A statistically significant difference was obtained between the pre-test and post-test scores of the intervention group (*t*(-6,25); *p*=000<.013; Cohen *d*=0,87). As presented in parentheses *p* value was .000 and effect size was high effect as .87. There was no significant difference between the pre- and post-test scores of the control group (*t*(-0,48); *p*=1.00>.013). Although there was no statistical difference between the pre-test scores (*t*(-0,60); *p*=1.00>.013) of the intervention and control groups, there was a statistically significant difference between their post-test scores (*t*(-3,82), *p*=.004<.013; Cohen *d*=1.05). As presented in parentheses *p* value was .004 and effect size was high effect as .1.05.

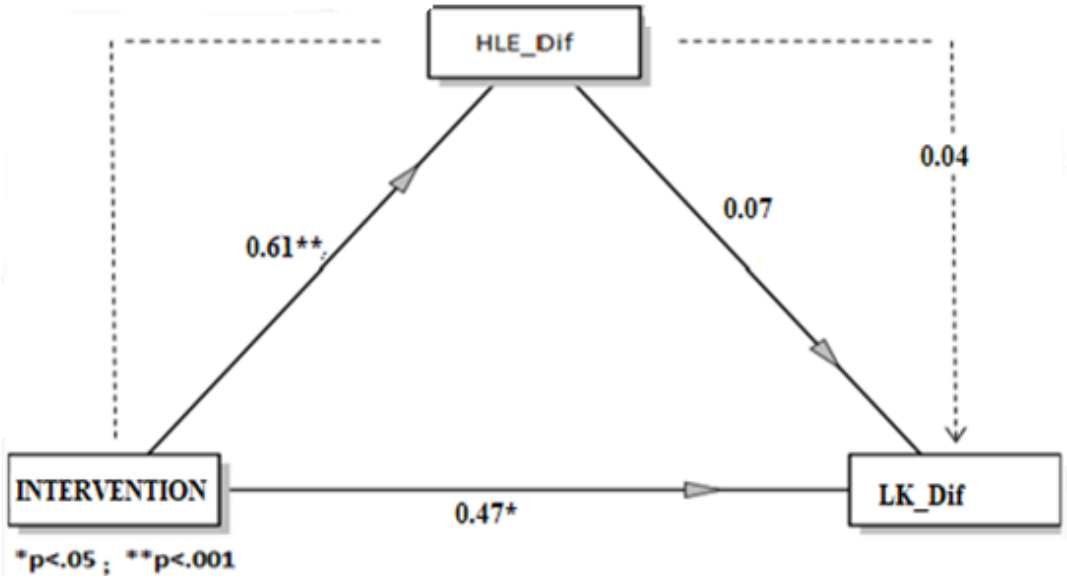
8.3.11 Do Changes in the HLE Mediate the Impact of the Dialogic Reading Programme on Letter Knowledge?

Regression models were established to determine whether the HLE difference scores mediated the letter knowledge difference scores of the intervention and control groups.

Regression results are given in Figure 32 and Table 42.

Figure 32

Mediator Role of the HLE in the Relationship between Intervention (DRP) and Letter Knowledge



As seen in Figure 32, when the intervention with the HLE difference scores are accounted for in the model, the effect from intervention to letter knowledge is not significant.

Table 40

Indirect and Total Effects of the Dialogic Reading Programme on Letter Knowledge

				95% CI				
Type	**Effect**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**p**
Indirect	Intervention ⇒ HLE_Dif ⇒ LK_Dİf	0.21	0.46	-0.69	1.11	0.04	0.45	0.653

Component	Intervention ⇒ HLE_Dif	14.38	2.68	9.12	19.63	0.61	5.37	0 .001*
	HLE_Dif ⇒ LK_Dİf	0.01	0.032	-0.048	0.08	0.07	0.45	0.651
Direct	Intervention ⇒ LK_Dİf	2.25	0.75	0.79	3.71	0.47	3.02	0.003*
Total	Intervention ⇒ LK_Dİf	2.46	0.60	1.29	3.63	0.51	4.12	0 .001*

HLE Dif = Home Literacy Environment difference, LK Dif = Letter Knowledge Difference

Figure 32 and Table 42 show that the intervention has a statistically significant effect on the HLE and on letter knowledge, but there is no evidence of an indirect effect on letter knowledge via HLE.

8.4 Summary of the Results

In this pilot RCT, the effects of the DRP were investigated directly for the HLE and indirectly for early literacy skills, and DRP's direct effects on early literacy skills were also investigated. Results showed that the DRP significantly affected the HLE and early literacy skills of preschoolers in the intervention group. Results also showed that HLE partially mediated the effect of the DRP on print awareness. Table 43 shows a summary of the quantitative results.

Table 41

Summary Table of the Quantitative Results

Mixed Design ANOVA and Mann Whitney U		
The Effects of the DRP on Dependent Variables	**Significant (*p* value)**	**Not Significant (*p* value)**
HLE	<.001	
Vocabulary	<.001	
Phonological awareness	<.001	

Letter knowledge	<.001	
Print awareness	<.001	
Listening comprehension	<.001	
REGRESSION (Mediator Effect of the HLE between the DRP and Dependant Variable)		
Vocabulary		0.49
Phonological awareness		0.89
Letter knowledge		0.65
Print awareness	0.03 (partial)	
Listening comprehension		0.15
BONFERRONI		
HLE Scores		
The difference between pre-test scores of the intervention and control groups		0.79
The difference between post-test scores of the intervention and control groups		0.73
The difference between pre- and post-test scores of the intervention group	<.001	
The difference between pre- and post-test scores of the control group		1.00
Vocabulary Scores		
The difference between pre-test scores of the intervention and control groups		1.00
The difference between post-test scores of the intervention and control groups		0.025

The difference between pre- and post-test scores of the intervention group	<.001	
The difference between pre- and post-test scores of the control group		1.00
Phonological Awareness Scores		
The difference between pre-test scores of the intervention and control groups		1.00
The difference between post-test scores of the intervention and control groups	<.001	
The difference between pre- and post-test scores of the intervention group	<.001	
The difference between pre- and post-test scores of the control group		1.00
Letter Knowledge Scores		
The difference between pre-test scores of the intervention and control groups		1.00
The difference between post-test scores of the intervention and control groups	<.001	
The difference between pre- and post-test scores of the intervention group	<.001	
The difference between pre- and post-test scores of the control group		1.00

Chapter 9

The Pilot Randomized Controlled Trial: Qualitative Results

9.1 Introduction

The current research was conducted to determine the effects of the DRP on the HLE, language and early literacy skills of children with low SES. To determine parental views on the effectiveness of the DRP, an interview schedule involving nine questions was prepared and used to conduct semi-structured interviews. This chapter presents the analysis of the parents' responses.

9.2 Data Analysis

To analyse the qualitative data collected from parents in the intervention group, content analysis was used, a process described by Holsti (1969, p.14) as "any technique for making inferences by objectively and systematically identifying specified characteristics of messages". The key elements of content analysis are reduction and classification because these help to make data more manageable and comprehensible (Cohen et al., 2018). Moreover, coding is defined as a "major approach" to qualitative data analyses (Cohen et al., 2018). A code is defined as "a name or a label that the researcher gives to a piece of text that contains an idea or information" (Cohen et al., 2018, p.68). Stemler (2000) explained that the aim of the content analysis is to compress participants' explanations into fewer content categories systematically and in a replicable way.

For this study, the semi-structured interviews were held with parents in the intervention group by phone, and audio recorded. All voice recordings were transcribed by the researcher. Another observer who is working on a PhD at Gazi University in Turkey checked 30 percent of the transcriptions to determine the accuracy of the transcription from voice to text, comparing two versions and identifying any wrong or missing words or sentences. The text version was then translated into English and parent responses were categorized and coded for analysis. Next, alphabetical code names were given to the categories, and the frequency of the codes were calculated. The symbol "*f*" represents the number of parents who specified the same response type (category). For example, *"learning how to read with child"* was mentioned by 12 parents

using different words. Since 12 parents mentioned the same category, the symbol of "*f*" is 12/24. Numeric codes were given to anonymise parents' names, and some examples of comments for each category/response type are presented.

9.3 Results

9.3.1 The Benefits of the Dialogic Reading Programme for Parental Beliefs and Experiences

The parents were asked whether they thought the DRP was effective in enriching the HLE, and all parents commented on its positive effects on the HLE. Their views about the DRP's HLE benefits are presented in Table 44. Categories B, C, F and H are about provision of reading materials; A, D, E, F concern the process of shared reading; and J and I involve interaction, communication and relationships between parents and children. These views showed that the DRP enriched the HLE in terms of promoting the shared reading experience.

Table 42

Effects of the Dialogic Reading Programme on the Home Literacy Environment

No	Response Types (Categories)	*f*	Example Comment
A	Learned how to read with the child	12 of 24	(12) *"I read with my child before, but I did not know how to read effectively. Thanks to this programme I learnt how to do it."*
B	Established a library at home and buying new books	13 of 24	(18) *"We started to read more and bought more books. Therefore, we established our library."*
C	Learned how to choose the best storybooks	7 of 24	(19) *"I learnt how to choose the most suitable books for my child's interests."*
D	Enjoyed reading together	7 of 24	(16) *"We started to love reading together. We really enjoyed it."*

E	Increased motivation for reading	6 of 24	(25) *"Our motivation for reading increased. We loved the programme."*
F	Started reading at home	3 of 24	(5) *"Books entered our lives for the first time."*
G	Strengthened relationships	3 of 24	(6) *"The bond between me and my daughter got stronger."*
H	Subscribed to a magazine	2 of 24	(11) *"We subscribed to a monthly magazine."*
I	Learned how to guide my child	2 of 24	(8) *"We learned our child's tendencies and learned how to guide her."*
J	Had more structure at home	2 of 24	(21) *"After we started the programme, we had a structure in our lives. But when that process is over, I am afraid that our lives will be disorganized again."*

9.3.2 The Benefits of the Dialogic Reading Programme for Children's Language and Vocabulary Skills

The parents were asked whether they thought the DRP was effective in improving their children's language skills. All parents responded positively, and their views about DRP's benefits for children's language skills are presented in Table 45. Categories B, C and D are about improvements in receptive and expressive language; A is about vocabulary; E is about cognitive skills; and F concerns pronunciation. These views showed that according to the parents the DRP improved children's language skills.

Table 43

Effects of the Dialogic Reading Programme on Language Skills

No	Response Type	Ƒ	Example Comment
A	Improved vocabulary and learning new concepts	19 of 24	(7) *"She learned the differences between words and new concepts. She improved her vocabulary. She started to ask more questions. She learned new concepts through the interaction between us."* (8) *"The DRP certainly contributed to her language skills. She learned many new concepts. Her vocabulary has improved a lot. Her ability to speak and express herself improved and became much better than her friends."*
B	Improved self-expression	9 of 24	(13) *"Her self-expression skills improved. She regained her confidence. She was an introverted child in the past, but she is less shy now."* (1) *"My child was withdrawn, but now he is very open. All my relatives noticed. My child can express his opinions more confidently. He is very sociable. He talks to everyone and jokes. He gives long speeches. He has new words."*

C	Language	7 of 24	(2) *"His speech developed. He started to express words more clearly. While talking about something, he gives examples of things he just learned. He started to correct us when we were using language incorrectly. He uses language more accurately."* (17) *"His language skills were good, but he got better. He talks more. He learned more words. He mostly uses different sentences. He uses different words and sentences. He speaks more actively."*
D	Asked more questions than before during reading	4 of 24	(23) *"He started to love reading more. He asked too many questions more. He learned to ask questions about the book."*
E	Made logical guess about the issues	2 of 24	(12) *"It was very useful for my child. His speech has improved, and he can explain his thoughts better. He predicts events in the books. He makes reasonable comments and predictions."*
F	Improved pronunciation	2 of 24	(23) *"His pronunciation became more proper. He missed words in the past. But now he can express the words more clearly. He can express himself better. He has new words."*

9.3.3 The Benefits of the Dialogic Reading Programme for Children's Phonological Awareness

The parents were asked whether the DRP was effective in improving their children's phonological awareness. The responses of 19 out of 24 parents were positive about its effects on phonological awareness, and their views about DRP's benefits for children's phonological awareness skills are presented in Table 46. Category A is about syllable awareness; B and D concern sounds; E is about sound-symbol correspondents; and C refers to DRP ineffectiveness. This data shows that according to the parents the DRP improves children's phonological awareness.

Table 44

Effects of the Dialogic Reading Programme on Phonological Awareness

No	Response Type	*f*	Example Comment
A	Separated words into syllables	12 of 24	(6) *"Her sound skills improved. I could see these developments. For example, she can now split words into syllables, and syllables into sounds."*
B	Distinguished the differences between sounds	11 of 24	(2) *"He can distinguish the sounds in words. We play rhyme games together."* (7) *"My child finds rhyming words. He can notice which words have similar sounds."*
C	No changes observed	5 of 24	(5) *"I could not observe a development in my child's phonological awareness"*
D	Noticed the first sounds in words	4 of 24	(7) *"He plays sound games. I say the first sound and he tries to find other words that start with it."*
E	Learned sound-symbol associations	2 of 24	(9) *"He learned to split words into syllables. Also learned sound-symbol association. He realized that symbols represent sounds."*

9.3.4 The Benefits of the Dialogic Reading Programme for Children's Letter Knowledge

The parents were asked whether DRP is effective in increasing their children's letter knowledge, and the responses of 22 out of 24 parents were positive. Their views about DRP's benefits on children's letter knowledge are presented in Table 47. Categories A, B and D are about learning and realizing new letters; C refers to combining letters; and E features DRP ineffectiveness. The responses show that according to the parents the DRP is a useful programme for improving children's letter knowledge.

Table 45

Effects of the Dialogic Reading Programme on Letter Knowledge

No	Response Type	*f*	Example Comment
A	Learned new letters randomly	19 of 24	(13) *"She learned new letters. I do not remember exactly which ones. But I think she learned letters like R, I and A. She might has learned other letters, but I can observe only these ones."*
B	Learned specifically the letters in his or family members' names	8 of 24	(12) *"Of course, it was useful. He did not know any letters before. Now, he knows all the vowels. He also knows all the letters in his name and in the names of all family members."*
C	Combined letters to write a text	2 of 24	(7) *"She learned many new letters. For example, she learned the letters in her name. She can write her name. She can write letters by putting together random letters."*
D	Noticed letters in words	2 of 24	(6) *"She learned new letters. She learned the whole alphabet. She noticed the letters in the shop and other names. She also can say the letters in the words she uses in everyday language."*

E	No differences observed	2 of 24	(22) *"My son did not learn new letters. I do not think he is ready to learn letters yet. He may learn in the future, but he is not ready for it now. I mentioned some letters, but he did not remember and forgot them."*

9.3.5 The Benefits of the Dialogic Reading Programme for Children's Listening Comprehension

The parents were asked whether the DRP was effective in improving their children's listening comprehension. The responses of 22 parents out of 24 were positive, and their views about DRP's benefits for children's listening comprehension are presented in Table 48. Categories A, B and C are about comprehension skills; D is about attention; E concerns imagination skills; and F is about DRP ineffectiveness. These views showed that according to the parents the DRP improved children's listening comprehension.

Table 46

Effects of the Dialogic Reading Programme on Listening Comprehension

No	Response Type	Ƒ	Example Comment
A	Improved story comprehension	10 of 24	(5) *"She can understand everything better. At the beginning of the programme, I had to work hard for my child to understand the story but now she can understand it more quickly. Since she understands more quickly, she can answer my questions more quickly."*
B	Retold the story	9 of 24	(8) *"When I was reading each book, I used to read it repeatedly so that he could understand it. But now he can understand it all at once and tell us the story again.*
C	Answered comprehension questions more quickly	7 of 24	(6) *"My daughter's listening skill was good before but now she has better skills. In the past, when I asked a question from a book, she could not immediately answer it, but now she can."*
D	Improved attention	4 of 24	(9) *"At the beginning of the programme, he could not pay attention to the book and did not understand well. But during the programme, he answered the questions more carefully. He learned to summarize and retell the book."*
E	Improved imagination	3 of 24	(7) *"Since we did not do such an activity before, we did not realize what our child could learn. Her fantasy world developed*

			a lot because we read many books together."
F	No changes observed	2 of 24	(17) *"I did not notice any change in my child's listening skills. He was listening and understanding very well in the past. Now he also listens and understands me. There is no problem with his listening."*

9.3.6 The Benefits of the Dialogic Reading Programme for Children's Print Awareness

The parents were asked whether DRP has a positive effect on their children's print awareness, and all of them agreed that the DRP was effective. Parental views about DRP's benefits for children's print awareness are presented in Table 49. Categories A, E and F concern print direction; G, H and J are about writing skills; C and D feature book conceptions; and B and I include print conceptions. These views showed that according to the parents the DRP is a useful programme for children's print awareness.

Table 47

Effects of the Dialogic Reading Programme on Print Awareness

No	Response Type	*f*	Example Comment
A	Realized where print starts and finishes	17 of 24	(16) *"My son started expressing interest in print. He usually asked questions about letters while reading. I put my finger on the words when we read the books. So, he learned where the print starts and finishes."*
B	Learned about punctuation marks	14 of 24	(13) *" She knows the question mark, and is excited when she sees it on the page."*
C	Realized where the title of the book is written	12 of 24	(12) *"He knows about the concepts and symbols on the cover page. He can point to the book name on the cover page."*

D	Realized where the author's name is written	10 of 24	(9) *"He did not know what an author was before the programme. In time, he has realized each book is written by an author, and he can point to the author's name on the page."*
E	Learned about print direction	9 of 24	(18) *"I put my finger on the print when we read together. Therefore, he learned print direction. Now, he wants to follow my reading with his finger."*
F	Learned about page direction	4 of 24	(15) *"She looked at the pages randomly before the programme. But now she knows that the left page is the first."*
G	Wrote words and sentences independently	3 of 24	(10) *"He writes the sentences independently and puts a dot at the end."*
H	Drew letters, concepts and symbols	3 of 24	(5) *"He used to draw randomly but now he can draw letters and shapes."*
I	Realized the difference between uppercase and lowercase	3 of 24	(22) *"Before the programme he did not know the difference between letters and other symbols. But now he can realize the difference between upper and lower cases."*
J	Tried to write what he/she heard	2 of 24	(3) *"Sometimes he asks me to talk and tries to write what I say."*

9.3.7 How Did Lockdown Affect the Dialogic Reading Programme's Implementation?

The parents were asked whether the lockdown had affected the implementation of the DRP and their responses were both positive and negative. Some parents explained that they had experienced the lockdown having a positive effect on the DRP's implementation; in contrast, some parents mentioned that lockdown negatively affected the motivation of parents and children, thereby decreasing the regularity, seriousness, and productivity of the DRP. The

responses showed that the families differed in their circumstances during lockdown. Parental views about the effects of lockdown on implementing the DRP are presented in Table 50. Categories A, B and F are about positive experiences; C, D and E are about negative experiences; and G concerns the lockdown's lack of effect on the DRP's implementation.

Table 48

Lockdown's Effects on the Dialogic Reading Programme's Implementation

No	Response Type	*f*	Example Comment
A	Increased parental motivation for reading	7 of 24	(24) *"It was a chance for me to start this programme. If this programme was not there, I wouldn't know how to do an activity with my child during the lockdown period. During the lockdown, me and my child had a huge motivation to read together."*
B	Increased child's motivation for reading	5 of 24	(23) *"There was nothing to do at home except reading books. Therefore, he read with me with more motivation."*
C	Increased distractions	3 of 24	(5) *"We could not read together regularly because my husband and my other children were at home. I tried to continue to the programme, but I cared for everybody, cooked and cleaned every day. Therefore, I did not have time to continue properly but I think I did my best."*
D	Decreased child's motivation for reading	3 of 24	(25) *"It was terrible. She always wanted to go to school. She wanted to go out. She fought with us many times. She did not eat. She resisted and was depressed. Her motivation to read was very low. I was fine, and my motivation was the same as before the lockdown."*

E	Decreased support and feedback for the parents	3 of 24	(17) *"Since we could not meet weekly and watch videos regularly, the productivity decreased. I think it was not my best. I could do better if I watched videos weekly."*
F	Decreased parental motivation for reading	3 of 24	(16) *"I was very nervous during the quarantine process. I was also very scared. I did not want to do anything. I did not want to read a book either. I had to read because I attended the programme."*
G	Increased the number of DR sessions	2 of 24	(6) *"We read together and played games more than before the lockdown. She asked me to read the same book many times. It increased the time we spent together."*
G	Nothing changed	2 of 24	(15) *"She is not a child who likes to go outside. Therefore, the programme was not affected by lockdown"*

9.3.8 How did the Lockdown Affect Parent-Child Interaction and Communication?

The parents were asked whether the lockdown impacted on communication between them and their children, and the responses varied. Most parents mentioned that the lockdown positively affected the interaction and communication between them and their children; however, a small number of parents experienced negative effects from the lockdown. Parental views about the lockdown's effects on parent-child interaction and communication are presented in Table 51. Categories A, B, C, D and G are about increasing the time spent and improving relationships between parents and children, while E, F, H and I are about decreasing the time and relationships between parents and children.

Table 49

Lockdown's Effects on the Parent-Child Interaction and Communication

No	Response Type	Ƒ	Example Comment
A	Increased time spent together	20 of 24	(1) *"It was very good for us. We spent more time together than we have ever spent as a family."*
B	Increased quality of time spent together	16 of 24	(9) *"We did not waste the time we spent together. We always spent time with something new and learned new things."*
C	Increased number of activities together	15 of 24	(7) *"We played a lot of new games together. We searched and found new games on the Internet and played those games."*
D	Started to understand each other better	5 of 24	(2) *"We realized that we did not know our child well before the quarantine. We realized that we were ignoring his requests. He did not know us well either. That's why I think that period contributed to our getting to know each other."*
E	Decreased quality of time spent together	4 of 24	(8) *"Although our time spent together increased, we did not play new games or read new books. We did the same and limited number activities the whole time. "*
F	Increased problem behaviours	3 of 24	(25) *"She was very bored at home. She stopped speaking and expressed her wishes only by crying. She often cried and shouted. Sometimes she broke the things around her."*
G	Decreased time spent on technology	2 of 24	(20) *"Before the quarantine, my son was wasting a lot of time with tablets and mobile phones. But in the quarantine, my husband and I made sure that our children spent time with us, not with technology. We*

			played more games together, reducing his reliance on technological tools."
H	Relationship breakdown	1 of 24	(15) *"The strong relationship between me and my child become very weak. We had to spend a lot of time together. We became unable to tolerate each other's personal aspects that we do not like. We started getting very angry and fighting."*
I	Increased time spent on the mobile phone	1 of 24	(5) *"We could not take care of our child enough. So, she spent more time on mobiles than before."*

Overall, these qualitative results showed that the DRP enriched home literacy materials and activities. It also encouraged parents to take part in activities such as visiting the library to support their children's language and literacy development. These results also showed that the DRP improved children's language, phonological awareness, print awareness, letter knowledge and listening comprehension. Although the lockdown process negatively affected the relationships between some parents and their children, many of them tried to take advantage of this condition. Two findings are clear. Some (though not a majority of) parents reported increasing motivation and a minority reported decreased motivation or increased distractions. Lastly, results showed that the majority reported spending more and better-quality time together.

Chapter 10

The Pilot Randomized Controlled Trial: The Synthesis of the Results, Discussion, Conclusion and Implications

10.1 Introduction

This study was conducted to determine the effects of the DRP on the HLE and language and early literacy skills of children from low SES backgrounds. In addition to the original aims, the effects of the lockdown period on the DRP's implementation and the parent-child interaction and communication were examined. Quantitative and qualitative data were collected, and results were presented in Chapters 8 and 9. This chapter presents a synthesis and discussion of key findings in the context of previous literature followed by implications for further research, practice and policy.

10.2 Key Findings

One of the most important key findings of this research to literature is that when low SES parents in Turkey are supported, they can engage their children's preschool education process. Another important contribution of the current research is that it presented a well-designed guideline for parents. All tasks expected from parents were explained clearly. In the parent training sessions, parents were explained the importance of HLE and its effects on children's language, early literacy and future reading skills. Therefore, it was emphasized to improve the quality of HLE. Parents were also informed on the ways of enriching HLE. The information and support provided to parents about HLE were not limited to parent training sessions. In the Monday sessions of the first four weeks, parents were given feedback on their activities at home and encouraged to do more and better. After the fourth week, parents continued to be supported and encouraged by the researcher via calling, messaging and chatting. Therefore, their children's HLE enriched after the intervention. According to the results of the HLEQ, the number of books and other materials at home increased. Some parents established personal libraries for their children and diversified the types of literacy activities they did at home. Some of them started to read regularly and visit public libraries in the city with their children. Regarding the qualitative data, almost all the parents commented on how the intervention had shown them how to read a book with their child. At the beginning of the intervention, parents

knew that shared reading was important, but they did not know how to plan the activity or how to use strategies. They also did not have enough books. At the end of the intervention, parents had increased their knowledge of DR and obtained better access to storybooks. Moreover, the storybooks they used in the DRP sessions remained with them. When the control participants' HLEQ scores were considered, the HLE scores of most of the participants were stable or had decreased as predicted and only a few of them had increased. This lack of change suggests a lack of information exchange between the two groups, which could be due to my request that they did not share but also the lockdown conditions.

The increase in HLE scores was supported by the semi-structured interview results. Most of the parents explained that they started reading books regularly at home, bought new books, prepared libraries for their children at home and subscribed to magazines. Their motivation to read was also increased. In the meetings conducted in the first weeks of the implementation process, parents asked the researcher questions about how to continuously enrich the HLE. Parent 25 commented during the first week of the implementation, *"I read books with my daughter. We spend a very good time together. We prepared our library. She was happy to have a library now. We bought new storybooks, and I asked her opinion when I bought these books. We started doing new activities as a family. We went to the park and theatre together."* Although it was the first week, parental changes to enrich the home environment might be one of the most important reasons for the increase in HLE scores. Although parents' fidelity to the DRP in the following weeks was not as high as in the first, it was seen that this fidelity was maintained at a high level until the end of the implementation because all of them were in contact with the researcher until the implementation process was done.

Another reason for the increase in the HLE scores might be the motivation and increase in self-confidence of the parents during the implementation process. At the beginning of the parent training session, most parents knew that reading a book with their children would be a high-quality activity for supporting reading; however, the parents stated that they did not have the necessary knowledge, education level, family environment or motivation to do that. Parents mentioned that during the training, their self-confidence increased. This might have led to an increase in motivation and self-confidence to sustain the implementation. Since the parents might not have excelled during their own education, they considered sustaining this implementation as an individual success, which might have enabled their commitment to the DRP implementation and to communicate weekly with me. Parents' commitment was reflected in the weekly notes. For example, Parent 19 shared their views on the second week of

implementation: *"I left school at a very early age. My family did not let me continue* in school. *I do not want my child to go through what I have been through. I want my child to complete her education and have a good life. I will do anything for my child to love studying and school. With this programme, my child loved reading and books for the past two weeks. I will do whatever I can to make my child love reading because I know that her love for reading is linked with my success."* Furthermore, Parent 16 discussed the same in their semi-structured interviews: *"My parents did not let me study. That's why I do not have a job and a career. However, I want my child to study and have a good job in the future. Therefore, I did my best to make this programme successful."* When these views were considered, parents had a significant motivation for implementation. Parents stated that they did not find their own educational circumstances sufficient for their children and aimed to provide better conditions and develop supportive environments for their futures.

In the literature, there were only a limited number of studies showing the effects of home-based intervention on the HLE of preschool children. One of them was conducted by Niklas and Schneider (2017), who investigated a non-intensive intervention on the vocabulary, phonological awareness and HLE of 125 German children, with an average age of 5 years 5 months, and their parents. The parents were divided in four groups: the first with 50 parents who did not attend any type of intervention; a second group of 12 parents who attended evening meetings; a third group of 17 parents who attended individual DR training; and a fourth group that included 46 parents who attended both evening meetings and DR training. The children's vocabulary, phonological awareness and HLE were measured before and after the intervention, and the results showed that the HLE and phonological awareness of the children of parents who attended both parts of the intervention significantly improved compared to other children whose parents participated in different intervention programmes. There were some similarities and differences between this and the current study. In this study, phonological awareness, vocabulary and the HLE were measured but in the current study, in addition to those factors, print awareness, letter knowledge and listening comprehension were also measured and the HLE was tested as mediator. The number of participants in this study was much higher than the current study but the results of both studies sit in parallel.

The current research did not include only HLE as dependent variable. It determined the effects of the DRP on both HLE and early literacy skills together. The results of the early literacy skills are discussed below.

The vocabulary of the children in our intervention group significantly increased compared with the control group. There was a medium effect size of the intervention on vocabulary, which showed that the intervention was impactful. According to the results of the TEL, children in the intervention group learned many new words and started explaining themselves with a higher level of confidence. They also learned the function of some words and improved their general naming skills. In real terms many children went from having low vocabulary scores before the intervention to scoring within the normal range which is the cut-off point afterwards. As mentioned before, the cut-off point is the average score expected from all children in a certain age.

Moreover, apart from the DRP, incidental learning during the intervention period might have developed the children's vocabularies. However, when the scores of the children in the control group were examined, there was no significant increase, and their incidental learning was limited. This suggests that the effect on the intervention groups' scores was caused by the DRP.

There are two ways in which the DRP could increase vocabulary knowledge, directly via the specific words taught during the sessions and indirectly via incidental opportunities for learning new words during the intervention sessions. The DRP in the current research included teaching a specific word during each session with children attending 60 sessions and therefore being taught 60 words. Furthermore, the DRP sessions already enabled children to learn new words naturally as a result of the strategies that it includes, such as asking open-ended questions, expanding child's comments, and employing "wh-" and distancing questions; therefore, it is not surprising that children's vocabulary skills had improved.

In the semi-structured interviews, parents shared their views on how the intervention may have improved their children's vocabulary. First, they stated that they spoke to their children more and looked at their smartphones less frequently during the day with the DRP implementation. Some parents expressed how their children were more talkative and that in this way their self-confidence increased (although there was no data regarding the relationship between increased talking and increased self-confidence). It is possible that parents might have interpreted children's better self-expression as increased self-confidence.

The vocabulary target words end of the DRP might have led to an improvement in vocabulary. In the DRP, target vocabulary was expressed in each book, and parents were asked to pay attention to the target vocabulary in every book, reading to their children and teaching these words to them. In a total of 60 sessions in the DRP, children were supported with new

vocabulary teaching, and this might have led to an increased vocabulary. Parents commented in their semi-structured interviews that the children constantly learned new concepts and the features of these concepts. For example, Parent 7 expressed the following in the fourth week: *"New and unknown words are added to her vocabulary. For example, I taught the words machinist and locomotive as target vocabulary in last week's books. Now, when she sees a train picture in a book or on TV, she says a machinist drives it."* This parent's comments show that vocabulary targets in the DRP form an important aspect of the intervention and suggest that the child was able to apply the vocabulary to other contexts, thereby consolidating their understanding.

Reading a book for the first time in most homes and including books in the home environment for the first time might have led the DRP to be effective on vocabulary. Some parents stated that they created a library in their house and bought new books. By starting to read books at home, individuals at home learning new vocabulary and using this vocabulary might have led the children to learn new vocabulary. Some parents expressed that there was a new regulation in their home, and they even subscribed to magazines. Although any indirect effect the DRP may have had on the HLE was not explored, such a new approach might have increased the vocabulary versatility used by the individuals at home. In particular, magazine subscription might be having been an effective way to learn current terms and concepts and follow them. In the literature, Kim et al. (2015) investigated the HLE's effects on the vocabulary and decoding skills of preschool-age children and showed that the number of children's books at home, the number of shared reading activities per week, the frequency of family members' storytelling and singing were significantly associated with children's vocabulary and decoding skills in preschool. They also found that SES predicted children's vocabulary and decoding skills.

Another reason for the DRP's effectiveness in improving vocabulary might be the CROWD and PEER strategies by Whitehurst et al. (Arnold et al., 1994, Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1999). In the parent training sessions, the parents were informed about these strategies, which were modelled to show how to use these strategies in the reading sessions. In the Intervention Instruction (Appendix 6) provided to the parents, examples of how the parents could use these strategies were given in the first session along with detailed explanations of how and where these strategies will be used on each page. Both in weekly meetings and post-intervention semi-structured interviews, the parents started to use these strategies, commenting that they mostly used open-ended questions, 5W1H (what, who, where, when, why and how) questions, and reminding and guessing strategies. These strategies

might have encouraged children to talk more and talking more may have caused them to use new words; therefore, the strategies might have been effective in improving children's vocabulary.

There are some research findings in the literature supporting the results of this study. For example, Opel et al. (2009) investigated the effectiveness of DR intervention on the vocabulary of 160 preschoolers from 10 preschools in rural Bangladesh, who were equally divided into intervention and control groups. Seven children withdrew from the study, and 153 children were post-tested. Children's vocabulary knowledge was measured before and after the intervention, which lasted four weeks and was conducted by teachers. As a result, the vocabulary scores of children in the intervention group increased from 26 to 54 percent while the vocabulary scores of the control group remained the same. There are some similarities and differences between this and the current research in that the former investigated the effects of DR on vocabulary, but the current research determined the effects of DR on both vocabulary and other early literacy skills. This research was conducted by teachers and lasted four weeks, but the current research was conducted by parents and lasted for 12 weeks. However, both this research and the current research was conducted with children with low SES, and participants were divided into intervention and control groups randomly, with DR interventions found to be effective in building the vocabulary skills of children in the intervention group.

In another study, Cohen et al. (2012) investigated the effects of DR on the English and Spanish vocabulary of 72 preschool children with an average age of 57 months while their three teachers and three teaching assistants from six different preschools also participated. The intervention included two parts: learning how to use DR strategies; and learning how to build vocabulary. Both the DR and vocabulary parts of the intervention consisted of English-only, bilingual, and Spanish-dominant versions, and books and vocabulary were selected from both languages. Within the intervention, teachers attended workshops, and attended meetings for reflection and consultation, and the intervention lasted eight weeks. The children's vocabularies in both languages were measured pre- and post-test. Results showed that the vocabulary of all three language groups – English-only, bilingual, and Spanish-dominant – increased, which were in parallel with the results of the current study.

The phonological awareness skills of children in the intervention group significantly increased compared with the control group. According to results of the TEL, most children learned the similarities and differences between sounds and showed awareness of rhyme between different

words. Some of them also learned an awareness of first and last sound, and an awareness of dividing sentences into words and words into the syllables.

The qualitative results of parental views supported the results of the phonological awareness subtest of the TEL. During the parent training sessions, it was explained to parents how to work on phonological awareness with their children at home, and parents took notes and asked questions each week about these skills. According to the parents, at most, children's awareness of syllables, rhymes and phonemes at the start of words improved. During the weekly meetings, parents considered these two skills as the simplest and easiest of the phonological awareness subskills such as rhyming or sound manipulating; therefore, parents might have focused on these skills more than others. Parents also mentioned developing other phonological awareness subskills with their children. For example, Parent 9 commented on improvements in her child's phonological awareness: "*He learned to split words into syllables. He also learned sound-symbol association. He realized that symbols represent sounds.*" This comment showed that the child learned many phonological awareness subskills, and that the parent could observe these developments.

Phonological awareness skills are significantly important in reading and writing teaching in a phonetic language like Turkish. There are many studies across the world showing the effects of phonological awareness in reading development in both Turkish (Güldenoğlu et al., 2016, Akoğlu and Turan, 2012) and other alphabetic reading languages (Furnes and Samuelsson, 2011, Pfost, 2015, Vander Stappen and Reybroeck, 2018). In these studies, the effects of phonological awareness were found on later attainment in single word reading, spelling, reading accuracy, fluency, and comprehension in the first, second and third grades.

There are several potential reasons for the increased phonological awareness skills among the intervention group children. One of the most important might be the use of DR strategies recommended by Whitehurst et al. (Arnold et al., 1994, Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1999) for language skills development by parents. Several studies have shown that the strategies that contribute to language skills are also effective in developing phonological awareness skills (Huennekens and Xu, 2016, Elmonayer, 2013, Ergül et al., 2016). Among the DR strategies, "wh" and open-ended questions could be the most important ones since they encourage children to talk more. Ergül et al. (2016, p.6) explained the role of the strategies of "wh" and open-ended questions in developing print and phonological awareness as: "They (parents and teachers) included many examples of "wh" and

open-ended questions to prompt children to talk, expand their responses, and ways of print and phonological referencing to guide their interaction with child/children while reading."

Another reason for increased phonological awareness might be the increased number of parent-child common participation activities at home, as parents started various new speaking-based activities with their children and focused on sentences, words and sounds. They sang nursery rhymes with their children and tried to help them to identify the rhyming words, and these speaking-based activities might have increased both listening and phonological awareness skills. Although the HLE was not found to be a significant mediator, parental views suggested that the HLE might be effective in the development of children's phonological awareness. Both the changes in the HLE and DRP sessions could have contributed to the children's future reading success.

There are several studies in the literature supporting the results of the current research. For example, section 3.3.5 mentioned two such studies by Elmonayer (2013) and Huennekens and Xu (2016), who investigated the effectiveness of DR interventions on the phonological awareness of preschool-age children. Children's phonological awareness were pre- and post-tested before and after the intervention, and both interventions were conducted in the children's classroom, with researchers conducting the implementation. Results showed that children's phonological awareness significantly improved from pre- to post-test in Arabic, Spanish and English languages.

According to the results of the TEL, the letter knowledge of children in the intervention group significantly increased compared with the control group. In real terms, many children went from having low letter scores before the intervention to scoring within the normal range which is the cut-off point afterwards. As mentioned before, the cut-off point is the average score expected from all children in a certain age.

Parents commented that their children learned new letters randomly and learned the letters in their names and the names of family members. When a parent conducts a DR session with a child, he/she focuses on both pictures and print and the child might ask about letters when their parent focuses on print. Therefore, the child might learn the name of letters during DR sessions. As a result, letter knowledge is one of the easiest skills to be developed with the DRP. Moreover, asking questions about the letters when talking with the child creates the most important learning environment and thereby ensures letter knowledge skill development. This was reflected in parents' comments. For example, Parent 6 said the following: *"When I talked*

with my daughter about the print, she pointed out the letters and asked their names. I wrote her name and introduced the letters. She found the letters in her name in the book and showed me those letters." Other parents also shared positive views regarding the effects of the DRP on letter knowledge, and the results of the semi-structured interviews supported the results of the TEL.

The word card implementation after the DRP sessions might also have affected letter knowledge development. Words and images were matched and presented to the children, and when the word and the image on the card matched, the children might then pay attention to the letters forming the word. This would help them learn the relationship between the written symbols and sounds and thereby might develop their letter knowledge.

Furthermore, according to the TEL, the listening comprehension of children in the intervention group significantly improved at post-test compared with the control group. There are a number of possible reasons for this. Firstly, parents explained that the DRP improved children's understanding and their ability to retell the story. The most effective strategy used for improving retelling skills was event cards with participants asked to order the event picture cards of the books at the end of each DRP session. Three pictures related to the beginning, middle and end of the storybooks were presented to the participant, and the participant was asked to put them in the story order. When children tried to order the cards, they remembered the events in the storybooks, which meant the cards could support the children's memory. In addition, the participants who knew they would need to order the cards at the end of each session might have listened to the story more closely during the session and thus improved their listening comprehension skills.

Understanding of the story improved as children listened to the stories because parents asked them questions many times during the sessions. Parents asked questions about both the background knowledge and the story in the books, and the background knowledge questions made the children remember the concepts that they had learned before and made them ready for learning new concepts. For example, one parent explained that her child knew the word engineer (driver of a train), but she could not remember it and use it in daily life. After asking the background knowledge questions during the session, she remembered this word and could say it when she saw trains in other books. The story content questions helped children to understand the relationships between events and the features of characters more easily, and these questions also helped children to learn new concepts and behaviours. Ten parents

mentioned that their children's listening comprehension improved due to the questions they asked as the DRP progressed.

Parents not only asked questions during the reading sessions but also gave children the opportunity to interact. They expanded children's responses and continued to ask new questions according to children's responses and helped children make connections between the events in the books and their real lives, which further strengthened their understanding. As for retelling the story, at the end of each session, parents showed three pictures in different parts of the book and asked the children to sequence them in order of the events in the book and retell the story by both sequencing and reorganizing the pictures. Therefore, in time, the retelling skills of the children developed, and the parents may have noticed this. These parental views supported quantitative results of the TEL.

The effect of the DRP on listening comprehension might be due to the natural interaction in shared reading. As a form of shared reading, DR is an intervention approach that requires continuous interaction between the adult and the child and necessitates communication. As mentioned in section 3.3.1, this natural interaction dates back to the sociocultural perspective of Vygotsky (1978), which argued that all developments in human life happen through social interaction. According to Vygotsky (1978), all learning takes place within the child's ZPD. In the ZPD, the child applies parent's support when he/she is challenged to learn new concepts, behaviours and skills. Since the DRP sessions of the current research take place within the ZPD's of the children, they might have asked questions about various elements of the storybook including events, characters and concepts and so their listening comprehension skills might be improved.

In this intervention approach, questions periodically asked by the children and the children's answers play an important role. In such an approach, asking questions constantly encourages children to make guesses about the story more often, and the child must listen better to correctly answer the questions. All these interactions might have improved the child's listening comprehension.

The literature has supported the positive effect of story retelling on children's listening comprehension (Oduolowu and Oluwakemi, 2014). Parents stated that children tried to remember the story as they try to retell the story again and thus improved their listening comprehension skill. In the literature there are several studies that aim to improve listening comprehension through DR. For example, da Nóbrega Rogoski and Flores (2021) conducted a

case study to determine the effects of DR on listening comprehension among Brazilian children. A single subject research design was implemented with three girls and one boy aged five to six years old involved in the study. The children had Portuguese as their first language and no second language with the intervention conducted in the children's school classroom. During the intervention, 30 storybooks were read with children and the children were measured at pre-test for narrative function, event sequence and follow up. Results showed that the children's retellings skills improved after the intervention. There are some similarities and differences between this and the current research, although this study employed a single subject research design while the current research used a pilot RCT. Moreover, this research was conducted in classroom conditions, but the current research was conducted at home. This research included follow-up assessment, but the current research did not. However, both this and the current research included DR strategies with 30 storybooks as their intervention and were found effective on listening comprehension of presechoolers.

In another study, Lonigan et al. (1999) investigated the effects of shared reading and DR interventions on early literacy skills of 95 children aged from two to five years with low SES. The children were divided in three groups – no treatment; shared reading; and DR – with the two intervention groups attended in small group settings. The intervention lasted six weeks. Children were pre- and post-tested on oral language, listening comprehension and phonological awareness, and the results showed that shared reading intervention was effective in improving children's skills. Dialogic reading was effective for language, whereas shared reading was effective for listening comprehension and phonological awareness. There are some similarities and differences between this study and the current research. This research included two interventions and one control group, but the current research included only one intervention and one control group. This research compared effects of shared reading and DR, but the current research tested the effects of DR only. This research lasted six weeks and was conducted in small groups in school, while the current research lasted 12 weeks and took place one-to-one at home. However, both this research and the current research were conducted with children with low SES and found to affect language skills.

The print awareness of children in the intervention group significantly improved at post-test compared with the control group. According to the PAT, they learned print and book concepts, print and page directions and function of print.

In addition to the results of the PAT, parents mostly commented that children realized where the print starts and finishes. When they read with their children, they put their finger on the

print, reading and moving their finger simultaneously; therefore, the children will have been focused on the print. They then made the children read the print by following the lines with their fingers. This way children might have understood that the print characters were symbols explaining the pictures and therefore their print awareness might have increased. Another reason for children's increased print awareness might be the word cards shown to the children in the DRP sessions. At the end of each session, the parent showed a word card to the child, read the word and asked the child to match it with a picture in the book. Thus, the child both interacted with written material and gained awareness of the relationship between print and picture.

Parents also commented on their children learning about punctuation marks. There might be two reasons for this. First, punctuation marks are different from letters, and they might be more interesting for children than the other text. In weekly meetings some parents mentioned that punctuation marks attracted the attention of their children; furthermore, parents might have specifically focused on punctuation marks during the sessions because it was explained during the parent training sessions that punctuation marks are accepted as an element of print awareness, and that they are important for later literacy success. Therefore, parents might have taught children the names of punctuation marks and their functions. Parents also mentioned that their children learned about the function of print. For example, Parent 16 expressed the following:

> *My child no longer only focuses on images when looking at a book. The print has started to attract his attention while looking at the images. During reading sessions, he pressures me to read fast and learn what it is. He understands that the text has a message. Also, when there are subtitles on the TV, he asks me what it is since he now knows it has a meaning. Before he did none of these things, but with the DRP, these changes started even from the first week. He learned a lot of new things and he enjoyed it.*

The point that parents mentioned above showed that the qualitative data obtained from parents supported the quantitative data obtained from children.

The effects of the DR interventions on print awareness were explored in many studies in the literature. For example, Kim and Riley (2021a) investigated effects of a home-based DR intervention on language and early literacy skills of preschool children. A randomized controlled trial was conducted with 18 teachers, 87 parents and their children. Participants were

divided into intervention and control groups, and teachers in the intervention group attended a workshop including training about parent involvement. They then educated and encouraged their parents. The intervention lasted six weeks, and participants were measured at pre-test, post-test and follow-up. Results showed that a six-week home-based intervention significantly improved the taxonomy of children in the intervention group at post-test and increased their vocabulary and print awareness at the follow-up compared with the control group. However, as the current study did not include a follow-up measurement, these results are in parallel with its results.

Lastly, the findings of the current research were mostly in line with the prediction in the logic model of the research explained in the section of 4.3. The current research predicted that the DRP could improve directly the HLE, language and early literacy skill of children at risk of literacy learning problem due to low SES. As predicted, the DRP improved all these dependant variables directly. The research also predicted that the DRP could indirectly improve children's language and early literacy skills by mediating changes in children's HLE. This assumption was partially in line with the prediction. The DRP indirectly affected only print awareness. This indirect of the DRP on print awareness was mediated by changes in the HLE. Print awareness is the children's knowledge regarding the function of print. The intervention encourages parents to source more books, which exposed the child to more print. Therefore, as the HLE of children increased their print awareness skills improved. As a child reads a book in their home environment, they start to recognize the print in the book and learn the print function. In this process, the child understands that the print represents the images and carried a message. Thus, the child forms a relationship between the print and the images. Development of all these skills is possible when the child accesses print, which can be accessed via books. This brings the necessity to have books in the home environment, which together with increasing the number of books means enriching the HLE. Enriching the environment means an increased use of print each day, which means an indirect contribution to print awareness skill development.

10.3 Impact of the COVID-19 Pandemic

During the implementation process, the COVID-19 pandemic started, and unavoidably, it affected the DRP's process and parent-child interaction and communication. This effect could be both positive and negative, and its certain and possible effects are listed below.

The DRP was planned to be implemented over 12 weeks. The first weeks of the implementation were conducted as planned; however, at the beginning of the fifth week, all schools including preschools were closed by the government to limit the spread of the COVID-19 pandemic. Therefore, the last eight weeks of the DRP were conducted under pandemic conditions and it was necessary to make changes to the implementation of the intervention due to the COVID-19 pandemic restrictions. At the beginning of the implementation, the plan was to meet with parents in intervention group every Monday, to watch parents' videos and provide feedback face to face. This was only possible for the first four weeks of the implementation. In the remaining eight weeks, parents were contacted by phone, email or online chat to provide feedback on videos that had been sent. Some parents were not able to send videos, but they were still contacted each week to discuss their experiences of implementing the intervention. Sometimes, it was possible to listen to their intervention sessions by phone and provide feedback verbally over the phone.

During the COVID-19 pandemic different families had different experiences depending on their circumstances. Some had more time for the programme, but others had less. Some parents emphasized that the lockdown increased their and their children's motivation for reading, but some mentioned that they lost their motivation. One reason for increased motivation could be that the DR is a good activity to be done at home during lockdown. Being confined at home may have prompted both parents and children to read books together, and eventually their motivation for reading may have increased.

Among all the views about the effects of lockdown on parent-child interaction, increasing time spent together and increasing quality of time spent together were the most common. Although the HLE scores of the intervention group participants increased, this increase was around five percent of the variance, demonstrating that the DRP had a medium-level effect on the HLE. The DRP's effect on the HLE might have been larger if the lockdown had not happened, but one of the main reasons for the lack of effect of the DRP on the HLE might be the lockdown period because the last eight weeks of the implementation were conducted under lockdown conditions. Parents could not visit libraries or theatres with their children, which made access to free books difficult. Additionally, since some parents lost their jobs, they were unable to purchase children's books and other reading-writing materials. Since the family members were at home all day long, mothers were constantly busy with cleaning, washing dishes and cooking. This might have led the parents not to focus on the DRP to the desired level.

From another perspective, the lockdown process might have supported the DRP implementation process positively. Some parents reported spending more time with their children at home playing and doing activities. Although the lockdown was expected to increase the amount of parent-child time spent together in both groups, only the parents in the intervention group had the DRP. Therefore, the lockdown process might have created more time for the implementation of the DRP and led the implementation to be effective. This was supported by feedback from parents who stated that the lockdown process had a positive effect on the implementation and effectiveness of the DRP. For example, parent 6 explained that *"We read together and played games more than before the lockdown. She asked me to read the same book many times. It increased the time we spent together."* and parent 1 explained that *"It was very good for us. We spent more time together than we have ever spent as a family."*

However, from another perspective, the lockdown period might have decreased the effects of DRP on vocabulary. Some parents commented that because the lockdown period decreased the amount of time they could spend with their children, their children spoke less with them, rejected activities playing together, and cried more. For example, Parent 25 explained the following: "*She was very bored at home and rejected playing together. She stopped speaking and expressed her wishes only by crying. She often cried and shouted. Sometimes she broke the things around her."* The lockdown affected the DRP implementation process just like it affected the entire function of the world. In the semi-structured interviews, parents said that the lockdown had significant negative effects on some implementation processes, and this negative effect was not limited to the DRP implementation but also reflected in parent-child communication and interaction more broadly. Children's inability to realize their desires to go out, go to school and play with friends led them to exhibit problematic behaviour, and the emergence of such problematic behaviours might have had a negative effect on the DRP implementation. Instable implementation of the DRP might have then lessened its effects.

Regardless of being negative or positive, the lockdown period created instability in the DRP implementation, which did not proceed as planned and, naturally, its effects were not measured as planned. The changes in Monday meetings, in the types of feedback and in post-test measures have been explained in detail above.

10.4 Implications

The current research has some important implications for stakeholders in Turkey, including parents, teachers, policymakers, curriculum and designers and researchers.

10.4.1 Implications for Parents

There are some important suggestions for Turkish parents. The current research showed that, as a form of shared reading, DR positively affected children's language and early literacy skills. In Turkey, formal pre-school education starts when children reach the age of 4 years; however, children can develop knowledge and skills related to language and early literacy skills before this time. Our findings strongly suggest that parents should regularly engage their children in shared reading activities at home before the children start preschool. There are many ways for parents to learn how to conduct shared reading activities with their children. For example, parents would read papers from child development magazines, but parents from low SES background might not be able to access these. Parents could also watch videos on social media accounts of child development specialists. In Turkey, there are several such specialists who inform and aim to increase parents' knowledge for supporting their children' development. Parents could follow those accounts by searching some keywords such as child development, parenting, early childhood, preschool education etc. Parent lastly can attend some seminars conducted by child development specialist or researchers. However, high fees could be a significant barrier to parental involvement in those seminars.

The current research also showed that enriching the HLE supports children's language and early literacy skills and improves parent-child interaction and communication. Therefore, Turkish parents should support their children by creating a rich HLE and planning outside activities. For example, parents could create a literacy corner or a simple library for their children at home and visit public libraries with their children. However, there might be many barriers to parents to provide a rich HLE, conduct DR activities at home and organize outdoor activities for their children. First, parents might not know how to provide a rich HLE. Second, parents might not be aware of the impact of a rich HLE on child development. Third, parents might not have the financial capability to buy books and other materials. Fourth, there might not be free public libraries in the area where parents live. Finally, parents may not have time to conduct DR activities at home since they might take time to care of their other children.

In order to implement two strategies mentioned above (teaching parents enriching the HLE and conducting DR activities with their children), the current research needs to be adapted as a large-scale project in Turkey, and, as in the current research, parents should be contacted through preschools and attend training sessions. However, such a large-scale national project would require a significant budget and it could not be estimated. Therefore, to provide an estimated budget and other elements of the project, a comprehensive RCT should be conducted. The expenditures and other elements, including the number of teammates, of the large-scale project can be planned according to the RCT.

10.4.2 Implications for Teachers

Our results showed that the DRP significantly improved the language and early literacy skills of preschool-age children with low SES. Although the research was implemented in home settings, the extant literature shows that DR interventions are effective both when applied in the home setting and in small and whole group classroom settings. Therefore, preschool teachers should read the results of the current research and implement DR practices in their classrooms to support their students' development. All theses in Turkey are submitted to the National Thesis Centre's website and everyone can access them for free. Teachers could download and read all theses and examine their appendices. However, there is not a free platform for other research papers and presentations in Turkey. Therefore, teachers must pay to read articles and presentations in paid journals. The appendices of the current research were prepared to be as much as clear and understandable. Both the storybook names, target words in each book and the pages that pictures were selected were clearly explained in Appendices 2 and 3. An instruction for both the use of DR strategies and conducting phases of a DR activity was designed and presented in appendix 6. Although those material are prepared for parents of the current research, all adults including teachers could use them.

One barrier to this is highlighted by a range of Turkish studies (Altun and Tantekin Erden, 2016, Ergül et al., 2014, Güney, 2012, Doğanay Bilgi et al., 2020b, Doğanay Bilgi et al., 2020a) showing that teachers did not have enough knowledge of development of early literacy skills, DR practices and other school arrangements such preparing a literacy corner in the classroom. Although early literacy skills and DR are mentioned in the current preschool curriculum (Meb, 2013), it has been seen that teachers have not learnt about early literacy and DR. Since teachers do not know this information, in-service training seminars and workshops should be organized for them, which could be done by the researcher and other researchers working in the early

childhood education area. The researcher will apply to the Ministry of Education for a budget to organize educational seminars in preschools. The seminars/workshops should focus on the development of language and literacy skills in the early childhood period and the impact of this development on later years. Moreover, these seminars/workshops should focus on the importance of preschool education in child development and the impact of a rich classroom environment on children's language and early literacy skills. Lastly, seminars should focus on guiding teachers on how to conduct DR sessions with small or large groups in a classroom setting. Also, online seminars which have the same context should be organized for teachers who may not be able to attend the seminars in person.

10.4.3 Implications for Home-School Relationships

The results of the current research have some important implications for the home-school relationships in Turkey. In the current research, the school management invited the parents to participate in the research. The management also contacted with parents with low literacy levels via mobile phone to invite them to participate in the research. Participants were then given five working days to decide whether to participate in this research. After they decided to opt in, they signed the form and returned it to the preschool management, who then informed the researcher about parent consent by phone. All this process means that the participation process needed a communication and a coordination among the parents and the school management. Also, the parents in the intervention group attended parent training and Monday meetings. This led parent to spend more time at school than other parents. This also necessitated parents to communicate more with the school management and teachers. The research also showed that parents from low SES in Turkey could be a part of in a school-supported study. It showed that parents participated in a home-based intervention could be educated, trained and followed in their children’s preschool located in low SES region of Turkey and could conduct the sessions of the intervention in their homes. Considering all these processes, the current research showed that a home-based intervention could improve the home-school communication and relationship. Other researchers in Turkey could follow a similar process when they conduct an implementation process.

10.4.4 Implications for Policymakers at the Ministry of Education

The results of the current research have two important implications for policymakers working in the early childhood department of the ministry. The first is encouraging the participation of parents in the education process in the preschool period and to lower the starting age for preschool education from 48 months. The current research shows that low-SES parents can contribute effectively to their children's early language and literacy development. Policymakers should issue an instruction or circular and forward it to preschools that should state that parents should be more involved in the education process of their children. The policymakers also should appoint municipalities to organize free educational seminars for parents on how to support their children's education. In this way, parents might learn many methods to support the development of their children including DR and its strategies.

According to the pre-test in the current research, the language and early literacy skills of the 48-month-old children in the low SES group were below the cut-off point of the TEL. As mentioned before, the cut-off point is the average score expected from all children in a certain age. Preschool education in Turkey starts from 48 months, and children can only attend kindergarten for one year. In contrast, preschool education starts earlier and lasts longer in OECD countries. For this reason, preschool education in Turkey should start at an earlier age. Policymakers should issue an instruction and submit it to the parliament, so that the Assembly lower the age of preschool education and ensure that children participate in the education process earlier and for a longer period. In this way, children in low socioeconomic groups will have more opportunities for the development of language and early literacy skills. As the researcher of the current research, the researcher will prepare a report on the two issues that concern policymakers and forward it to the relevant units in the Ministry.

10.4.5 Implications for Preschool Curriculum and App Designers

The significant effect of the DRP showed that this method should have an important place in the preschool curriculum. In the 2013 preschool curriculum (Meb, 2013), which is the most recent preschool curriculum in Turkey, reading aloud with children in the classroom is suggested, but there is no detailed content on this method. The DR method and its strategies mentioned by Whitehurst et al. (Arnold et al., 1994, Lonigan and Whitehurst, 1998, Whitehurst et al., 1994a, Whitehurst et al., 1999) were not part of the curriculum. The curriculum therefore should be updated to include this method and these strategies. Curriculum designers in Turkey meet annually to decide whether the curriculum should be updated, and should they decide that

the curriculum needs updating, they would start to work on it and present a latest version to the schools. The researcher will report the results of the current research to curriculum designers and recommend in the report that the curriculum should include more information about the development of early literacy skills and the implementation of DR interventions.

The current research has also an important implication for Turkish app designers. An app could be developed for parents to learn DR strategies and do DR activities at home. In Turkey, there are several free apps (without private company's apps) developed by the Tohum Autism Foundation and the Turkish Radio and Television Corporation for preschool aged children. The apps aim to improve children's language, pre-literacy and pre-math skills. However, there is not any app aiming to improve parental information and qualification for home-based activities. The researcher will prepare a report on the app necessities and forward it to both the Foundation and Corporation. He will mention on the report that the app should involve both informative videos for improving parental knowledge about developing language and early literacy skills and sample animation videos for DR activities. He will also mention that it should include high level coding and 2D or 3D animations.

10.5 Strengths of the Current Research

The current research aimed to determine the effects of the DRP on both HLE and early literacy skills together. There are considerable number of studies in the literature aimed to determine effects of DR interventions on language and early literacy skills; however, the current research investigated the effects of the DRP on both language and early literacy skills and the HLE. The current research investigated the mediator effect of HLE, which is another unique aim in the context of the literature. Another strength of the current research is that it included a F&A study before the pilot RCT, in which all the elements of the DRP were tested and it was attempted to increase the validity and reliability of the DRP. The quantitative data clearly showed that the DRP improved the HLE and early literacy skills of children, and the qualitative data collected from parents supported the quantitative results. Furthermore, the mediator role of the HLE in the development of print awareness was another significant and unique finding of the current research. Lastly, the current research investigated the effects of the COVID-19 pandemic on both implementations of the DRP and on parent-child interaction and communication.

10.6 Limitations of the Current Research

The current research has some limitations. They might have limited the conclusions that can be drawn from the current research. First, most parents could not video record the DR sessions; therefore, it could not be possible to obtain data on the procedural fidelity during the DR sessions. Also, the current research did not obtain the data on the fidelity in relation to the dosage of the implementation. These might decrease the number of the DR sessions and the quality of them in terms of using DR strategies, vocabulary teaching and narrative works. Therefore, the effectiveness of the DRP on language and early literacy skills could decrease because of this lack of videos records and dosage records. If all parents could have video recorded and recorded the number of the sessions per week, the researcher would have provided them feedback on their implementation and improve their procedural fidelity, and might increase the effectiveness of the DRP.

Second, another critical limitation of current research is the lack of the Monday meetings after the fourth week. Since the pandemic emerged, meetings were cancelled and the researcher contacted with the parents via emailing, messaging or calling. Some parents could not get contact regularly and get feedback from the researcher. This might have decreased parental fidelity to the DRP and decreased the quality of the sessions. If the Monday meetings conducted as planned, parents would have met more with the researcher, could ask more questions, watch parents' videos, and receive more feedback. This might increase the effectiveness of the DRP.

Third, another limitation of the current research was about the data collection process at post-test. The current research showed that post-test measures of the intervention could be adapted for remote delivery and conducted by parents or by researchers via phone. However, these types of data collection were less reliable than the original versions. When parents conducted the assessments, the researcher listened the sessions via phone. He stopped and gave feedback to parents when they acted out of the procedures. Stopping parents and giving feedback them caused the sessions took long time. This losing time might have made the children bored. If the data had been collected directly by the researcher, the sessions could have been shorter. Therefore, the children could be less bored and this could increase the number of their correct answers.

Fourth, another limitation of the current research was that the parents in the control group were ensured at the beginning of the implementation that they will be included in parent training sessions and given all materials at the end. However, the researcher informed them before post-

test that parent training could not be done due to the pandemic conditions and the DRP materials could not be given to them because there was not enough budget. This decreased their motivation to continue to be a part of the study. As a results, it might have decreased the quality of post-test assessment.

10.7 Research Suggestions for Future Studies

The current research evaluated the effectiveness of the DRP on the HLE, language and early literacy skills of children from low SES. Future studies might evaluate the effects of the DRP on the HLE and early literacy skills of participant groups from a wider range of socioeconomic backgrounds and circumstances, in order to determine whether the DRP is most effective with or only affects low SES. In the literature, the effects of the DR interventions were found on language and early literacy skills of children from different SES backgrounds (Sim and Berthelsen, 2014, Kotaman, 2020, Kim and Riley, 2021b, Elmonayer, 2013). Next, measurements in the current research were pre- and post-tests, which meant looking at the short-term effects of the DRP, but it is unclear whether these effects would continue. After a few months, the children in the participant group will continue into the second year of preschool education; therefore, in future studies, a delayed post-test measurement should be applied.

In the current research, parent training sessions and Monday meetings were conducted with the parents in the intervention group to improve their knowledge background, follow their practices at home and give them feedback to improve the quality of the sessions. However, for future studies, some changes could be made to both parent training and Monday meetings. For example, parents could be given the videos that the researcher watches in parent training sessions. Parents could watch the videos at home and renew their knowledge on the intervention. Also, parents could be given an internet-enabled SIM card so that they could easily deliver their session videos to the researcher. In this way the researcher could give them feedback easily and quickly. As for the Monday meetings, another type of the following could be added the research. For example, the researcher could visit homes and observe the HLE of children. In this way, the researcher could directly observe to what extent the parents conduct the implementation correctly.

All parts of the current research, including pre-test, implementation and post-test, were conducted during the preschool period; therefore, the effects of the DRP on children's early academic achievement at the beginning of primary school were not determined. There have

been a limited number of studies determining this effect (Shahaeian et al., 2018), but in future studies, it is important to determine the effects of the DRP on children's early academic achievement at the beginning of primary school because there has been no study in the Turkish literature conducted about the effects of shared reading on children's readiness for literacy at the beginning of primary school.

The current research did not investigate the longitudinal effects of the DRP on the reading achievement of children at the end of first and other grades of primary school. There have been a limited number of studies investigating longitudinal effects of DR interventions on reading achievement in primary school, which have shown that the long-term effects of the DR interventions on reading achievement are limited (Whitehurst et al., 1999, Zucker et al., 2013). In the Turkish literature, only one study (Ergül et al., 2017a) investigated the effects of the DR intervention conducted during preschool on first-grade children's literacy. Results showed that the intervention significantly affected children's reading fluency, accuracy and comprehension at the end of first grade. Due to these contradictory findings in the literature, the longitudinal effect of DR is worth investigating. Therefore, in further studies, the impact of a DR intervention on reading achievement of children at the end of first, second, third and fourth grades of primary school should be investigated.

The current research was conducted with typically developing children with low SES, but it is worth exploring the effects of the DRP on the language and early literacy skills of children with LI, intellectual disability (ID), hearing impairment (HI), etc. since those children are in greater need of interventions for the development of language and early literacy skills. There have been a limited number of studies investigating the effects of DR interventions on the HLE, language and early literacy skills of children with disabilities, and in the Turkish literature there is only one study (Aslan, 2018) investigated the effects of a shared reading intervention on the early literacy skills of children with ID. Results showed that the intervention improved early literacy skills of preschool children with ID and those effects had continued six weeks later.

In the current research, the implementation of the DRP was conducted in the home setting and the sessions were organized by parents; however, several studies in the literature have shown that the DR interventions organized by teachers in school or in home-plus-school conditions could have significant effects on children's language and early literacy skills (Lonigan and Whitehurst, 1998, Opel et al., 2009). In the home setting, the intervention can only be implemented one-on-one and the interaction happens only between the parent and child. This has both positive and negative aspects. Since only the parent and child are present, the child

can ask the parent as many questions as he/she wants; however, the interaction in the setting becomes limited when compared with small and whole group settings. In small and whole group settings, the interaction happens both between children and between the teacher and children, which allows for more interaction in the session and the children asking more questions and thereby provides a more beneficial learning environment. In the literature, the small group setting was found to be the most effective for DR interventions (Simsek and Erdogan, 2015b, Tetik and Işıkoğlu Erdoğan, 2017); therefore, future studies might compare the effectiveness of the DR intervention conducted at home, home plus school and only school settings.

10.8 Conclusion

This study was conducted to determine the effects of the DRP on the HLE, language and early literacy skills of children from low-SES backgrounds. Both quantitative and qualitative data showed that the DRP positively affected children's HLE, language and early literacy skills, as well as showing the HLE had a mediator effect between the DRP and print awareness. Lastly, results showed that the COVID-19 pandemic had both positive and negative effects on the implementation of the DRP and the interaction and communication between parents and children. The results of the current research are important for stakeholders in Turkey including parents, teachers, researchers, policymakers and curriculum designers. Parents should be supported to regularly engage their children in shared reading activities and enrich the HLE. Teachers should be encouraged to participate in in-service training seminars and workshops about the development of language and early literacy skills and shared reading activities. These developments require a large budget and a larger-scale RCT would need to be undertaken to justify the cost. After this large-scale RCT, if the DRP is shown to be effective, it is recommended that the Ministry of Education should organize a national project with researchers in early childhood education and that updates to the pre-school curriculum should be considered.

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Appendices

Appendix 1: Illustrated Storybook Evaluation Scale

	PICTURE AND CONTENT FEATURES	Not Sufficient (1)	Partial Sufficient (2)	Sufficient (3)
1.	The cover picture is interesting.			
2.	More than half of the book pages consist of pictures.			
3.	Text and pictures on the same page are compatible.			
4.	The pictures are of aesthetic value.			
5.	The pictures are suitable for the child's developmental features.			
6.	The characteristics and movements of the characters in the book (body language, emotions, etc.) are reflected in the pictures.			
7.	The colours used in the painting are lively and remarkable.			
8.	The subject of the story is appropriate to child's age and developmental features.			
9.	The subject of the story is interesting for children.			
10.	The story is capable of fulfilling the spiritual needs of children.			
11.	The story is helpful to improve the child's creative imagination.			

12.	The language used in the story is clear, understandable and accurate in terms of grammar.			
13.	The language and style used in the story is appropriate to the age and developmental features of children.			
14.	The style of the story is not informative and instructive.			
15.	The story is qualified to improve the vocabulary of the children.			
16.	The main idea / theme of the story is clear and understandable.			
17.	There are introduction, development, and conclusion sections of the story.			
18.	The characters in the story are suitable for the child to identify and model.			
19.	The story gives importance to ethical and universal values (love, respect, democracy etc.).			
20.	The story does not constitute stereotypes in terms of language, religion, ethnicity, gender etc.			
21.	The story presents problems that the child can solve.			
TOTAL				

Appendix 2: Books, Vocabs and Narrative List of the DRP

Name	Author and Translator	Publisher	Vocab Item	Narrative	Pages
1. Kirmizi Elma (Red Apple)	Author: Feridun Oral	Yapı Kredi	Kar (Snow)	Retelling, Sequencing, Summarising	2,16,28
2. Bekçi Amos'un Hastalandığı Gün (The day Watcher Amos got sick)	Author: Philip C. Stead and Erin E. Stead	Yapı Kredi	Dost (Good friend - familiar)	Retelling, Sequencing, Summarising	1-2, 19-20, 29-30
3. Acıkmadım ki! (Lunchtime)	Author: Rebecca Cobb	Türkiye İş Bankası	Kurt (wolf)	Retelling, Sequencing, Summarising	5, 11-12, 23
4. Bu Kış Kimse Üşümeyecek (Nobody will get cold this winter)	Author: Feridun Oral	Yapı Kredi	Kizak (sled-sledge)	Retelling, Sequencing, Summarising	7-8, 15-16, 23-24
5. Gökdelene Giren Bulut (Cloud entering the skyscraper)	Author: Behiç Ak	Odtü Yayıncılık	Gökdelen (Skyscraper)	Retelling, Sequencing, Summarising	6-7, 14-15, 24-25
6. Gökyüzündeki Gizli Bahçe (Secret Sky Garden)	Author: Linda Sarah and Fiona Lumbers	Pearson	Flut (flute)	Retelling, Sequencing, Summarising	4, 16, 24
7. Hiç Hata Yapmayan Kız (The girl who never made mistake)	Author: Mark Pett and Gary Rubinstein	Binbir Çiçek Kitaplar	Paten (skate-roller skate)	Retelling, Sequencing, Summarising	1, 22, 29
8. Kutup Ayısı Olmak İsteyen Boz Ayı (Stripes the Cat Tiger)	Author: Jean Leroy	Martı	Kutup Ayisi (Polar bear)	Retelling, Sequencing, Summarising	1-2, 13-14, 27-28
9. Kuyruksuz (Tailles)	Author: Can Göknil	Can Çocuk	Kıvrım kıvrım (In curls)	Retelling, Sequencing, Summarising	6, 18-19, 29
10. Kağıt Bebekler (The Paper Dolls)	Author: Julia Donaldson And Rebecca Cobb	Türkiye İş Bankası	Timsah (alligator)	Retelling, Sequencing, Summarising	5, 23, 29
11. Kahraman Itfaiyeciler	Author: Heather Amery, Stephen Cartwright	Türkiye İş Bankası	Itfaiyeci (Firefighter)	Retelling, Sequencing, Summarising	5-6, 11-12, 15

(Hero Firefighters)					
12. Kar Fırtınası (The Snow Storm)	Author: Heather Amery and Stephen Cartwright	Türkiye İş Bankası	Ağıl (sheep pen)	Retelling, Sequencing, Summarising	6, 12, 15
13. Kırmızı Kanatlı Baykuş (Red Winged Owl)	Author: Feridun ORAL	Yapı Kredi	Kanat (wing)	Retelling, Sequencing, Summarising	7-8, 13-14, 22
14. Kim Korkar Kirmizi Baslikli kizdan (Who's afraid of little red riding hood)	Author: Sara Sahinkanat	Yapı Kredi	Avci (hunter)	Retelling, Sequencing, Summarising	1,13-14, 21-22
15. Babaannem Kime Benziyor (Who Does My Grandmother Look Like?)	Author: Feridun ORAL	Yapı Kredi	Kuzu (lamb)	Retelling, Sequencing, Summarising	6-7, 28-29, 34-35
16. Dunyanin en kucuk hediyesi (The Smallest Gift of Christmas)	Author: Peter Reynolds	Altin Kitaplar	Teleskop (teleskope)	Retelling, Sequencing, Summarising	6, 23, 36
17. Kucuk ayi ile ahlat agaci (Little bear and wild pear tree)	Author: Yalvac Vural	Yapı Kredi	Ahlat (wild pear)	Retelling, Sequencing, Summarising	3-4, 11-12, 27-28
18. Uc kedi bir canavar (Three cats and a monster)	Author: Sara Sahinkanat	Yapı Kredi	Salya (saliva)	Retelling, Sequencing, Summarising	5-6, 19-20, 29-30
19. Bir dostluk masali (A story of Friendship)	Author: Susanna Isern	Ucanbalik	Boynuz (horn)	Retelling, Sequencing, Summarising	3-4, 15-16, 23-24
20. Ben sandalye degilim (I am not a chair)	Author: Ross Burach	Beyaz Balina	Benek (spot)	Retelling, Sequencing, Summarising	1-2, 16, 35-36
21. Koyunlar Krali 1. Louis Louise 1, King of the Sheep	Author: Olivier Tallec	Hep Kitap	Taht (throne)	Retelling, Sequencing, Summarising	3-4, 21-22, 29-30

22. Bir dakika (One minute)	Author: Somin Ahn	Abm	Tohum (seed)	Retelling, Sequencing, Summarising	2, 10, 23-24
23. Kar Masali (Snow Tale)	Author: Elif Yemenici	Yapı Kredi	Baykus (owl)	Retelling, Sequencing, Summarising	11-12, 27-28, 43-44
24. Kirpi ile Kestane (hedgehog and chestnut)	Author: Feridun Oral	Yapi Kredi	Kestane (chestnut)	Retelling, Sequencing, Summarising	4, 18, 28
25. Uc kedi bir dilek (Three cats one wish)	Author: Sara Sahinkanat	Yapi Kredi	Dam (rooftop)	Retelling, Sequencing, Summarising	1-2, 17-18, 21
26. Benekli (spotted – speckled)	Author: Bilgin Adali	Yapi Kredi	Dalmacyali (dalmation)	Retelling, Sequencing, Summarising	9-10, 17-18, 27-28
27. Benim atim farkli (My horse is different)	Author: Esin Bacaci Taner	Timas Cocuk	Eyer (saddle)	Retelling, Sequencing, Summarising	22-23, 28-29, 34
28. Hosgeldiniz (Welcome)	Author: Barroux	Redhouse kidz	Dalga (wave)	Retelling, Sequencing, Summarising	3-4, 9-10, 19-20
29. Tombik ayi hastalaninca (Bear feels sick)	Author: Karma Wilson and Jane Chapman	Pearson	Magara (cave)	Retelling, Sequencing, Summarising	9, 25, 28-29
30. Gokkusagini kovalayan kedi (Cat chasing the rainbow)	Author: Filiz Ozdem	Yapi Kredi	Sirk (circus-ring)	Retelling, Sequencing, Summarising	7-8, 21-22, 29-30
31. Kutuphanedeki Aslan (Library Lion)	Author: Michelle Knudsen	Ucanbalik	Ansiklopedi (Encyclopedi)	Retelling, Sequencing, Summarising	12, 17-18, 35-36
32. Kasal (Spork)	Author: Kyo Maclear and Isabelle Arsenault	Hep Kitap	Pasakli (dowdy)	Retelling, Sequencing, Summarising	2, 9, 27-28
33. Gergedanlar Krep Yemez	Author: Anna Kemp	Pearson	Pankek (pancake)	Retelling, Sequencing, Summarising	7, 25, 28

(Rhinos don't eat pancakes)					
34. Cesur Tavsan Hopi (Brave Rabbit Hopi)	Author: Nicola Kinnear	Organik Kitap	El feneri (flashlight - electric torch)	Retelling, Sequencing, Summarising	2, 16, 25-26
35. Arkadaslar (Friends)	Author: Sophie Bellier	Cicek Kitaplari	Gri (Grey)	Retelling, Sequencing, Summarising	1-2, 13-14, 19-20
36. Dombili ve Nine (Mog and the Granny)	Author: Judith Kerr	Hep Kitap	Baston (walking stick)	Retelling, Sequencing, Summarising	4, 15, 28-29
37. En Sevdigim Oyuncak (My favorite toy)	Author: Elif Yemenici and Dogan Gunduz	Yapi Kredi	Kepce (ladle-scoop)	Retelling, Sequencing, Summarising	1-2, 9-10, 27-28
38. Kedi Adasi (Cat Island)	Author: Behic Ak	Can Cocuk	Ada (Island)	Retelling, Sequencing, Summarising	1-2, 13-14, 25-26
39. Kipir kipir (Naughty toes)	Author: Ann Bonwill	Marsik Kitap	Bale (Ballet)	Retelling, Sequencing, Summarising	1-2, 9-10, 23
40. Farkli ama ayni (Differen but Same)	Author: Feridun Oral	Yapi Kredi	Kaval (pipe)	Retelling, Sequencing, Summarising	7, 17, 23
41. Annemin Cantasi (My Mom's Bag)	Author: Sara Sahinkanat	Yapi Kredi	Yelken (Sail)	Retelling, Sequencing, Summarising	1-2, 11-12, 23-24
42. Benekli Faremi Gordunuz mu? (Have You Seen My Spotted Mouse?)	Author: Feridun Oral	Yapi Kredi	Kazan Boiler - Kettle	Retelling, Sequencing, Summarising	5-6, 23-24, 29-30
43. Yavru Ahtapot Olmak Cok Zor (Difficult to Be an Octopus)	Author: Sara Sahinkanat	Yapi Kredi	Ahtapot (Octopus)	Retelling, Sequencing, Summarising	3-4, 9-10, 17-18
44. Bil Bakalim Seni Ne Kadar	Author: Sam McBratney	Ucanbalik	Nehir	Retelling,	4-5, 14-15, 24-25

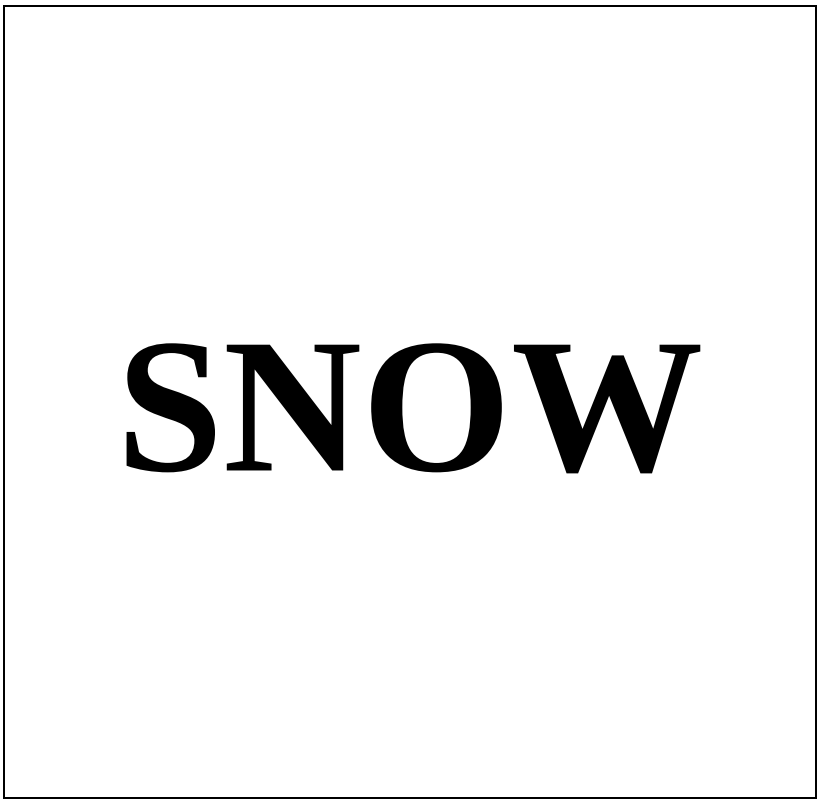
Seviorum (Guess How Much I Love You)			(River)	Sequencing, Summarising	
45. Muhendis, Yagmus, Deniz (Engineer, Rain, Sea)	Author: Andrea Beaty	Ucanfil	Siginak (Shelter)	Retelling, Sequencing, Summarising	1-2, 13-14, 27-28
46. Evdeki Kim (Who is at home)	Author: Marisa Vestita	Cicek Kitaplar	Kitaplik (Library)	Retelling, Sequencing, Summarising	1-2, 15-16, 25-26
47. Nokta (The Dot)	Author: Peter Reynolds	Altin Kitaplar	Nokta (Point)	Retelling, Sequencing, Summarising	6, 17-18, 26
48. Mis Gibi (ish)	Author: Peter Reynolds	Altin Kitaplar	Vazo (Vase)	Retelling, Sequencing, Summarising	6, 13-14, 26
49. Benden Bir Tane Daha Olsa (So Few of Me)	Author: Peter Reynolds	Altin Kitaplar	Takim (Team)	Retelling, Sequencing, Summarising	1, 14, 20
50. Tirsak Sincap (Scaredy Squirrel)	Author: Melanie Watt	Marti	Sincap (Squirrel)	Retelling, Sequencing, Summarising	1-2, 11-12, 29
51. Benim Kucuk Kardesim (My Litlle Sibling)	Author: Cristian Jelibols	Cicek Kitaplar	Fıçı (Barrl)	Retelling, Sequencing, Summarising	1, 24, 32
52. Dedecigimi Seviyorum Cunku (Why I Love My Grandpa)	Author: Dabiel Worth	Cicek Kitaplar	Komik (Rock)	Retelling, Sequencing, Summarising	1, 11-12, 29
53. Beklenmedik Misafir (Unexpected Guest)	Author: Feridun Oral	Yapi Kredi	Ceviz (Walnut)	Retelling, Sequencing, Summarising	6, 20, 24
54. Kedis'in Armagani (Kedis's Gift)	Author: Aytul Akal	Is Bankasi	Armagan (Gift)	Retelling, Sequencing, Summarising	6-7, 25, 30
55. Kamp (Camp)	Author: Heather Amery and Stephen Cartwright	Is Bankasi	Cadir (Tent)	Retelling, Sequencing, Summarising	8, 12, 24

56. Traktor Macerasi (Tractor Adventure)	Author: Heather Amery and Stephen Cartwright	Is Bankasi	Traktor (Tractor)	Retelling, Sequencing, Summarising	7, 12, 15
57. Kirda Piknik (Picnic)	Author: Heather Amery and Stephen Cartwright	Is Bankasi	Makinist (Machinist)	Retelling, Sequencing, Summarising	4, 11, 14
58. Ac Tirtil (The Very Hungary Caterpillar)	Author: Eric Carle	Mavi Bulut	Tirtil (Caterpillar)	Retelling, Sequencing, Summarising	3, 7-8, 13-14
59. Minik Tohum (The Tiny Seed)	Author: Eric Carle	Kuraldisi Cocuk	Okyanus (Ocean)	Retelling, Sequencing, Summarising	1-2, 15-16, 24
60. Kafasi Karisik Bukalemun (The Mixed-up Chameleon)	Author: Eric Carle	Kuraldisi Cocuk	Bukalemun (Chameleon)	Retelling, Sequencing, Summarising	1-2, 25-26, 29-30

Appendix 3: Weekly Groups of the Storybooks and Vocabs

Group 1	Group 2	Group 3	Group 4
1. Red Apple (Snow) 2. Nobody will get cold this winter (sled-sledge) 3. Stripes the Cat Tiger (Polar Bear) 4. The Snow Storm (Sheep Pen) 5. Lunchtime (Wolf)	1. The Paper Dolls (Alligator) 2. Who Does My Grandmother Look Like? (Lamb) 3. Snow Tale (Jungle) 4. Difficult to Be an Octopus (Octopus) 5. Scaredy Squirrel (Squirrel)	1. Hero Firefighters (Firefighter) 2. Who's afraid of little red riding hood (Hunter) 3. Picnic (Machinist) 4. Tractor Adventure (Tractor) 5. Naughty Toes (Ballet)	1. Secret Sky Garden (Flute) 2. The girl who never made mistake (Skate – Roller skate) 3. The Smallest Gift of Christmas (Telescope) 4. Brave Rabbit Hopi (flashlight - electric torch) 5. Different but Same (Pipe)
Group 5	**Group 6**	**Group 7**	**Group 8**
1. Little Bear and Wild Pear Tree (Wild pear) 2. Hedgehog and Chestnut (Chestnut) 3. Rhinos Don't Eat Pancakes (Pancake) 4. Unexpected Guest (Walnut) 5. My favourite toy (Ladle - Scoop)	1. Three Cats One Wish (Rooftop) 2. Have You Seen My Spotted Mouse? (Boiler –Kettle) 3. Who is at home (Library) 4. Ish (Vase) 5. My Little Sibling (Barrel)	1. The Mixed-up Chameleon (Chameleon) 2. The Very Hungary Caterpillar (Caterpillar) 3. Spotted – speckled (Dalmatian) 4. My Mom's Bag (Sail) 5. Cat Island (Island)	- The day Watcher Amos got sick (Good friend – familiar) - Friends (Grey) - The Dot (Dot – Point)) - So Few of Me (Team) - Kedis's Gift (Gift)
Group 9	**Group 10**	**Group 11**	**Group 12**
1. Red Winged Owl (Wing) 2. Three cats and a monster (Saliva) 3. A story of Friendship (Horn) 4. My horse is different (Saddle) - Cat chasing the rainbow (Circus - Ring)	1. Welcome (Wave) 2. Bear feels sick (Cave) 3. Guess How Much I Love You (River) 4. The Tiny Seed (Ocean) 5. Engineer, Rain, Sea (Shelter)	1. Cloud entering the skyscraper (Skyscraper) 2. One minute (Seed) 3. My Little Sibling (Barrel) 4. Louise 1, King of the Sheep (Throne) 5. Library Lion (Encyclopedi)	1. Tailless (In curls) 2. Spork (Dowdy) 3. Why I Love My Grandpa (Rock) 4. I am not a chair (Spot) 5. Mog and the Granny (Walking stick)

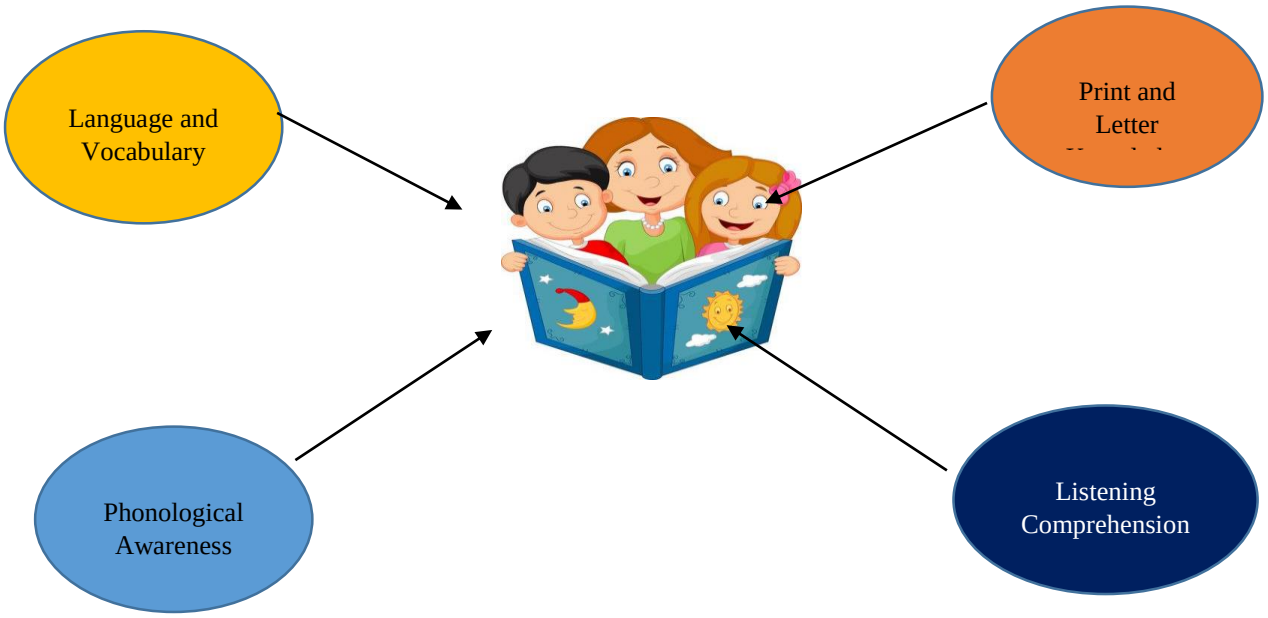
Appendix 4: Sample Vocabulary



Appendix 5: Sample Narrative Work

Appendix 6: Intervention Instruction of the DRP

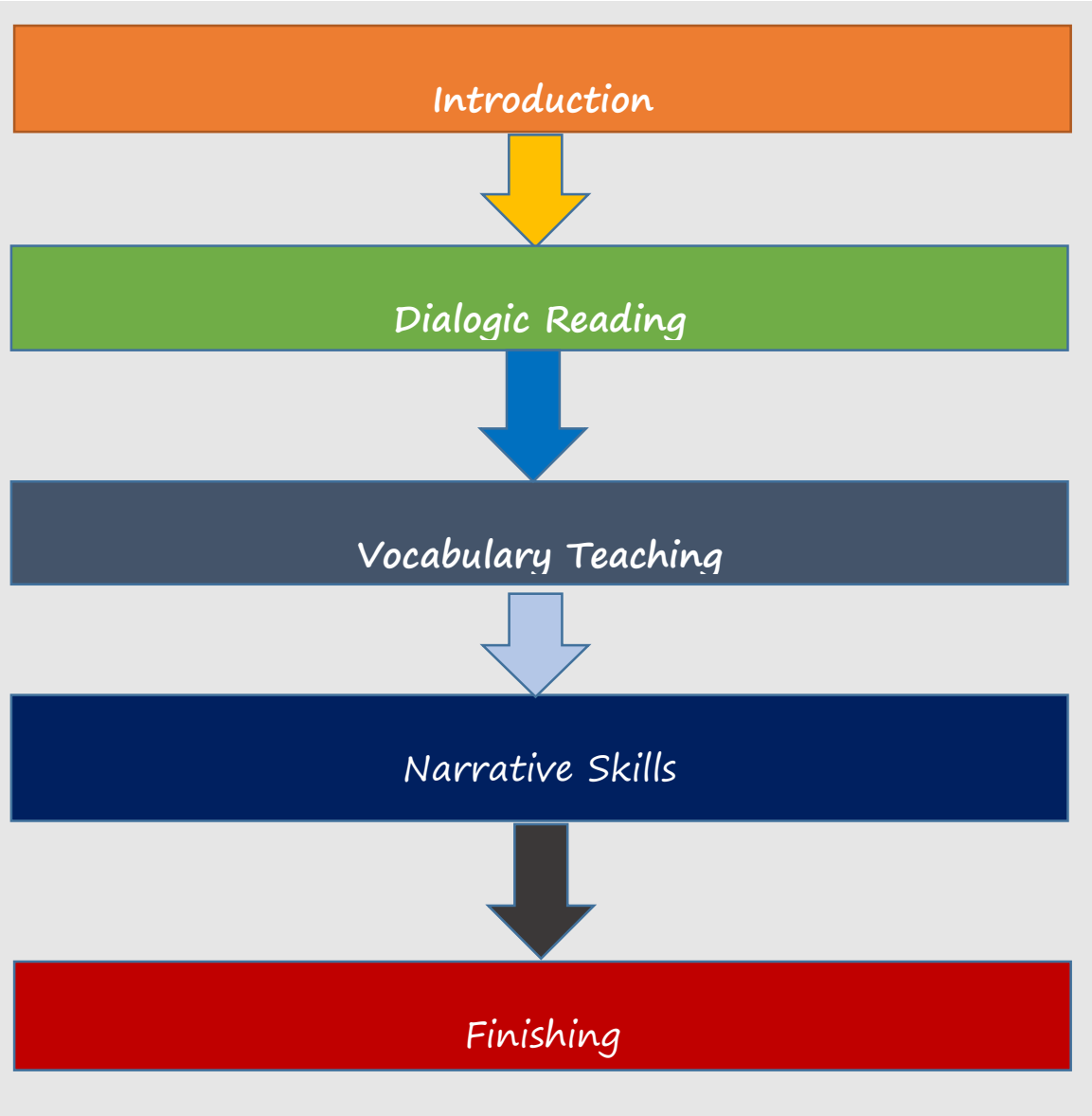
DIALOGIC READING PROGRAM - INTERVENTION INSTRUCTION



This guide booklet includes information about implementing of the Dialogic Reading Program. Each steps of the program are introduced in detailed. The booklet is provided for you to conduct the sessions with ease. Please follow the instructions.

Session 1

Overview



Step 1 – Introduction (2 Minutes)

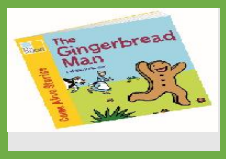
- Before you start the session, try and settle your child and get him/her ready. You can prepare conduct the session in a comfortable room, with TV off.
- Explain to your child that you are going to do some special things each day where you are going to look at some books together and talk about some words and pictures.

You could say:

- *We are going to share a special time today. We are going to read a funny book, learn new words and look some pictures.* ***If we manage to do all of the activities then you will get to choose a reward sticker.***
- *Let's have some fun!*

- Then, start to read book with him/her.

Step – 2 Dialogic Reading (15 Minutes)



- Attract your child attention to the book. Read the title of the book, and point it while reading. Read name of the author and point it while reading.

You could say:

- *There is a funny book here. There are different pictures on the cover page. Look, there is a rabbit in a jungle. I wonder what the title of the book?*
- *Let's read to learn what it is!*
- *Now, I am going to read the title of the book. It is Red Apple (pointing when reading).*
- *You know each book is written by a person or people. The name of author of this book is Feridun Oral (pointing while reading).*

- Talk about the pictures on the cover page, and ask "wh" questions.

You could say:

- *Look at the cover page?*
- *What happens here?*
- *Who is there?*
- *Where is this place? Yes, as you said. There is a rabbit, looking at an apple tree. There is also snowy weather.*

➢ Take your child's guesses about the content.

You could say:

- *What do you think about the rabbit? What will it make?*

➢ Expand your child talks, and make him/her curious about the content.

You could say:

- *(After getting guesses) Thank you for sharing your ideas. As you guessed, the rabbit could get cold because weather is snowy. It could be also hungry, right?*
- *Let's read the first page to learn what our sweet rabbit will experience!*

➢ Read the first page, and respond your child's guesses about the first page.

You could say:

- *Well done! As you mentioned the weather is cold and the rabbit is getting cold. It is also hungry.*

➢ Take your child guesses about events in the next pages.

You could say:

- *How will the rabbit feed itself?*
- *(After getting guesses) Thank you for sharing your ideas. As you said, there is an apple on the tree. It may reach the apple to feed itself.*
- *Let's read the next page to learn!*

➢ Read the next page and give feedback about his/her guesses.

You could say:

- *Well done! As you said, the rabbit tries to eat the apple but it couldn't.*
- *How will it deal with?*

➢ Explain meaning of the unknown words in the book.

You could say:

- *Look! There is another animal. Its name is jerboa.*

- Ask questions that help your child to link the content of the book to daily life.

You could say:

- *Have you ever seen a jerboa before?*

- Take your child guesses about events in the next pages until the story ends.
- Read the next pages and give feedbacks about his/her guesses until the story ends.
- After reading the last page, ask open-ended questions that help your child to create an alternative ending.

You could say:

- *If you were the rabbit, what would you do to reach the apple?*
- *And how would you share it to other animals?*

- Make comment about his/her ending.

You could say:

- *You can also do …… to reach the apple.*
- *You can also make ……. to share it.*

Step – 3 Vocabulary Teaching (5 Minutes)

- Take the card of the targeted word at the end of the book.

You could say:

- *Now, we are going to find our special word today. It is at the end of the story. Let's find it!*

- Introduce the new word. Prompt your child to say the word with you. Give your child lots of praise for trying. If he/she doesn't want to say it here, move on.

You could say:

- *Our special word is Jungle. Now, tell with me! Well done! You said Jungle.*

- Find the word in the story and read the sentence which has the word in it. Use the picture in the book to explain the word.

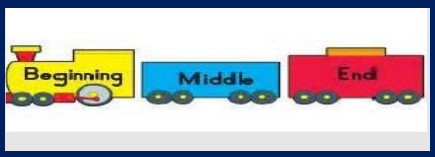
You could say:

- *Let's find our special word in the story. Here it is! It says: "…a little rabbit lives in a JUNGLE". A JUNGLE is where it lives. Look, the JUNGLE has flowers, trees and greens, (point to the pictures as you name them and pause to allow your child to name them if he/she can).*
- Show again your child the dictionary card of the "JUNGLE" and give your child a definition of the word.

You could say:

- *The "JUNGLE" is written like that. Let's stick it to its picture one the page.*

Step – 4 Narrative Skills (5 Minutes)



- Mix up the 3 story sequencing pictures and put them in front of your child. Explain that the pictures are from the story and that they need to be put into the right order to show what happened in the story. Work with your child to put the pictures in order. Provide as much support as needed.

You could say:

- *These pictures are from our story. One of them shows what happened at the BEGINNING of the story which means it happened FIRST. One shows what happened NEXT, in the MIDDLE of the story. The LAST picture shows what happened at the END; this comes LAST. Choose a picture for us to look at FIRST. What is happening in this picture? Did this happen FIRST or LAST? Was it at the BEGINNING, in the MIDDLE, or at the END? (Repeat for the other two pictures).*
- When you have finished, look back in the book together to check if they are in the right order.

You could say:

- *Thank you for sequencing the pictures. Let's look at book to check pictures' order.*
- Give your child lots of praise.

You could say:

- *Well done! You did perfect*

Step – 5 Finishing (3 Minutes) 

- Review the session and praise your child for hard working today.

You could say:

- *Today, we read "Red Apple" book together. Then, we learned "Jungle" word and looked some pictures about the book.*

- Give him/her a sticker for sticker chart.

You could say:

- *Throughout our work, you helped me too much. So, you won this sticker.*

- Tell him/her that you are looking forward to more special time with tomorrow's session.

You could say:

- *I am looking forward to have more special time with tomorrow's work.*

Appendix 7: Ethical Approval for the Feasibility & Acceptability Study

The Secretariat

University of Leeds

Leeds, LS2 9JT

Tel: 0113 343 4873

Email: ResearchEthics@leeds.ac.uk

UNIVERSITY OF LEEDS

Davut Aslan

School of Education

University of Leeds

Leeds, LS2 9JT

Business, Environment and Social Sciences joint Faculty Research Ethics Committee (AREA FREC)

17.09.2019

Dear Davut

Title of study:	**The feasibility and acceptability of a parent-delivered Dialogic Reading Program for Turkish Pre-schoolers**
Ethics reference:	**AREA 18-200**
Grant reference:	**201282714**

I am pleased to inform you that the above research application has been reviewed by the Social Sciences, Environment and LUBS (AREA) Faculty Research Ethics Committee and following

receipt of your response to the Committee's initial comments, I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 18-200 Davut Aslan - Feasibility Ethical Review Form.doc	2	11/09/19
AREA 18-200 Davut Aslan - Fieldwork Risk Assessment.docx	1	26/07/19

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at http://ris.leeds.ac.uk/EthicsAmendment.

Please note: You are expected to keep a record of all your approved documentation and other documents relating to the study, including any risk assessments. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at http://ris.leeds.ac.uk/EthicsAudits.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Jennifer Blaikie

Senior Research Ethics Administrator, the Secretariat

On behalf of Dr Matthew Davis, Chair, AREA Faculty Research Ethics Committee

CC: Student’s supervisor(s)

Appendix 8: Ethical Approval for the Pilot Randomized Controlled Trial

The Secretariat

University of Leeds

Leeds, LS2 9JT

Email: ResearchEthics@leeds.ac.uk

UNIVERSITY OF LEEDS

Davut Aslan

1.20 Hillary Place - School of Education

University of Leeds

Leeds, LS2 9JT

Business, Environment and Social Sciences joint Faculty Research Ethics Committee (AREA FREC)

28 February 2023

Dear Davut

Title of study:	Determining the Effectiveness of a Dialogic Reading Program for Pre-schoolers
Ethics reference:	**AREA 19-066**

I am pleased to inform you that the above research application has been reviewed by the Business, Environment and Social Sciences joint Faculty Research Ethics Committee and following receipt of your response to the Committee's initial comments, I can confirm a

favourable ethical opinion as of the date of this letter. The following documentation was considered:

The committee thanked you for engaging so constructively with the committee's comments and providing clear responses.

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at http://ris.leeds.ac.uk/EthicsAmendment.

Please note: You are expected to keep a record of all your approved documentation and other documents relating to the study, including any risk assessments. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at http://ris.leeds.ac.uk/EthicsAudits.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Clare E Skinner

On behalf of Dr Matthew Davis, Chair, AREA Faculty Research Ethics Committee

CC: Student's supervisor(s)/ Faculty Research and Innovation Office

Appendix 9: Ethical Approval for the Amended of the Pilot Randomized Controlled Trial

AREA 19-066 (Amd 1 – 07/20) - Determining the Effectiveness of a Dialogic Reading Program for Pre-schoolers

NB: All approvals/comments are subject to compliance with current University of Leeds and UK Government advice regarding the Covid19 pandemic, as well as any local restrictions where the study is being carried out regarding in-person data collection and travel.

I am pleased to inform you that the above research ethics application has been reviewed by the Business, Environment and Social Sciences (AREA) Faculty Research
Ethics Committee and on behalf of the Chair, I can confirm a favourable ethical opinion based on the documentation received at date of this email.

Please retain this email as evidence of approval in your study file.

Please notify the committee if you intend to make any further amendments to the original research as submitted and approved to date. This includes recruitment methodology; all changes must receive ethical approval prior to implementation. Please see https://leeds365.sharepoint.com/sites/ResearchandInnovationService/SitePages/Amendments.aspx or contact the Research Ethics Administrator for further information (researchethics@leeds.ac.uk) if required.

Ethics approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas.
The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, risk assessments and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

I hope the study goes well.

Best wishes

John Hardy

On behalf of Matthew Davis, Chair, AREA FREC

Appendix 10: Parent Sample Demographic in Feasibility & Acceptability Study

Mother Age	**Father Age**	**Mother Occupation**	**Father Occupation**	**Mother Education**	**Father Education**
30	34	Cook	Factory worker	Secondary School	Secondary School
36	40	Hairdresser	Factory worker	High School	High School
36	39	Homemaker	Factory worker	High School	Secondary School
24	29	Homemaker	Factory worker	Secondary School	Secondary School
29	34	Homemaker	Factory worker	High School	Secondary School
27	33	Homemaker	Factory worker	High School	High School
27	34	Homemaker	Public officer	High School	High School
25	34	Homemaker	Worker	Secondary School	High School

Appendix 11: Child Sample Demographic in Feasibility & Acceptability Study

Code	Age	Gender
1	49 months	Male
2	54 months	Male
3	56 months	Male
4	48 months	Male
5	48 months	Male
6	56 months	Female
7	48 months	Female
8	44 months	Female

Appendix 12: Demographic Information Form for Parents in Feasibility & Acceptability Study

This form consists of two parts including questions about parents and their children.

Questions for Parents		**Mather**	**Father**
Name:			
Surname:			
Age:			
Occupation:			
Educational Background	**Illiterate**		
	Primary school		
	Secondary school		
	High school graduate		
	College / university or higher		

Questions for Child	
What is your child's name and surname?	
What is date of birth of your child?	
What is your child's gender	**Male:**
	Female:
Does your child has sibling(s)? - **If yes, please specify their number:**	
What is the name of preschool your child attends?	

Appendix 13: Interview Schedule fort the F&A Study

There are some open-ended questions below to be asked to parents at the end of the study in order to determine their thoughts, suggestions and ideas about implementation process of the DRP. These questions will be asked by the researcher using semi-structured interview technic.

Questions
General: 1. Could you share your general views, experiences and observations about the DRP?
Benefit and Enjoys and Sustainability: 2. Do you think the program an enjoyable and interesting home-based activity for children? Please explain why/ why not. 3. Do you think the program a useful home-based activity for parent-child interaction? Please explain why/ why not. 4. Will you continue to implement the program with your child after this study? Please explain why/ why not. 5. What else (support, materials etc.) do you need to implement the program more effectively?
Challenges and Necessities 6. Did you or your chid experience any problem in the process? If yes, please describe. 7. Do you think there are any potential disadvantages of the program for children? If yes, please describe.
Parent Training: 8. Do you think the parent training was clear enough for implementing the program? Please explain why/ why not. 9. Do you think the number of parent training sessions was enough for implementing the program? Please explain why/ why not. 10. Do you think the length of parent training sessions was enough for implementing the program? Please explain why/ why not.
Time:

11. The program is organized as a 12-week intervention. Do you think this time period should be increased or decreased or is about right? Please explain why/ why not. 12. The program includes 60 sessions. Do you think this number of sessions should be increased or decreased or is about right? Please explain why/ why not? 13. The sessions of the program take 30 minutes. Do you think this length of sessions should be increased or decreased or is about right? Please explain why/ why not?
Content 14. The program is implemented as shared book reading, vocabulary teaching and narrative skills, respectively. Do you have any comments about this content and sequencing?

Appendix 14: Procedural Fidelity Checklist

The Steps Expected by the Implementer	Yes	No
The researcher introduced research aims.		
The researcher introduced research design.		
The researcher introduced time schedule.		
The researcher explained a brief overview of the development of language and early literacy skills in preschool years.		
The researcher explained the role of a rich HLE in the development of early literacy skills.		
The researcher explained the impact of well-developed early literacy and language skills in preschool years on later reading achievement.		
The researcher introduced the DRP's content and materials.		
The researcher explained the DRP's implementation .		
The researcher became a model to parents, following the intervention instruction.		
The researcher gave feedback to parents based on the videos recorded during the feasibility study.		

Appendix 15: Demographic Information Form for Parents in the Randomized Controlled Trial

This form consists of two parts including questions about parents and their children.

Questions for Parents		**Mather**	**Father**
Name:			
Surname:			
Age:			
Occupation:			
Educational Background	**Illiterate**		
	Primary school		
	Secondary school		
	High school graduate		
	College / university or higher		

Questions for Children	
What is your child's name and surname?	
What is date of birth of your child?	
What is your child's gender	**Male:**
	Female:
Does your child has sibling(s)? **If yes, please specify their number:**	
What is the name of preschool your child attends?	

Appendix 16: Demographic Information of Parents in the Intervention Group of the Pilot Randomized Controlled Trial

Mother Code	Father Code	Mother Age	Father Age	Mother Occupation	Father Occupation	Mother Education	Father Education
1	1	31	41	Home maker	Public officer	High school	High school
2	2	30	34	Cook	Worker	High school	High school
3	3	39	41	Home maker	Worker	High school	Secondary school
4	4	25	34	Home maker	Worker	Secondary school	High school
5	5	42	45	Home maker	Tailor	Primary school	Secondary school
6	6	27	33	Home maker	Worker	College	College
7	7	27	34	Home maker	Officer	High school	University
8	8	36	39	Home maker	Security	Secondary school	High school
9	9	29	32	Home maker	Worker	College	College
10	10	24	29	Home maker	Worker	High school	Secondary school
11	11	43	44	Home maker	Officer	High school	Master

12	12	36	39	Home maker	Worker	High school	Secondary school
13	13	36	40	Hairdresser	Worker	High school	High school
14	14	29	30	Home Maker	Unemployed	High school	Secondary School
15	15	30	32	Home maker	Worker	Secondary school	Secondary school
16	16	28	34	Home maker	Worker	Secondary school	Secondary school
17	17	37	35	Accountant	Public officer	High school	High school
18	18	29	30	Technician	Public Officer	High school	High school
19	19	26	26	Home maker	Worker	High school	High school
20	20	31	36	Home maker	Worker	High school	Secondary school
21	21	34	39	Home maker	Worker	Primary school	Primary school
22	22	27	29	Home maker	Worker	Secondary school	Primary school
23	23	36	31	Home maker	Officer	Secondary school	High school
24	24	26	32	Home maker	Technician	Secondary school	High school
25	25	37	43	Home maker	Worker	Primary school	Primary school

Appendix 17: Demographic Information of Parents in the Control Group of the Pilot Randomized Controlled Trial

Mother Code	Father Code	Mother Age	Father Age	Mother Occupation	Father Occupation	Mother Education	Father Education
1	1	35	37	Public officer	worker	College	College
2	2	33	41	Home Maker	Worker	College	High school
3	3	31	36	Home maker	Worker	High school	High school
4	4	40	42	Home Maker	Worker	High School	High School
5	5	29	33	Public officer	Public officer	College	College
6	6	35	38	Home Maker	Worker	Primary school	Secondary School
7	7	35	40	Home Maker	Unemployed	High school	High School
8	8	40	41	Worker	Unemployed	High school	Secondary School
9	9	26	31	Home Maker	Worker	Secondary school	College
10	10	28	33	Home Maker	Worker	High school	Primary school
11	11	32	40	Home Maker	Worker	Secondary school	Primary school

12	12	30	38	Home Maker	Chauffeur	College	College
13	13	43	46	Home Maker	Worker	Secondary School	High School
14	14	38	46	Technician	Teacher	College	College
15	15	28	30	Home Maker	Worker	College	Secondary school
16	16	27	29	Home Maker	Unemployed	Primary school	High school
17	17	36	40	Home Maker	Shop Keeper	High school	Secondary school
18	18	26	38	Home maker	Shop keeper	High school	Primary school
19	19	37	43	Home maker	Shop keeper	Primary school	High school
20	20	26	33	Home Maker	Farmer	Primary School	High School
21	21	39	40	Home Maker	Unemployed	High School	High School
22	22	31	38	Home Maker	Worker	High School	High School
23	23	27	37	Home Maker	Worker	High School	High School
24	24	31	36	Hair Dresser	Worker	High School	High School
25	25	26	30	Worker	Worker	High school	High school

Appendix 18: Demographic Information of Children in the Intervention Group of the Pilot Randomized Controlled Trial

Code	Gender	Age
A	Male	56 months
B	Male	56 months
C	Male	55 months
D	Male	56 months
E	Female	56 months
F	Female	56 months
G	Female	50 months
H	Female	56 months
I	Male	50 months
J	Male	51 months
K	Female	55 months
L	Male	56 months
M	Female	55 months
N	Female	56 months
O	Female	56 months
P	Male	56 months
Q	Male	56 months
R	Male	54 months
S	Male	51 months
T	Male	56 months
U	Female	56 months
V	Male	51 months
W	Male	56 months

X	Male	56 months
Y	Female	56 months

Appendix 19: Demographic Information of Children in the Control Group of the Pilot Randomized Controlled Trial

Code	Gender	Age
A	Female	54 months
B	Male	53 months
C	Female	56 months
D	Male	56 months
E	Male	56 months
F	Male	56 months
G	Male	56 months
H	Female	56 months
I	Male	56 months
J	Female	56 months
K	Female	54 months
L	Male	55 months
M	Male	52 months
N	Female	56 months
O	Female	56 months
P	Male	52 months
Q	Female	54 months
R	Male	56 months
S	Female	56 months
T	Male	55 months
U	Female	56 months
V	Female	56 months

Appendix 20: The Home Early Literacy Environment Questionnaire

Dear Mother/Father

This questionnaire is prepared to assess children's early literacy environment at homes. The information that you will provide will not be used without scientific aims and will not be disclose to any person or organization.

Thank you for contributions

In the following items, select the option that suits you best, considering the literacy activities in your home.

A.

1. How many books does your child have?

( ) 0-2 ( ) 3-10 ( ) 11-20 ( ) 20-40 ( ) more than 40

2. How many books do you have?

( ) 0-2 ( ) 3-10 ( ) 11-20 ( ) 20-40 ( ) more than 40

3. How often do you read to your child?

( ) Never ( ) Sometimes ( ) Once a week ( ) Once a day ( ) Several times a day

4. How old was your child when you started reading to her?

( ) 0-6 months ( ) 7-12 months ( ) 13 month – 2 years ( ) 2-4 years ( ) after 4 years

( ) I have not started yet

5. How often does your child ask you to read to him / her?

( ) Never ( ) Sometimes ( ) Once a week ( ) Once a day ( ) Several times a day

6. How often does your child see you reading in a week?

( ) Never ( ) 1-2 times ( ) 3-4 times ( ) 5-6 times ( ) Everyday

7. How much do you like reading?

( ) Never ( ) A little ( ) Much

8. How long does your child watch television in a day?

( ) 0-15 minutes ( ) 16-30 minutes ( ) 31-60 minutes ( ) 1-2 hours ( ) More than 2 hours

In the items below, select the option that best suits you, taking into account your activities with your child

	Never	Sometimes	Once a week	Once a day	Several times a day
B.					
9. How often do your child write words?					
10. How often does your child ask you to write for him/her?					
11. How often does your child write letters?					
12. How often does your child ask you how to spell words?					
13. How often does your child draw something?					
C.					
14. How often does your child try or play rhyming word games with you or others??					
15. How often do you play rhyming word games with your child?					
16. How often do you show your child words and signs, such as restaurant names or street signs? (Burger King's logo, “Stop” sign, etc.)					
17. How often does your child ask you for help in reading the words on food packages or street signs?					
18. How often does your child say child rhymes?					
19. How often do you try to teach him/her the names of the letters when you read to your child?					
D.					
20. When you read books to your child, how often does your child automatically show or talk about the pictures?					
21. When you read books to your child, how often does your child ask questions about characters or events?					

22. When reading books to your child, how often does your child complete the words or lines in the story? (when your child reads a book that is well-known, then says the next line or word before you read it)					
23. How often does your child pretend to read a book? Sitting with the book, saying similar words to the true story in the book.					

Appendix 21: Interview Schedule for the Pilot Randomized Controlled Trial

The first seven questions are about effects of the intervention on children's skills. The remaining two are about the effects of the COVID-19 on the implementation of the DRP.

1 – Could you share your general views, experiences and observations about the DRP?
2 - Do you think the program positively affected your child's receptive and expressive language? - *If yes, Why?*
3 – Do you think the program positively affected your child's vocabulary? - *If yes, Why?*
4 - Do you think the program positively affected your child's phonological awareness? - *If yes, Why?*
5 - Do you think the program positively affected your child's letter knowledge? - *If yes, Why?*
6 - Do you think the program positively affected your child's listening comprehension? - *If yes, Why?*
7 - Do you think the program positively affected your child's print awareness? - *If yes, Why?*