MOTHER-CHILD INTERACTIONS WHILE SHARING PRINT AND ELECTRONIC
VERSIONS OF BOOKS

By

Ji Eun Kim

B. Sc., Chung-Ang University, 1998
B. A., Kyung Hee University, 2000

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ABSTRACT

The purpose of this study was to compare (1) mother-child interactions in three different contexts: sharing a picture book in traditional paper format, sharing an electronic book in CD-ROM format and sharing an electronic book in video-clip format; (2) a mother’s interactions with her 7- and 3-year-old child; and (3) how children’s initiations differ according to age. Two boys and their mother from a middle class Korean family that recently immigrated to Canada were involved in this study. The texts for shared reading activities were provided in Korean. Four session-observations of each activity were videotaped, with a one-week interval, between sessions. The videotapes were transcribed and analyzed based on verbal event categories that emerged from the data and that were informed by the literature on shared book reading. The conversations between the mother and the child during shared reading were examined to find any predominant characteristics in the content of their talk.

Findings of the study include the following: (1) there were some differences in mother-child interactions across the three contexts and these seemed to be related to different formats and features of the books, (2) mother-child interactions during the shared reading differed according to the children’s ages, and (3) the children exhibited different initiations during the shared reading according to their ages.

The findings of this study suggest that different factors, such as medium of the text, the age of the children, and the children’s sociocultural experiences may be related to mother-child interactions during shared reading and may influence children’s home literacy practices. This study provides insight of the potential differences in mother-child interactions during shared reading, depending on the medium and the children’s ages.
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1. AN INTRODUCTION TO THE STUDY

1.1. Introduction

The importance of home literacy practices in young children’s literacy development has been stressed in the literature (Sulzby & Teale, 1991). Among various home literacy activities, parent-child shared reading is considered one of the most important activities for early literacy development (van Kleeck, 2004). Currently, young children use different kinds of technological media at home (Rideout, Vandewater & Wartella, 2003), so alongside print version of books, electronic books appear to be an integral part of some young children’s home literacy activities (Smith, 2002).

1.2. Problem Statement

For decades, the interaction between parent and child as it relates to early learning and development, has been studied. For example, Vygotsky (1978) stressed the importance of adult intervention in a child’s zone of proximal development. Within a child’s zone of proximal development, children can solve problems with an adults’ guidance that they cannot solve by themselves. Rogoff’s notion of apprenticeship and its impact on children’s learning in a sociocultural environment (1991), and Sigel’s distancing model in parental intervention (1984, 1993), also view the interaction between parents and children as an important aspect of childhood learning and development. These notions about the vital role a parent plays have been reflected in studies of the various areas of child development, such as language (Snow & Goldfield, 1983), literacy (Reese, 1995), and cognitive development (Sigel, 1984). Evidently, it is believed that parental intervention plays a crucial role as it pertains to child development.
In particular, parent-child interaction during shared book reading has been widely studied. Research into shared book reading has found diverse interactions, particularly when taking into account the different ages of the children (Martin, 1998), their culture (Bus, Leseman & Keultjes, 2000), and the types of text (Anderson, Anderson, Lynch & Shapiro, 2004). A few studies have been conducted with minority cultures and these have shown differences in parent-child interactions, depending on the child’s age. However, more studies are needed, as society in North America becomes more culturally diverse.

Moreover, some studies (e.g., Heath, 1983) have found that children from minority cultural groups are often at a disadvantage in school literacy. Therefore, it is necessary to develop a greater understanding of these children’s home literacy practices to connect their literacy experience at home with that of school. In addition, studying how parent-child interactions during shared book reading are shaped by the child’s age will enhance our understanding about the relationship between children’s cognitive and literacy abilities, and parent-child interactions. However, there have not been many studies examining this subject.

Parents’ diverse interactions have also been observed in some other home activities, such as mealtimes (De Temple & Beals, 1991) and computer use (Shade & Watson, 1987; Worden, Kee & Ingle, 1987). As technology becomes more advanced, and home activities reflect these changes in technology, computer use is almost certainly bound to expand (Giauquinta, Bauer & Levin, 1993). In fact, home computers have increasingly become a part of many children’s daily lives. According to Rideout et al. (2003), 77 percent of US children, ages four to six, live in homes that have computers, and 70 percent of these children have experience with computer use. Even though young children’s proficiency
with home computers is rapidly increasing, parent-child interactions surrounding home computer usage, such as parent-child shared reading with an electronic book, have not been sufficiently studied. Only a few studies have addressed the topic of parent-child interactions during the shared reading of an electronic book. For instance, Worden et al. (1987) compared parents' teaching behaviors during children's literary activities with an alphabet book and with alphabet-learning software. They found that parents exhibited different frequencies and types of verbal guidance across activities. Another study showed different parent-child interactions during the sharing of various formats of problem-solving computer software. Shade and Watson (1987) compared mother-child interactions while working with different types of problem-solving software, namely open-ended (where users control the computer program) and close-ended (where computers control the user's computer use) applications. This study showed that mothers' verbal guidance differed during activities depending on what software format was used. However, since these studies were conducted in laboratory settings over a short period of time, they do not provide a thorough understanding of what occurs in a more naturalistic setting.

Many theorists and educators have posited the importance of a parent's role in early childhood development. If within the home, parents act as major teachers, it is imperative to study how parents enact this important role. However, most studies about parents' interactions with young children in shared book reading have involved mainstream parent-child dyads. Thus, as cultural diversity increases, a more thorough examination of minority culture parent-child interactions during home activities is necessary in order to have a greater understanding of minority culture children's home literacy practices.
Furthermore, there have not been sufficient studies focused on differences in parent-child interactions, when sharing texts in a medium other than traditional print books. Since young children are spending more and more time at their home computers (Rideout et al., 2003), electronic books have become a part of their daily home activities for many of them. Therefore, the study of parent-child interactions during shared reading of electronic books is needed in addition to the examination of shared reading of printed books in traditional paper format. Moreover, as only a few studies illustrate parent-child interactions during shared book reading depending on children's ages, studying these interactions with different aged children, during shared reading of print and electronic versions of books, will shed light on this important topic.

1.3. Purpose of the Study

The proposed study aims to analyze and describe a minority culture's parent-child interactions during their sharing of print and electronic versions of books. It is expected that it will expand our knowledge about minority culture mother-child interactions in three different activities and according to two different age groups.

The following questions will guide this study:

(1) Are there any differences or similarities in the types and frequency of mother-child interactions across the three contexts (a print book and two different versions of electronic books)? If so, what are they?

(2) Are there any differences or similarities in mother-child interactions between the two age groups in those activities? If so, what are the differences or similarities?
(3) Do children initiate interactions in the three contexts? If so, what are the differences or similarities in the way children initiate interactions depending on their ages?

1.4. Significance of the Study

During the last few decades, parent-child interactions and children's learning have received considerable attention from researchers. However, those studies have mostly focused on parent-child interactions with one child in a particular age group, in the mainstream culture, and during shared print book reading. Thus, there is a lack of understanding about parent-child interactions in different age groups, during shared reading with different media other than print books, and in minority cultural groups. In this study, these factors will be examined. This study will lead to an increased understanding of parent-child interactions, categorized by age, in a minority cultural group. This study should have implications for theory and practice.

1.5. Definition of Key Terms

The following terms are defined as follows for the purpose of this study.

1. Emergent literacy: Children's non-conventional reading and writing that contributes to their conventional literacy development (Sulzby & Teale, 1991).

2. Parent's mediation: Parents' provision of verbal or non-verbal guidance that focuses not only on the text but also goes beyond the text, in order to encourage a child's understanding. In the process of mediation, parents provide children chances to experience both successes and challenges (van Kleeck, 2004).

3. Children's initiations: Children's talk that takes the conversation in a new direction,
and elicits the parent’s response during shared reading.

4. Parent-child interactions: Verbal and nonverbal exchanges between a parent and a child during shared reading. Rogoff (1991) viewed both verbal and non-verbal dialogue as important communication events.

5. Immediate talk: Talk that focuses only on immediate contexts, such as illustrations or words in the text (De Temple, 2001).

6. Non-immediate talk: Talk that does not focus on immediate contexts but is related to non-immediate contexts, such as personal experience, general knowledge, inferences and prediction (De Temple, 2001).
2 REVIEW OF RELATED LITERATURE

2.1. Introduction

The review of literature will explore parent-child interactions during shared reading of print and electronic versions of books. In the first section, theories about parent’s interactions with children and children’s learning will be reviewed. In the second section, previous studies involving parents’ interventions and emergent literacy will be presented. A third section of this review will focus on parent-child interactions during shared book reading. Lastly, parent-child interactions during the sharing of electronic versions of texts in previous studies will be examined.

2.2. Theory and Models

2.2.1. Vygotskian sociohistorical perspective

Parents’ interactions with children and the relationship of such interaction to children’s development have received considerable attention over the last several decades. In fact, in many theories of learning, the importance of the role played by adults in children’s learning and development has been postulated. One prominent theory is Vygotsky’s sociohistorical perspective (1978). He considered children’s development in two different levels. One is the actual developmental level, which refers to children’s mental functions that they have obtained. The other is Zone of Proximal Development (ZPD), in which with an adult’s guidance, children can solve problems that they cannot solve by themselves. Moreover, he considered children’s mental development in ZPD as children’s learning. According to Vygotsky, adults’ interventions strongly encourage children’s learning in their ZPD which then helps to increase children’s actual level of development.
Thus, Vygotsky asserted that adults play an important role in children’s learning and
development.

2.2.2. The notion of apprenticeship

The importance of adult’s roles in children’s development is also an important concept in
Rogoff’s notion of apprenticeship (1991). Rogoff stressed that adults facilitate young
children’s learning and development in socioculturally acceptable ways. According to her,
children’s learning with adults’ guidance has especially been shown in children’s
language development, object explorations, construction, and remembering and planning.
Rogoff argued that sociocultural aspects, such as values and norms, in fact, influence
those adults’ facilitations that guide children’s learning and development. Therefore, she
regarded adults as important mediators of children’s learning.

2.2.3. Distancing Theory

In terms of adults’ guidance in children’s development, Sigel’s distancing theory (1984,
1993) posited three different levels of parents’ distancing acts that are “the behavioral
expressions of values and beliefs, and as such reflect the intentions and expectations of
parents for their child’s social and intellectual development” (Sigel, 1993, p. 146).
According to Sigel, a parent’s distancing acts, “an external source of discrepancy”,
stimulate a child’s use of related mental representational processes (Sigel, 1993, p. 143).
For example, in his theory, the concept of distancing can be defined as the gap between
the person’s cognition and the immediate environment of events. He also claimed that
parent’s higher level of distancing acts encourage children’s higher levels of cognitive
development (Sigel, 1993). For example, parent’s use of high-level distancing strategies
at home appeared to be related to children’s better performance in Piagetian tasks. Thus,
Sigel thought that parents play an important role in children's cognitive development. Theorists (Rogoff, 1991; Sigel, 1984, 1993; Vygotsky, 1978) consistently stress parents' roles in children's learning and development. They also acknowledge that parent's guidance in parent-child interactions is, in fact, influenced by cultural values and norms (Rogoff, 1991; Vygotsky, 1978). Thus, it is assumed that there are close relationships between culture and parents' facilitations in parent-child interactions.

2.3. Parents' mediation and emergent literacy

2.3.1. Emergent literacy

Young children's developing ability to read and write has been the focus of many studies because early literacy development is considered an important precursor for later literacy learning (McCardle, Scarborough & Catts, 2001). The notion of emergent literacy (Clay, 1967) has been widely used to describe young children's literacy development before schooling. Central to the concept of emergent literacy is that children begin to learn literacy through the use of non-conventional literacy forms before schooling (Sulzby & Teale, 1991). Moreover, emergent literacy theorists consider the various sociocultural aspects of young children's literacy development, including, young children's engagement in shared reading with their parents at home (Sulzby & Teale, 1991). Parent-child interactions during shared reading are socioculturally embedded. That is, different "value and purposes of literacy", "beliefs about child development and preliteracy learning" and "ways of talking with children" in different cultural groups influence these interactions that in turn are thought to affect young children's literacy development differently (van Kleeck, 2004, p. 179-184). Mason and Sinha's review (1993) outlines the
general perspectives of emergent literacy:

  Literacy emerges before children are formally taught to read. Literacy is defined to encompass the whole act of reading, not merely decoding. The child’s point of view and active involvement with emerging literacy constructs is featured. The social setting for literacy learning is not ignored (p. 141).

As Mason and Sinha (1993) state, emergent literacy views children as active learners, and considers sociocultural aspects to be an important part in children’s literacy development. These aspects of an emergent literacy theory reflect Vygotsky’s sociocultural perspectives. According to Vygotsky (1978), young children develop meaning-making and symbol use through sociocultural interactions. Thus, children learn not only the functional skills of literacy, but also the sociocultural meaning of literacy. That is, children’s literacy learning includes both learning the conventional use of written letters to read and write words and the culturally embedded meanings of the words and the meanings and functions of literacy itself.

As children’s primary sociocultural environment, conditions at home are crucial to their emergent literacy (e.g., Sulzby & Teale, 1991) which will be the basis of later literacy development at school. Many studies illustrate the relationship between children’s home literacy experience and literacy achievement at school (e.g., Heath, 1983). Heath’s ethnographic study (1983) involving homes from three different cultural communities (a mainstream cultural group and two different minority cultural groups) clearly illustrates that young children actually build their knowledge about language and literacy within their home environment before regular schooling. In her study, minority children’s home literacy experiences differed from academic literacy at school; the discrepancy between
the minority children’s home and school literacy experiences was problematic in terms of the children’s development of academic literacy at school. On the other hand, mainstream children had consistent literacy experiences, both at home and at school, which enhanced their development of academic literacy at school. Pellegrini (1991) also claimed that, as school literacy reflects mainstream cultural literacy use, children from the mainstream group have fewer difficulties than those from minority cultural groups whose home literacy experience differs from school literacy. Moreover, De Temple (2001) posited that children with high home support for literacy obtained the highest scores on kindergarten measures of language and literacy. Thus, early home literacy experience seems to be crucial for young children in order to build their background knowledge about literacy before schooling. With an understanding of the disadvantages of children from minority cultural groups in their school literacy learning, many researchers (e.g., Heath, 1983) emphasized the importance of connecting children’s literacy practices at home and at school.

2.3.2. Parent’s mediation

In the home environment, parents are often the major mediators in young children’s literacy development, and many theorists stress the importance of an adult’s role in children’s learning and development (e.g., Rogoff, 1991; Vygotsky, 1978). Parents’ mediation during shared book reading has been widely studied, particularly in relation to children’s language, literacy and cognitive development. From their meta-analysis, Bus, van Ijzendoorn and Pellegrini (1995) concluded that parent-child shared book reading experience appears to be related to young children’s language, literacy and reading achievement.
Parents’ mediation has been defined in several different ways in various studies. According to van Kleeck (2004), “in the book sharing, the term ‘mediation’ is often used to refer to the discussions about a book that go beyond the printed text (i.e., extratextual), that help the child understand the text” (p. 188). Moreover, van Kleeck indicated that, in many studies, an adult provides a wide range of verbal mediations, along a continuum from concrete to abstract, during book sharing. “Decontextualized talk” or talk that goes beyond the illustrations or works in the text is illustrative of parents’ abstract mediation. “Immediate talk” or talk that directs children to pay close attention to the immediate physical environment would be an example of parents’ concrete mediation.

2.3.3. The association between parents’ mediation and emergent literacy

Some studies illustrate a positive relationship between parents’ mediation and young children’s language development as it relates to later literacy development (Chaney, 1994). For instance, Wells (1985) examined 128 children over a 10 year period in order to investigate the relationship between home and school uses of language. He observed the language uses of children between the ages of 1 1/4 and 3 1/2 years during four different activities: looking at books, listening to a story read or told from a book, drawing and coloring, and writing. He found a positive relationship between listening to a story being read and children’s later academic literacy ability. According to Wells, children’s early experience with hearing and discussing a story helps children to obtain the oral language competence necessary to meet school language requirements. In addition, he found that many teachers and parents focused more on teaching the mechanics of literacy rather than meaning making from the text. However, as written communication requires decontextualization while reading and writing, children need to have the ability to
decontextualize the texts in addition to the mechanical knowledge of literacy in order to increase their ability to interpret the text. Thus, Wells asserted that children need adults' mediation to make the connection between themselves and the text, so the story can be meaningful for them. Such adult mediation appeared during discussions about the story in his study. Another study is Whitehurst et al.'s examination of 29 children (ages 21 to 35 months) and their parents (1988). Parent-child dyads were divided into experimental and control groups. Parents in the experimental group received instructions to increase the use of some open-ended questions and expansions, and to decrease the use of less challenging interventions, such as straight reading during shared book reading time. During a one-month home-based intervention, children's gains in language abilities were compared between two groups in a post-test. Children in the experimental group performed better on the post-test of expressive language ability than those in the control group. Similarly, Jordan, Snow and Porche (2000) conducted a study in middle-class communities with a total of 248 kindergarteners and their parents (71 in the control group and 177 in the experimental group). Parents in the experimental group received five, 1-month parent-training sessions instructing them to increase the frequency and quality of their language interactions during book-centered activities. In the post-test, children's gains in language scores in the experimental group were compared to the control group. Children in the experimental group achieved higher language scores than those in the control group. Thus, these studies indicate that there is a relationship between parents' mediation and young children's language development. Researchers (e.g., McCardle et al., 2001; Snow, 1983) suggested a relationship between children's early language abilities and later literacy abilities. McCardle et al. (2001) also found a significant correlation between verbal
abilities at ages two to four and later reading achievement.

Many studies have consistently shown some positive relationship between certain types of parents’ mediations and children’s emergent literacy development (e.g., Davidson & Snow, 1995; De Temple, 2001; Reese, 1995). In particular, the focus of many studies has been on the relationship between parent’s decontextualized talk during shared reading and young children’s literacy development. Parents’ decontextualized talk refers to the talk that requires children not to rely on the immediate physical environment, but to go beyond presented contextual information (De Temple & Beals, 1991; van Kleeck, 2004). In some studies, the term non-immediate talk is used instead of decontextualized talk; both terms are considered synonymous (De Temple & Beals 1991; van Kleeck, 2004).

Some examples of decontextualized/ non-immediate talk are “recollections of personal experience, comments, or questions about general knowledge or for drawing inferences and making predictions” (De Temple, 2001, p. 37). In contrast to decontextualized talk and non-immediate talk, contextualizing talk or immediate talk is defined by De Temple (2001), as follows: “The topic of the talk was most closely tied to the illustrations or works in the text that had just been read” (p. 36).

Some studies illustrate the positive relationship between parents’ decontextualized talk and young children’s literacy development. For example, Davidson and Snow (1995) audio-taped kindergarten children and their parents’ verbal interactions from twelve middle class families. They compared audiotapes between six children in a precocious readers group (ER) with a third grade level of literacy abilities, to six children in a prereading peers group (PR) that had an average kindergarten level of literacy ability. While there were not many significant differences in parent-child interactions between
the two groups, some significant differences appeared in decontextualized language use. Parents in the ER group used decontextualized language significantly more than parents in the PR group. The researchers posited that in larger samples, the advantage of the ER families’ richer and more challenging linguistic environment for young children would be even more pronounced. Similarly, De Temple’s study (2001) revealed:

The children who had the highest scores on the kindergarten measures of language and literacy skill were the children… …whose mother used a smaller percentage of immediate talk and more non-immediate talk (p. 48).

Thus, De Temple (2001) concluded that there is a positive relationship between a parent’s use of non-immediate (decontextualized) talk and a negative relationship between a parent’s use of immediate (contextualizing) talk and a child’s language and literacy skills. However, Reese’s study (1995) showed that both the use of a mother’s decontextualizing and contextualizing utterances during shared book reading and past events appeared to be a predictor of a child’s later print skills. Reese audio-taped the interactions of 20 white, middle class mother-child dyads, when children were at 40, 46 and 58 months of age; later she conducted a comprehensive literacy assessment to examine the children’s literacy skills at 70 months of age. Her analysis pointed to a positive relationship between parents’ overall use of demanding, decontextualized utterances and a child’s print skills. However, a stronger positive relationship appeared between a mother’s increasing use of contextualizing utterances during sharing past events over 18 months and a child’s print knowledge at 70 months. Thus, these three studies show a positive relationship between parents’ decontextualized utterances and young children’s literacy development, even though De Temple’s study (2001) and Reese’s study (1995) showed conflicting results
about the relationship between parents’ use of contextualizing utterances and young children’s literacy skills. In all these studies, the positive influence of parents’ decontextualized utterances on emergent literacy development seems to reflect both Vygotsky’s and Sigel’s notions about adult mediation. This appears to be because parents’ decontextualized utterances challenge children’s thought in the ZPD (Vygotsky, 1978), and encourages children’s higher level of cognitive thought (Sigel, 1993).

2.4. Parent-child interactions during shared book reading

In many studies, it has been found that parent-child interactions differ depending on the child’s age, their home culture, the nature of print materials and different home activities.

2.4.1. Different parent-child interactions depending on child’s age

In some studies, parents used different kinds of mediation or teaching strategies during shared book reading depending on the child’s age. Martin (1998) videotaped the interactions of 25 mother-child dyads (5 pairs in age groups of 6, 12, 18, 24 months and 4 years old) during shared reading with one expository text and two narrative texts. She found that mothers of 24 months and 4 years old children asked more questions to engage their children and provided more time to explain text concepts than did mothers of 6, 12, and 18 months old children. This study demonstrated that mothers used different kinds of questions and verbal guidance, depending on children’s abilities, or age.

In addition, some studies have shown that parents used more decontextualized talk while sharing book reading with their older child than with their younger child. For instance, van Kleeck and Beckley-McCall’s study (2002) of mother-child interactions during shared book reading involved 6 mothers and their younger (ages between 9 months, and 1
year and 3 months old) and older (ages between 2 years and 8 months old, and 4 years and 9 months old) children. Her analysis revealed that the mothers displayed a greater percentage of higher levels of abstraction in their talk with their older children than with their younger children. Similarly, Martin and Reutzel (1999) audio and video recorded 25 mother child dyads (children aged 6, 12, 18, and 24 months as well as a group of 4 years olds) during the sharing of a narrative book and an expository book. They found that the mothers used more questions and extended explanations (higher level of abstraction) during shared book reading with their 24 months and 4 years old children. However, the mothers exhibited simpler language and focused more on retaining the child’s attention on the book (lower level of abstraction) during shared book reading with their 6, 12 and 18 months old children. Wheeler (1983) examined videotaped interactions of 20 mother-child dyads (10 dyads with younger child and 10 dyads with older child) during shared reading of a picture book. His study consistently showed that mothers talked about major elements of the pictures in the book (lower level of abstraction) during the shared reading with their younger children (ages between 1 year and 5 months old and 1 year and 10 months old) while they appeared to go beyond information about the pictures (higher level of abstraction) during shared reading with their older children (ages between 3 years and 5 months old and 5 years old). Goodsitt, Raitan and Perlmutter (1988) videotaped interactions between 48 mothers and their children (16 two-year-olds, 16 three and 1/2-year-olds and 16 five-year-olds) during the sharing of a novel book and a familiar book. They found mothers talked more about recalling and predicting events and concepts in the story (higher level of abstraction) during the shared reading with their older children (ages 3 years and 6 months old, and 5 years old) than with their younger children (2 years
old). However, mothers showed more labeling activities (lower level of abstraction) during the shared reading with their younger children. Thus, these studies consistently showed that parents more frequently used higher abstract levels of verbal guidance, such as expanded ideas about pictures as well as recalling and prediction, during shared reading with their older children, while they tended to use lower abstract level of verbal guidance, such as labeling, during shared reading with their younger children. Moreover, mothers in these studies adjusted their interventions in their use of different levels of distancing acts depending on their children’s abilities. This is consistent with Sigel’s distancing theory (1984).

2.4.2. Different parent-child interactions according to environmental aspects

Parents’ interventions around shared book reading can also vary due to contextual aspects, such as cultural environment, different kinds of print materials and different kinds of home activities. This finding is consistent with Sigel’s notion (1993) that parent’s interventions are flexible according to contexts. Different adult-child verbal interactions in different cultural groups have been shown in some studies (van Kleeck, 2004). For example, in a study with infants, Toda, Fogel and Kawai (1990) video-taped 28 mother and 3-month-old infant dyads in the United States, and 36 mother and 3-month-old infant dyads in Japan during free play. The study illustrated that maternal speech differed between mothers in the United States and Japan. US mothers used more information-oriented speech, while Japanese mothers used more affect-oriented speech to their 3-month-old infants. In addition, cultural differences in parent-child interactions during reading have also been documented. For example, Bus et al. (2000) videotaped parent-child interactions in three different cultural groups, Surinamese-Dutch (19 dyads),
Turkish-Dutch (19 dyads) and Dutch-Dutch (19 dyads) during the activities of categorizing pictures, categorizing familiar objects, book reading tasks, conversations around the family’s photo album, and a construction game. They found that “the ethnic groups … differ in how parents respond to and support their children during the reading session” (p. 72). For instance, “the Surinameses-Dutch group of parents tends to be more restrictive and discipline oriented than the Turkish-Dutch or Dutch parents” (p. 72).

Cultural differences among parent’s responses may originate from their cultural perceptions of children’s learning, as different cultural groups have different values (Rogoff, 1991). Anderson (1995) has shown cultural differences in parent’s perceptions of learning to read and to write in three different cultural groups in Canada. He interviewed 30 parents of K to grade 2 children from middle class families in an urban area of British Columbia (10 Euro-Canadians, 10 Indo-Canadians and 10 Chinese-Canadians). He found that Chinese-Canadian parents favored direct teaching, and had traditional perceptions of literacy learning, and Indo-Canadian parents valued general knowledge development in literacy, whereas Euro-Canadian parents emphasized valuing, demonstrating and encouraging literacy. As these studies illustrate, cultural aspects influence parents’ perceptions of learning and their interactions with children.

The nature of print materials also seems to influence parent-child interactions. Some studies have examined the effect of genre on parent-child interactions during shared book reading. Neuman (1996) posited that different, “types of text affect parent-children’s teaching and learning strategies” (p. 509). In her study, the analysis of verbal interactions of 41 parent-child dyads (18 low proficiency parent readers and 23 high proficiency parent readers) from low SES families showed that parent-child book reading with highly
predictable stories were more collaborative, whereas parent-child interactions during book reading with less predictable narrative texts focused more on the meaning of story and the meaning beyond the text. Similarly, in Anderson et al.'s study (2004) involving 25 four-year-old children and their parents from middle class families, the analysis of videotaped verbal and non verbal interactions revealed that parents interacted more with their children while sharing non-narrative texts than narrative texts. Moreover, Pellegrini, Perlmutter, Galda and Brody's study (1990) involving thirteen 4-5 years old African-American head start children and their mothers compared mother's teaching strategies during shared book reading with different genres (narrative and expository) and format (traditional children's book, comics and newspaper toy advertisement) of texts. They found that mothers teaching strategies were influenced by the genre of text, but not the format of the text. However, from his literature review, Pellegrini (1991) concluded that both genre and format influence mother-child interactions during book reading. According to him, less interpersonal interactions usually appeared during mother-child sharing narrative texts than while sharing expository texts. He posited that higher level teaching strategies, such as decontextual questions, occurred when mothers share a familiar format of texts with their children. Similarly, Pellegrini, Galda, Perlmutter and Jones's study (1994) with nineteen, 4-year-old children and their mothers from low SES families illustrated that mother-child dyads used different forms of talk around unfamiliar formats of texts (2 children's trade books) and more familiar formats of texts (the labeled toy advertisement from the local newspapers and labeled pictures from the children's preschool). For instance, "mothers and children used more linguistic terms, and text-world and world-text utterances in the familiar, compared to the traditional context"
(Pellegrini et al., 1994, p. 16). Although in one of these studies, the effects of format were not apparent, over all, it appears that both genre and format of text influence parent-child interactions during book sharing.

Besides culture and types of text, kinds of home activities also seem to influence different parent-child interactions. De Temple and Beals (1991) examined family talk in 4 different home activities, namely, book reading, elicited reports, toy play, and mealtimes during two home visit observations. They found children received various sources that encourage children's decontextualized language development from family talk in different family activities. For example, during the book reading activities, there was more non-immediate talk; during the elicited report activities, talk was focused on past events; during toy play activities, talk was related to fantasy world; and during mealtimes, family talk involved equivalent amounts of explanatory and narrative talk. Thus, during different kinds of home activities, mother-child dyads exhibited various kinds of decontextualized talk. De Temple and Beals (1991) also pointed out "there are a number of different language components involved in these tasks" (p.16). Within the context of the present study it is assumed that where home computer use is common, computer activities may or may not involve family interactions different from other kinds of family activities at home.

2.5. Parent-child interactions during computer use

Most studies of children's social interactions around computers have occurred in school, and have focused on aspects such as peer interactions at classroom computers (e.g., Jones & Pellegrini, 1996; Labbo, 1996). However, there have been a few studies in which
interactions during computer activities at home were investigated (e.g., Shade & Watson, 1987; Worden et al., 1987).

2.5.1. Parent-child interactions during a literacy-related computer activity

Worden et al.’s study (1987) compared parent’s teaching behaviors in children’s literacy activities with an alphabet book and alphabet-learning software. This study was conducted in a laboratory setting with 4 to 5 year-old children and their mothers or fathers. With a total of 20 parents and children, participants were grouped into 10 father-child and 10 mother-child dyads. In interactions with their child, mothers and fathers did not differ. However, the researchers found that mothers’ verbal styles were more consistent across tasks, while fathers’ verbal styles were more inconsistent across tasks. For example, whereas mothers’ verbal styles were consistent across the tasks in most categories of verbal events, such as comments, questions and so forth, fathers’ verbal styles were consistent across the tasks only in direct teaching categories of identifications, requests for identifications and laughter. Moreover, Worden et al. (1987) found that the frequency and the quality of parent-child interactions were higher when working with the book than when working with software. However, they posited that the slow-speed of the software might interrupt parent-child interactions during the computer activity. As current software is much more advanced than what was available in 1987, parent-child interactions with current day software may differ from what was found in this study. Thus, further study with more advanced software and technology is in order.

2.5.2. Parent-child interactions around a problem-solving computer activity

One study (Shade & Watson, 1987) compared interactions between 4- and 5- year-old children and their mothers as they worked with different types of software, both open-
ended and close-ended. Dyads were assigned to two groups, a "microworld" group with open-ended software and a "drill-practice" group with closed-ended software. Tasks for the microworld group involved problem-solving software, sorting pictures of objects as to whether they belonged inside or outside the house. The drill-practice group worked on skill based practice software for alphabet learning. Mother-child interactions were observed based on the following four levels of mothers' teaching strategies: (1) no intervention, (2) verbal instruction, (3) indicates materials (points) and (4) demonstrates. They found that mothers in the microworld group used higher level teaching strategies, and paid more attention to the child's needs during computer activities. Moreover, mothers in the microworld group were more sensitive about the child's age than mothers in the close-ended group. Shade and Watson (1987) concluded that it appears that using different kinds of software can affect parent's mediation in children's computer literacy activities. However, even though this study provides some understandings about parent-child interactions during computer activities, it was conducted in a laboratory setting, so it does not provide understandings about parent-child interactions in a more natural environment.

These studies (Shade & Watson, 1987; Worden et al., 1987) were conducted for a short period of time and in a laboratory setting. Thus, parent-child interactions in a "real" home environment may differ from those in both studies. In addition, parents in those two studies were from the middle or upper middle classes and mainstream culture, so those studies may not be representative of parent-child interactions in lower SES groups and/or in minority cultural groups. Thus, those studies provided only partial understandings about parent-child interactions in children's home computer use.
2.6. Summary

The crucial role of parents' mediation in children's learning and development has been emphasized by many theorists (e.g., Sigel, 1984; Rogoff, 1991; Vygotsky; 1978). The notion of emergent literacy (Sulzby & Teale, 1991) also considers parents’ mediation as important in young children’s literacy development, as it stresses the influence of young children's home environments on their developing literacy knowledge (e.g., Heath, 1983). In particular, a positive relationship has been documented between parents’ mediation during shared book reading and young children’s literacy development (e.g., Chaney, 1994). Many studies have shown that parents' use of decontextualized talk during shared book reading is positively related to the development of young children's emergent literacy (e.g., Davidson & Snow, 1995; De Temple, 2001; Reese, 1995). Parents appear to interact with their children differently during shared book reading according to the child's age (e.g., Martin, 1998), their home culture (e.g., Bus et al., 2000) and the nature of the text (e.g., Anderson et al., 2004; Pellegrini et al., 1990). Moreover, parent-child interactions differ during the sharing of a print version of an alphabet book and the sharing of alphabet-learning software (e.g., Worden et al., 1987). A higher frequency and quality of parent-child interactions occurred during the sharing of a printed alphabet book than during the sharing of alphabet-learning software. However, parent-child interactions during the sharing of electronic versions of books have not been sufficiently studied, even though electronic books are used widely in developed countries. Thus, the examination of parent-child interactions during the sharing of electronic versions of books seems to be timely and necessary.
2.7. Research Questions

The following research questions guided this study:

(1) Are there any differences or similarities in the types and frequency of mother-child interactions across the three contexts (a print book and two different versions of electronic books)? If so, what are they?

(2) Are there any differences or similarities in mother-child interactions between the two age groups in those activities? If so, what are the differences or similarities?

(3) Do children initiate interactions in the three contexts? If so, what are the differences or similarities in the way children initiate interactions depending on their ages?
3. METHOD

3.1. Introduction

This study investigated mother-child interactions during the sharing of print and electronic versions of books. The mother’s and the children’s interactions were compared in order to examine whether there were similarities and/or differences in their interactions during different activities. Special attention was paid so as to compare how these interactions differed according to the child’s age. Lastly, the frequencies and types of the children’s initiation of talk were compared in order to examine similarities and/or differences, depending on their ages. To compare the frequency and types of mother-child interactions, an analysis was conducted with verbal and non-verbal interaction categories. The transcription of mother-child conversations was examined in order to find any specific tendencies in their conversations.

3.2. Participants

This study involved a mother and her two sons from one family, living in an urban area of Western Canada. The family is middle class and has recently immigrated from Korea. They read books and participate in computer activities as a part of their daily home life. The older child, Sung-Woo (pseudonym) is seven years, three months old and the younger child, Jung-Woo (pseudonym) is three years, nine months old. At the time of the study, neither child had any formal school experience in Canada. The seven-year-old child, however, had three years of preschool and kindergarten education, and six months of public elementary school experience before coming to Canada. The three-year-old child has had no preschool or regular schooling experience. Since the seven-year-old
child has had school experience, he is a conventional reader and writer. However, the three-year-old child has no conventional alphabetic knowledge. Furthermore, the seven-year-old has sufficient skills to enable him to use a computer, such as opening websites by typing the website address or selecting it from a list of website addresses. However, the three-year-old child has only basic computer competency, such as selecting items on the screen by clicking with a mouse. Just as their literacy and computer use abilities differ, so too do their book reading and computer activities at home. For instance, the seven-year-old usually reads books by himself, as he is a conventional reader, while the three-year-old usually reads books with his mother. The seven-year-old uses a computer for playing computer games, while the three-year-old also uses a computer for playing computer games as well as for storybook reading. Some other differences in their book reading and computer activities at home were also revealed during the interview with their mother (Appendix A).

One of the religious organizations in the Korean community in an urban area of Western Canada was contacted to find appropriate participants for this study. Among the families showing a willingness to participate, the following criteria for selection were applied: (1) they must be a family from a minority cultural group; (2) they must be a family with daily book reading and use of a home computer as a part of their home activities; (3) the group must consist of a mother with two children of the same gender; and (4) the siblings must be a school-aged child and a pre-school aged child.
3.3. Data Sources

3.3.1. Tasks

Participants were provided with three tasks for observing mother-child interactions, shared reading of a print version of a book and shared reading of two different versions of electronic books. All of the materials were provided in the participants’ first language in order to offer a more natural and familiar context for interaction between the mother and the child.

One print version of a book and two electronic versions of books were provided. The print version of a book, entitled Helping Is So Much Fun, involves a story about a young bear who does not like helping his mother but realizes that helping others is a pleasurable thing. This hardcover book has text and illustrations on each page. Internet websites were selected for the electronic versions of books. There was no current version of these books in software or on CD-ROM because, now, people tend to use Internet websites for free or at low cost rather than buying software or CD-ROMs in Korea. The second book, entitled Splash, Splash, Let's Wash the Clothes, is a CD-ROM-like electronic version of a book (electronic book 1). This book is provided by the popular Internet website, www.jaeminara.com, a major source for educational material, such as books and educational games. The story in electronic book 1 is about the mistakes a young girl makes while playing outside after it rains. This book provides icons for each page, so readers can control the time spent there and make decisions about turning pages. The last book, entitled Tiger's Tail Caught Fire, is a video-clip-like electronic version of a book (electronic book 2). This book is also provided by an educational Internet website, www.yurinuri.com. The story is about a naughty tiger who learns to regret his bad
behavior when he experiences the assistance of friends who help him out of trouble. This book provides icons for play, stop, forward and rewind, in order to control viewing. However, because this book plays the story like a video clip, without stopping, even though it provides some icons to control each part of the story, users cannot easily control the speed.

Both the print version book and the two electronic books were chosen for shared reading tasks after discussion with experts in Korean children’s literature and taking into account information from the interview with the mother. The following criteria were used to select the books: (a) mother and children’s familiarity with the genre of the books and (b) their familiarity with a specific text. After information about these aspects was obtained from the interview with the mother an unfamiliar book from a familiar genre was chosen. A familiar genre of book was used because previous research suggested that parents use what are considered to be more effective teaching strategies with books of a familiar genre and format (Pellegrini, 1991). Moreover, it was expected that with a familiar genre of books, both the mother and children would feel more comfortable and interact naturally during the shared reading. In terms of the familiarity of text, an unfamiliar text was provided to increase the amount of mother-child interactions, as some studies have shown that familiar texts reduce parents’ interventions, but increase children’s independent reading (van Kleeck, 2004). Thus, by using an unfamiliar text, it was expected that the mother’s mediation would be more easily observed.

Furthermore, a print book and two electronic versions of books were matched in terms of complexity (van Kleeck, 2003), format (Pellegrini, 1991; Pellegrini et al., 1994) and genre (Anderson et al., 2004; Pellegrini, 1991), as some studies showed these aspects
possibly influence parent-child interactions during shared reading. Firstly, to match the complexity of the print and electronic versions of books, lines in the books were counted and compared. Both print and electronic books contained similar number of lines on each page (average two lines per page) and in total (24 lines in the print book, 27 lines in electronic book 1 and 28 lines in electronic book 2). However, the difficulty of the books appeared more suited to the three-year-old child, as the interview with the mother revealed that the three-year-old usually read books containing 2-3 sentences per page. Korean popular websites for young children mostly provide electronic books in a format similar to electronic book 2, rather than electronic book 1. As a result of this, many electronic books were available in a format similar to electronic book 2 for various age groups of children, but there was a lack of electronic books in a format like that of electronic book 1. However, it was decided to include both versions of electronic books in this study in order to compare different versions of electronic books, even though the difficulty of the books seemed more appropriate for the three-year-old. Secondly, the formats of the books were matched; all the books contained text and related illustrations on each page. Lastly, the genre of the books were matched, in this case a modern children's tale that was of a genre familiar to the children.

3.3.2. Data Collection and Analysis

Data for the present study included an interview with the mother and natural observation, as these are data collection methods widely used in qualitative research (Gall, Gall & Borg, 2003). The interview served to inform the researcher of the participants' previous experience with shared reading, as Yin (2003b) stated, the participants' prior history of working in a particular situation can be determined by holding an interview with
participants. In addition, natural observations were conducted to closely examine mother-
child interactions during the activities, as “it allows researchers to formulate their own
version of what is occurring...” (Gall et al., 2003, p. 267).

3.3.2.1. Interview with the mother

A semistructured interview was conducted with interview questions (Appendix A), based
on a questionnaire used in the pilot study. The interview was conducted in the
participants’ first language and at their home to allow for a more comfortable
environment. It took about 30 minutes. Interview data were collected by audio-taping and
later were transcribed. The interview with the mother helped explain, “how informants
structure their physical and social world” (Gall et al., 2003, p. 238). It served to identify
the genre of the book the children and mother usually read and are familiar with.
Furthermore, interview data (Appendix A) were used as a supplement to understand some
of the mother-child interactions.

3.3.2.2. Observations

Observations were conducted at the participants’ home, in a specific room, and at a time
of day that was decided by the participants, in order to observe their most natural
interactions. To ensure this, the mother was asked to share a reading activity with her
children, just as she would usually do at home. During the observation, the researcher did
not participate in the activities. However, in some situations in which participants
attempted to interact with the researcher, the researcher responded naturally and in a
relaxed manner.

Before the formal commencement of the study, the researcher spent time with the
participants in order to create a comfortable emotional and physical setting for the study.
A total of four observation sessions for each activity, with a one-week interval between sessions, was conducted to increase the validity of the study. Moreover, the order of each activity was counter-balanced by reversing which child went first. This served to minimize the effects of mother’s familiarity with the text, as the mother interacted with one of the two children first. For example, if the mother shared the text with the younger child first, during the first week, she was then asked to share the text with the older child first, during the second week.

3.3.2.3. Video-taping

During the observations, data was collected by video-taping, as this method was expected to enable the researcher to observe participants’ interactions more closely and enable important sections to be replayed and reviewed. Furthermore, this would help the researcher to observe and record details of interactions more precisely. Shared reading activities occurred at the dining table, as the mother and children usually did their reading and writing activities there. Based on this location, in order to keep participants’ attention away from the camcorder, it was set up at a 45-degree angle behind the participants because there was no space to set up the camcorder completely behind them. A small mirror was set up beside the print book or the computer, in order to record the participants’ facial expressions and other non-verbal interactions.

The inclusion of data was decided based on the starting point and ending point of each session. The starting point of each session was considered to be when the mother and the child looked at the books and began to talk about details related to the books. However, as only electronic book 1 provides an outline before the actual text, to create equivalence among the activities, mother-child talk during the shared reading of the outline of
electronic book 1 was not included in the data analysis. Therefore, the data for electronic book 1 was included from the point when the mother and the child started the shared reading of the actual text, including the title page. The ending point of the session was considered to be when the mother or the child gave any sign that they were finished with the shared reading, such as saying, "The end.", "Can I go?" or "Sung-Woo's turn?".

In order to analyze mother-child verbal and non-verbal interactions, all of the mother-child interactions during the activities were transcribed in Korean, and then translated into English. Mother-child interactions were divided into "message units", defined as a single statement or question that is meaningful (Kontos, 1983). Categories of mother-child interactions were developed, based on verbal categories found in previous studies and modified according to the categories that emerged (Appendix B). Data were then categorized and coded accordingly. Finally, the frequencies and types of those interactions were counted and compared across tasks, children's ages and across sessions.

After coding was performed by the researcher, a graduate student, majoring in early childhood education, coded 25% of the data in order to check its reliability. The agreement of coding was 75% before discussion. After the first discussion, the agreement of coding was 87%, and after a second discussion, an agreement of 95% was obtained.

3.3.2.4. Field notes

Descriptive field notes were kept to assist with "reconstruction of dialogue, description of the physical setting, accounts of particular events, and description of the observer's behavior" (Gall et al., 2003, p. 272). These notes were used in order to supplement the video-taping that could not clearly show contextual aspects, such as atmosphere, related events and so forth. The data from field notes served to explain contextual aspects, such
as events that happened before or after the shared reading activities.

### 3.3.3. Procedures

This study was conducted using the procedures described below.

Participants were sought from a religious organization within the Korean community. The researcher corresponded with the head of the organization, in this case the leader of the Korean Buddhist Temple, requesting that he or she distribute letters to his or her parishioners, in order to recruit a participant for the study. The first family that fulfilled the criteria and replied with the consent form was contacted by telephone to arrange a meeting with the researcher. The mother provided permission for the participation of both herself and her children in this research, since the children were not old enough to fully understand informed consent. The researcher scheduled an interview with the mother, and also scheduled the observation sessions. The interview with the mother was conducted before the observation sessions because the interview was expected to provide information about the children's literacy knowledge and computer experiences at home. This information was essential, since it enabled the researcher to choose a print book and equivalent electronic books. The interview took approximately 30 minutes and was audio-taped. Observations and video-taping of the mother-child interactions were made once a week for four weeks, during the shared reading of a print book and two versions of electronic books. The duration of time for each session was not controlled, as this research aimed to observe natural unlimited mother-child interactions at home. The researcher transcribed observations in Korean and then translated them into English. The researcher categorized interactions, and based on the categories, data were analyzed.
3.4. Research design

This study employed a qualitative research approach involving naturalistic observations and video-recording of mother-child interactions during three different tasks: print book reading and two different types of electronic book reading. A case study research approach was used. Gall et al. (2003) defined case study research in the following manner: “It is the in-depth study of instances of a phenomenon in its natural context and from the perspective of the participants involved in the phenomenon” (p. 436). This definition of case study research is consistent with the aims of the present study and is an effective way in which to conduct this study, as it aims to observe and describe mother-child interactions in their natural home environment in depth.

According to Yin (2003a), “a descriptive study presents a complete description of a phenomenon within its context” (p. 5). Moreover, Gall et al. (2003) posited that for a deeper understanding of the description, themes of presented phenomena can be explored. This study aims to describe phenomena within three different contexts and find patterns of mother-child interactions.

3.5. Criteria for assessing the quality of the research design

To check the validity and reliability of the case study findings, triangulation was employed (Gall et al., 2003). Triangulation is defined as “the process of using multiple data-collection methods, data sources, analysts, or theories to check the validity of case study findings” (Gall et al., 2003, p.464). Multiple data sources were used to check and increase the validity of this study, as data were collected by interview, video-taping and field notes. Data from interview and field notes complemented the data from video-taping.
For instance, data from the interview with the mother served to help in the understanding of participants' backgrounds, which was essential to finding some possible reasons for participants' behaviors shown in the videos. Moreover, data from field notes helped lead to an understanding of contextual aspects, such as mood, in mother-child shared book reading. Also, mother-child interactions during each activity were observed four times with a one-week interval between observations. The redundancy of data collecting reduces the potential for misinterpretation, as Stake (1994) has pointed out.
4. ANALYSIS OF DATA

4.1. Introduction

In Chapter IV, I describe differences and/or similarities in mother-child interactions across the contexts and between children's ages, and in children's initiations of talk that were revealed by an analysis of the data. These differences and/or similarities are presented in terms of the frequency of interactions, common interaction types, immediate and non-immediate talk, and the use of questions. Moreover, the trends of mother and children's interactions during the shared reading are examined to provide further understanding.

4.2. Findings

4.2.1. Research Question One

(1) Are there any differences or similarities in the types and frequency of mother-child interactions across the three contexts (a print book and two different versions of electronic books)? If so, what are they?

4.2.1.1. The frequency of mother-child interactions across the contexts.

Data analysis revealed several differences in mother-child interactions across the contexts, namely the shared reading of a print version of a book and two different electronic books. First, the total number of the mother and the children's interactions during the shared reading was different across the contexts (Figure 4.1). Both the mother and the three and seven-year-old children exhibited the greatest number of interactions during the shared reading of the print book. Interactions during the shared reading of electronic book 1 were second in terms of frequency and the least number of interactions occurred during
the sharing of electronic book 2.

**Figure 4.1** The total number of the mother and the child’s interactions during the shared reading

The total number of the mother and the children’s interaction types across the contexts were then compared (Figure 4.2). The total number of mother’s interaction types was similar across the contexts. However, the three-year-old child’s interaction types were the
most varied in the print book context while the greatest number of seven-year-old child’s interaction types were exhibited in the electronic book 1 context. Thus, there were no distinctive tendencies in the number of mother-child interaction types across contexts.

**Figure 4.2 The total number of the mother and the children’s interaction types during shared reading**

*Note.* The number of major categories was counted to calculate the number of interaction types. Where sub-categories existed, in major categories, such as comments, explanations, elaborations and simple responses, each sub-category was counted separately. (Maximum number of 29)
In short, the greatest number of the mother and the children’s interactions were displayed in the print book context, while the least number of interactions were exhibited in the electronic book 2 context. Moreover, the total number of mother-child interaction types did not differ distinctively across the contexts.

4.2.1.2. The frequency of mother-child interactions over time during the shared reading.

Figure 4.3 shows the interactions over time for the mother and the three-year-old child. First, the number of interactions increased over time in the print book context (the mother’s interactions: 152-345; the child’s interactions: 62-252). There was also an increase in the number of interactions over time in the electronic book 2 context. However, the number of interactions decreased over time in the electronic book 1 context. Across the three contexts, over time, the increase in the number of interactions between the mother and the three-year-old child was greatest in the print book context. In addition, over time, the largest number of interactions between the mother and the three-year-old child occurred during the shared reading of the print book while their interactions were the least frequent during the shared reading of electronic book 2.

The interactions over time for the mother and her seven-year-old are displayed in Figure 4.4. Overall, the number of the mother and her seven-year-old child’s interactions increased over time in the print book context (the mother’s interactions: 93-186; the child’s interactions: 38-134). Similarly, their interactions increased over time in the electronic book 1 context. Contrarily, there was decrease in the number of interactions over time in the electronic book 2 context. As is apparent in Figure 4.4, the greatest increase in the number of interactions over time in the mother-7-year-old dyad was
exhibited in the print book context.

Figure 4.3 The number of the mother and the three-year-old child’s interactions over time in the three contexts

![Graph showing number of mother's and child's interactions over time in three contexts.](image-url)
Figure 4.4 The number of the mother and the seven-year-old child’s interactions over time in the three contexts.
The number of interaction types during the shared reading also changed over time, as displayed in Figure 4.5. Changes in the number of interaction types during the sharing of electronic books over time did not show distinctive tendencies.

Figure 4.5 The number of the mother and the children’s interaction types over time in the three contexts
Figure 4.5 The number of the mother and the children’s interaction types over time in the three contexts (Continued)

Note. The number of major categories was counted to calculate the number of interaction types. Where sub-categories existed, in major categories, such as comments, explanations, elaborations and simple responses, each sub-category was counted separately. (Maximum number of 29)

In short, only during the sharing of the print book was there a fairly consistent pattern of an increase in interactions over time. It also appeared that overall, throughout the sessions the mother and her children exhibited the greatest number of interactions in the print
book context, and the least number of interactions in the electronic book 2 context. However, there was no distinctive tendencies in the number of mother-child’s interaction types over time.

4.2.1.3. The mother and the children’s interaction types across the contexts.

The frequency of different mother and children’s interaction types across contexts was examined next. First, the mother exhibited different interaction types more frequently depending on the contexts (Table 4.1 & 4.2). The mother provided the children with the following interaction types the most frequently during the sharing of the print book: reading the author’s name, the title and/or the text of the book, labeling, commenting about illustrations, explaining about illustrations and elaborations on illustrations. The most frequent interactions during the sharing of electronic book 1, was of the mother asking and answering “why” questions, and making and soliciting predictions about future events in the book. During the shared reading of electronic book 2, the mother’s comments about the story and recollections of the earlier parts of the story occurred the most frequently (Table 4.1). Moreover, the mother prompted the seven-year-old-child’s reading and turned the page to earlier parts of the story only in the print book context (Table 4.1).

The mother talked more about illustrations than about the story content during the shared reading of the print book, while she talked more about the story content than about illustrations during the shared reading of electronic books. For instance, while sharing the print version of the book the mother used more comments, explanations and elaborations about the illustrations than the story. However, during the shared reading of the two electronic versions of the books, the mother used more comments, explanations and
elaborations about the story than the illustrations (Table 4.2).

Table 4.1 The mother’s frequent interaction types across the contexts

<table>
<thead>
<tr>
<th></th>
<th>Mother (3 years)</th>
<th>Mother (7 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read Author/ Title/ The</td>
<td>99</td>
<td>14</td>
</tr>
<tr>
<td>text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labeling</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>Comment (1)</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Comment (2)</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Explanation (1)</td>
<td>157</td>
<td>60</td>
</tr>
<tr>
<td>Explanation (4)</td>
<td>29</td>
<td>31</td>
</tr>
<tr>
<td>Elaboration (1)</td>
<td>48</td>
<td>17</td>
</tr>
<tr>
<td>Prediction</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>Recalling</td>
<td>39</td>
<td>35</td>
</tr>
<tr>
<td>Prompting Reading</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Revisiting</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Read Author/ Title/ The text = Reading or asking the author’s name, title of the book or the sentences in the book; Labeling = Giving or asking a label for an item in the illustration; Comment (1) = Commenting about illustrations (including statements and questions); Comment (2) = Commenting about the story (including statements and questions); Explanation (1) = Explaining about illustrations (including statements and questions); Explanation (4) = Explaining about a reason for why questions (including statements and questions); Elaboration (1) = Elaborating about illustrations (including statements and questions); Prediction = Making or soliciting predictions about the story; Recalling = Recalling or asking to recall the story; Prompting Reading = Initiating reading by providing the first word of the sentence in the text; Revisiting = Turning to the page to earlier parts of the story.

Bold numbers show the most frequently occurring interactions across the contexts.
The number of interactions for each category is the total of the interactions in all the sessions.
Please see Appendix B, page 153 for a complete list of categories.
Table 4.2 Different focuses of the mother’s interactions on either illustrations or the story across the contexts

<table>
<thead>
<tr>
<th></th>
<th>Mother (3 years)</th>
<th>Mother (7 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment (1)</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Comment (2)</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Explanation (1)</td>
<td>157</td>
<td>60</td>
</tr>
<tr>
<td>Explanation (2)</td>
<td>78</td>
<td>75</td>
</tr>
<tr>
<td>Elaboration (1)</td>
<td>48</td>
<td>17</td>
</tr>
<tr>
<td>Elaboration (2)</td>
<td>33</td>
<td>31</td>
</tr>
</tbody>
</table>

Note. Comment (1) = Commenting about illustrations (including statements and questions); Comment (2) = Commenting about the story (including statements and questions); Explanation (1) = Explaining about illustrations (including statements and questions); Explanation (2) = Explaining about the story (including statements and questions); Elaboration (1) = Elaborating about illustrations (including statements and questions); Elaboration (2) = Elaborating about the story (including statements and questions)

Bold numbers show the most frequently occurring interactions across the contexts. These mother’s interaction types were chosen in order to examine the focus of the mother’s interactions on either the illustrations or the story. The number of interactions for each category is the total of the interactions in all the sessions. Please see Appendix B, page 153 for a complete list of categories.

There were also differences in the frequency of different types of the children’s interactions across different contexts (Table 4.3). During the shared reading of the print book, the children’s talk about labeling, explanations about illustrations, elaborations about illustrations and elaborations about the mother’s or their own previous talk were exhibited the most frequently. During the sharing of electronic book 1, the children’s predictions about possible future events in the story and elaborations about the story occurred the most frequently. They also responded that they didn’t know the answers to questions and intended to use the mouse more frequently during the sharing of electronic book 1 than in sharing electronic book 2.
Table 4.3 The children’s frequent interactions across the contexts

<table>
<thead>
<tr>
<th></th>
<th>Child (3 years)</th>
<th>Child (7 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labeling</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>Explanation (1)</td>
<td>68</td>
<td>24</td>
</tr>
<tr>
<td>Elaboration (1)</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>Elaboration (3)</td>
<td>61</td>
<td>28</td>
</tr>
<tr>
<td>Prediction</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Simple Response (2)</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Intention</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. Labeling = Giving or asking a label for an item in the illustration; Explanation (1) = Explaining about illustrations (including statements and questions); Elaboration (1) = Elaborating about illustrations (including statements and questions); Elaboration (3) = Elaborating about the partner’s or own previous talk; Prediction = Making or soliciting predictions about the story; Simple Response (2) = Responding with ‘don’t know’; Intention = the child’s intention to do something.

Bold numbers show the most frequently occurring interactions across the contexts.
The number of interactions for each category is the total of the interactions in all the sessions. Please see Appendix B, page 153 for a complete list of categories.

In short, it is obvious that the mother and the child’s talk focused more on illustrations than the story in the print book context, while the reverse is true for the electronic book contexts. Furthermore, both the mother and the children used certain interaction types more frequently in different contexts.
4.2.1.4. The mother and the children’s immediate and non-immediate talk across contexts.

Comparing the mother and the children’s immediate talk and non-immediate talk across the contexts shows variations in frequency (Figure 4.6). First, in terms of immediate talk, both the mother and the children used the greatest amount of immediate talk during the sharing of the print book, the second greatest amount during the sharing of the electronic book 1, and the least amount during the sharing of electronic book 2 (Figure 4.6). In addition, in terms of non-immediate talk, the mother used the greatest amount during the sharing of the print book and the least amount during the sharing of electronic book 2. Similarly, the three-year-old child used the greatest amount of non-immediate talk during the sharing of the print book and the least amount during the sharing of electronic book 2. However, the seven-year-old child used the greatest amount of non-immediate talk during the sharing of electronic book 1 and the least amount during the sharing of electronic book 2.

The mother’s and the children’s use of immediate and non-immediate talk during the sharing of each book also differed (Figure 4.7). The mother and both children used more immediate talk than non-immediate talk during the shared reading of the print book, while the converse is true for the electronic books. The difference in frequencies between immediate and non-immediate talk was greater during the sharing of electronic books than during the sharing of the print book. For instance, the number of occurrences of the mother’s non-immediate talk was approximately three times higher than the number of her immediate talk during the sharing of electronic book 2. Similarly, the children used non-immediate talk around two to three times more than immediate talk during the
sharing of electronic books (Figure 4.7).

**Figure 4.6** The mother and the children’s immediate and non-immediate talk across the contexts
Figure 4.7 The mother and the children's use of immediate and non-immediate talk during the sharing of each book.
In short, overall, in terms of the amount of the mother and the children's immediate and non-immediate talk across the contexts, they used the greatest amount of immediate and non-immediate talk in the print book context, while they used the least amount of immediate and non-immediate talk in the electronic book 2 context. Furthermore, comparing the ratio between immediate and non-immediate talk in each context, more
immediate than non-immediate talk occurred in the print book context, while more non-immediate than immediate talk appeared in the electronic book contexts.

### 4.2.1.5. The use of the mother and the children’s questions across the contexts.

The frequency of the mother and the children’s questions was also examined (Table 4.4). Both the mother and the children asked the greatest number of questions during their sharing of the print book. Mother and children generated more questions while reading the print book. Electronic book 2 generated the fewest questions across the contexts with the exception of the 7-year-old child who asked slightly more questions during the shared reading of electronic book 2 than electronic book 1.

Table 4.4 The total number of the mother and the children’s questions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother; 3 years</td>
<td>262</td>
<td>224</td>
<td>150</td>
</tr>
<tr>
<td>Mother; 7 years</td>
<td>133</td>
<td>120</td>
<td>82</td>
</tr>
<tr>
<td>Child; 3 years</td>
<td>115</td>
<td>87</td>
<td>37</td>
</tr>
<tr>
<td>Child; 7 years</td>
<td>52</td>
<td>36</td>
<td>42</td>
</tr>
</tbody>
</table>

*Note. Bold numbers show the most frequently occurring questions across the contexts. The number of interactions for each category is the total of the interactions in all the sessions. Please see Appendix B, page 153 for a complete list of categories for questions.*

Table 4.5 displays the comparison of the mother and the children’s immediate and non-immediate questions. First, in terms of immediate questions, both the mother and the children used the greatest number of immediate questions in the print book context, while the least number of immediate questions appeared in the electronic book 2 context (Table 4.5). Secondly, in regards to the use of non-immediate questions, the mother used the least number in the print context. However, the children used the greatest number of non-immediate questions in the print book context and the least number in the electronic book.
2 context. Moreover, in the three contexts, both the mother and the children used more non-immediate questions than immediate questions.

Table 4.5 The mother and the children’s immediate and non-immediate questions

<table>
<thead>
<tr>
<th></th>
<th>Immediate questions</th>
<th></th>
<th>Non-Immediate questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother; 3 years</td>
<td>74</td>
<td>37</td>
<td>4</td>
</tr>
<tr>
<td>Mother; 7 years</td>
<td>39</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Child; 3 years</td>
<td>26</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Child; 7 years</td>
<td>7</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Mother; 3 years</td>
<td>89</td>
<td><strong>112</strong></td>
<td>91</td>
</tr>
<tr>
<td>Mother; 7 years</td>
<td>44</td>
<td>56</td>
<td><strong>58</strong></td>
</tr>
<tr>
<td>Child; 3 years</td>
<td>70</td>
<td>55</td>
<td>26</td>
</tr>
<tr>
<td>Child; 7 years</td>
<td><strong>32</strong></td>
<td>25</td>
<td>13</td>
</tr>
</tbody>
</table>

*Note. Bold numbers show the most frequently occurring question types across the contexts. The number of interactions for each category is the total of the interactions in all the sessions. Please see Appendix B, page 153 for a complete list of categories for immediate and non-immediate talk.*

Overall, it appeared that the mother and the children used the greatest number of questions during the sharing of the print book. By contrast, they used the least number of questions during the sharing of electronic book 2. In addition, more non-immediate questions than immediate questions were asked by the mother and the children during the sharing of the three books.

4.2.1.6. Conversations between the mother and the child in the different contexts.

I now turn to the qualitative aspects of the study, and I present portions of the transcripts to illustrate some of the points just made in reporting the numerical data. The mother and the child’s conversations related more to the illustrations in the print book context and more to the story in the electronic book contexts (Example 4.1, 4.2 & 4.3). First, the mother and the child talked about illustrations a great deal, while sharing the print book.
Their conversation about illustrations was clearly represented in their talk while reading page 12 in the print book (Example 4.1).

**Example 4.1** The mother and the three-year-old child’s interaction in the second session of shared print book reading

-Text-

"웃돌아, 고마워. 우리들을 도와주었구나."
"Thanks, Kom-Dol. You helped us."
"뭐라고? 내가 도와주었다고."
"What? I helped you?"
Wow! So many fell off.
Kom-Dol shook the tree hard.

Then... wow! How many acorns are there? (The child is pointing to each squirrel and acorn, one by one.)

I don't know.
It cannot be counted.

Yeah. Too many.
So many.

Yeah.

Oh. Suddenly squirrels came in groups to get these acorns. (pointing to the illustration)

Here too. (pointing to the illustration)

(pointing to the illustration) What did they bring?

Like this (Showing action)

To rake them (acorns) all up and put them in the bag. (showing action)

Look at this. They’ve already picked up a lot[,] this much. (pointing to the illustration)

This one is still picking up. (pointing to the illustration)

This one is picking up hard. (pointing to the illustration)

This one spread [a cloth] and is gathering [acorns]. (pointing to the illustration)

Why is it doing that? Spreading [a cloth like that] (pointing to the illustration)

익심쟁이다.
Spreading [a cloth] like this, and after collecting [them] all, to wrap [them] like this. (Showing an action) He is greedy.

(23) C: 近대 애는 안그림데 (그림)
    But this one is not like that. (pointing to the illustration)

(24) M: 애는 이렇게 붓어 담고 있고, (그림)
    This one is picking up and putting in like this. (pointing to the illustration)
    애는 벌써 두개에 담고 있고. (그림)
    This one is already putting into the second [bag]. (pointing to the illustration)

(25) C: 응
    Yes.

(26) M: 애꼬라. (그림)
    Look at this one (pointing to the illustration)

(27) C: 왜?
    Why?

(28) M: 애는 뭐하고 있는거야? (그림)
    What is this one doing? (pointing to the illustration)

(29) M& C: (웃음)
    (laughing)

(30) M: 안닫고 지금 누워서 뭐하는거야? (그림)
    He is not picking up [...] and what is he doing? (pointing to the illustration)

(31) C: (웃음)
    (laughing)

(32) M: 웃기지?
    Funny?

(33) C: 어.
    Yeah.

(34) M: 되게 웃긴다 이거.
    It's really funny.

(35) C: 우리도 우리도 이렇게 했잖아. (그림)
    We, we also did [were] like them. (pointing to the illustration)

(36) M: 엄마 텔레비 볼때 이렇게 하구 잊잖아 (행동을 보이며) 그렇게 하고 있는데. 구경하고 있나봐.
    When I (mom) am watching TV, I do like that. (Showing action) He is doing just like that. He seems to be watching others.
    오래로 벌려놓구 요기다 떨어지면 쌌 담올라구 보구 있나봐. (그림)
    This one spreads [a cloth] here, and is watching acorns to put them [in the bag] when they fall off. (pointing to the illustration)

(37) C: (웃음. 한곳을 가리키며)
    (laughing and pointing to one spot in the illustration)

(38) M: 애네봐 애네봐라 애네 뭐하구 있는거야? (그림)
    Look at these ones. Look at them. What are they doing? (pointing to the illustration)

(39) C: 아?
    Huh?
(40) M: They are fighting over an acorn.

(41) M&C: (웃음) (laughing)

(42) M: 웃기지?
Funny?

(43) C: 음.
Yes.

(44) M: (웃음) 전짜 웃긴다. 그치?
(laughing) hilarious, right?

(45) C: 어. 이거도 웃기고 이거도 웃기고 (그림을 가리키며)
Yeah. This is funny, and that one is funny too. (pointing to the illustration)

(46) M: 음. 웃긴거 많지?
Yes. There are so many funny things, [huh]?

(47) C: 음.
Yes.

(48) M: 얘는 쭉 하고 넘어졌어. (그림)
This one fell flat. (pointing to the illustration)

(49) C: 왜?
Why?

(50) M: 적 미끄러졌으니까 그램을 하기 (그림)
[He] probably has slid [and fell]. So [he] is crying now. (pointing to the illustration)

(51) C: 너무 아파서?
Because it so hurts?

(52) M: 음.
Yes.

(53) C: 어디 아픔가?
Where does he hurt?

(54) M: 적 미끄러졌으니까 (행동을 보이며) 여기 (괄금치를 보이며)
'Cause he fell flat (showing action), here (showing an elbow)

(55) C: 다 다쳤어.
All are injured. [it hurts all over]

(56) M: 그럼이...
[Yes.] it does.

(57) C: 여전화다
Oh! The phone.

(58) M: 어떤게 제일 웃겨?
Which one is the funniest?
59

(59) C: 이겨방 이겨방 (그림)
This one and that one (pointing to the illustration)

(60) M: 이겨 사우는겨방 웃기지. (그림)
This, the fighting one is funny. (pointing to the illustration)

이령하고 있는 것도 웃기지? (행동 보이며)
The one doing like this is funny too? (showing action)

(61) M&C: (웃음)
(laughing)

(62) M: 그랬더니 “곰돌아 고마워 우리들을 도와주었구나. (문장을 가리키며)”
곰돌이가 어떻게 도와졌어? 다람쥐들?
Then, “Thanks, Kom-Dol. You helped us.” (pointing to the sentence)

How did Kom-Dol help? The squirrels?

(63) C: (행동을 보임 나무혼들는)
(showing action: shaking the tree)

(64) M: 나무를 혼들어서 우두둑 우두둑 도토리를 엄청 많이 떨어트렸지?
(행동)
[He] shook the tree, so, woo-do-dook woo-do-dook, so many acorns fell off?

(showing action)

(65) C: 응.
Yes.

(66) M: 그래서 이 다람쥐 친구들이 이렇게 많이 떨어졌지? (그림)
So these squirrel friends could pick up so many... like this? (pointing to the illustration)

예는 두개 챠이나 줄고 (그림) 와.
This one even has two [bags] (pointing to the illustration) Wow.

(67) C: 응..(웃음) (그림)
This one (laughing) (pointing to the illustration)

(68) M: 예는 기도하고 있고/ 빨리 떨어져라..하고 (행동으로 보임) 기도하고 있구.
This one is praying... praying [for them] to fall off soon. (showing action)

예는 사우구, (그림) 그랬지?
This one is fighting. (pointing to the illustration) They did that [huh]?

(69) C: 왜 사워?
Why are they fighting?

(70) M: 서로 겹겼다고 큰 도토리, 내켜야 아니야 내끼야 (행동) 그러면서
싸우는거지. (그림)
[They] fight over the big acorn, saying ‘that’s mine, no that’s mine’ (showing the action) (pointing to the illustration)

“뭐라고 내가 도와주었고?” 곰돌이는 자가가 도와준게 아닌데, 그냥
나무를 혼들었을 뿐인데. 그치?
“What? [you mean] I helped you?” Kom-Dol did not help. [He] just shook the
tree. Right?

근데 다람쥐들은 곰돌이가 나무를 혼들었기 때문에 도토리가 많이
The conversation in Example 4.1 occurred between the mother and her three-year-old during the second session of the sharing of the print book. While reading page 12 in the print book, they mainly explained, commented and elaborated about the illustration. First, there were 15 segments to explain the illustrations; thirteen segments were explained by the mother and two by the child. During this conversation, the mother often explained what the squirrels were doing in the illustration (line 10, 14, 36, 40, 48, 50, 66 and 68). Also, she explained the number of acorns in the illustration (line 6). In addition, the mother often asked the child to explain what was happening in the illustration. For instance, she asked the child to explain how many acorns fell off the tree (line 4), what the squirrel brought (line 12) and what the squirrels were doing in the illustration (line 28 and 38). Giving an explanation similar to the mother’s about the illustration, the child explained the scene where a lot of acorns fell off (line 1) and the way the squirrel put the acorns in the bag (line 13) in the illustration.

They also supplied comments and asked each other to provide comments about the illustration nine times in this conversation. The mother commented that how the squirrels were acting in the illustration was funny (line 34, 44 and 60). Additionally, the mother
asked the child questions in order to elicit comments about the illustration. For instance, she asks the child to provide comments about whether the squirrels’ behaviour was funny (line 32, 42, 46 and 60) and which squirrel’s behaviour was the funniest of all (line 58). The child commented about the number of acorns that fell off of the trees in the illustration (line 7).

Also in this conversation, the mother further elaborated on the illustration several times by providing elaborations about the reason (line 50) and the purpose (line 68) of the squirrels’ current behaviours, and about possible ways the squirrels could interact (line 70).

Differing from the elaborate conversation generated by the illustration, they only talked about the story briefly (line 62-66 and line 70-73). In this conversation, the mother read the text (line 62 and 70) and then explained what happened in the story (line 70 and 72). Also, she asked the child to explain about the story, in particular, about what Kom-Dol had done (line 62, 64 and 66) and why so many acorns fell off the tree (line 70).

The conversation generated by the mother and her three-year-old clearly explained what was happening in the illustration and how it related to events in the story. This conversation provided the child extratextual information about how the main character helped others and the reason why others felt grateful to him. In fact, this extratextual information seemed ultimately to help the child understand the relationships among the details of the story and the result of the main character’s action, as illustrated in line 62-73.

In contrast to the mother-child interactions during the shared reading of the print book, in the electronic book 1 and 2 contexts, the mother-child conversations were mainly related
to talking about the story line and there were fewer interactions relating to the illustrations (Example 4.2).

Example 4.2 The mother and the seven-year-old child in the fourth session of sharing electronic book 1

-Text-

Source: Hansol Education Jaeminara

(P1)

주룩주룩 비가 내렸어요.
Pitter-patter, pitter-patter[.] it was raining.
톡톡톡 빗방울이 창을 두드렸어요.
Drip, drip, drip[.] raindrops splattered the window.
“아이, 심심해. 밖에 나가놀고 싶어.”
“Ah, I am so bored. I want to play outside”

Sae-Rom is being idle, idling in the room
"어어, 비가 그쳤네."
"Ah, it has stopped raining"

-Conversation-

(P1)
(1) M: 비가 오면 더 시원하고 좋을거 같은데. 그래?
   If it rains, it would be cooler and nice, right?
(2) C: 응.
   Yes.
(3) M: 애는 세롬이는 비오는게 싫은가봐/ 나가서 놀구 싶어서.
   She, Sae-Rom, doesn’t seem to like raining because [she] wants to play outside.

(P2)
(4) M: 애는 이렇게 집안에 장난감이 많고 놀게 많아도 밖에 나가 놀구
Although [she] has a lot of toys and things to play with, [she] still wants to play outside.

(5) C: 갖구 놀구
   Play with.

(6) M: 밖에 나가서 뛰어 놀구 싶어서.
   Because [she] wants to go outside, run around and play outside.

(7) C: 근데 애 장난감 많은데 (그림) 장난감 괜히 샀네.
   But she already has a lot of toys (pointing to the illustration). [She] shouldn’t have bought the toys.

(8) M: 장난감은 안에서 갖구 노는 것인데 그게 이제 지쳤나봐.
   Toys are what she plays with inside, but [she] is probably tired of it now.
   [She] is tired of playing inside.

(9) C: 뛰는게 더 힘들게 같는데.
   It seems running would be harder.

      미끄럼도 타고 뛰어 놀구.
      Do you also like to play inside? [No] It’s better to go outside, and play hard at a playground, like playing on a slide and running.

(11) C: 응.
      Yes.

(12) M: 그게 더 좋지 않어?
      Wouldn’t you like that more?

(13) C: 응.
      Yes.

(14) M: 그러니까 애도 마찬가지야.
      So does she.

(P3)

(15) M: 금방 그쳤다.
      It stopped soon.

(16) C: 응.
      Yes.

Note. “” indicates the mother or the children read actual sentences in the text;
Literal translation was done. Words in the [ ] were not actually pronounced by participants, but put in the English version of transcription to show clear meaning of utterances.
M= the mother; C= a child (one of the children)

This conversation represented a part of the mother and her seven-year-old’s interaction in the fourth session of sharing electronic book 1. During the sharing of pages one through three, the mother and the child talked about the story rather than the illustration. For
instance, the mother elaborated on the story, sharing her thoughts about a rainy day (line 1), Sae-Rom's eagerness to play outside (line 4), and what Sae-Rom wanted to do there (line 6). She also explained what Sae-Rom was eager to do (line 3) and what happened in the story (line 15). Finally, she provided comments about Sae-Rom's feelings (line 8).

Even though the mother and the child talked a great deal about the story, they rarely talked about the illustration (line 4 and 7) during this conversation.

These discussions about the story, between the mother and her seven-year-old, provided the child with extra information about the story. This information explained the main character's actions and the reason for those actions. Thus, apparently, the mother intended through her talk to help the child understand what the main character was doing as well as why she behaved like she did.
Similar to the mother’s and the children’s interactions during the sharing of electronic book 1, the mother and the children talked about the story more than about the illustrations during the sharing of electronic book 2 (Example 4.3).

Example 4.3 The mother and the seven-year-old child’s interactions in the fourth session of sharing electronic book 2

-Text-

Source: www.yurinuri.com

(4) “Did something happen to the tiger? Let’s go [and find out]” “Okay. Okay.”
The animals who were asleep went to see the tiger.
(5) “하하하. 왜 들 그래요? 잠이 안 와서 노래를 불렀답니다.”
"Ha[,] ha[,] ha. Why you do this (why are you all here)? I just sang songs because I
couldn’t go to sleep."
“뭐! 장난으로 울은 거야? 우리를 놀렸구나!”
“What! Did you cry as mischief? You made fun of us!”

(6) 동물들은 화가 났지만 그냥 집으로 돌아왔어요.
Even though the animals got angry, they just returned home.
Next day, the weather was so hot.
그런데 숲에서 나온 호랑이가 샘물로 풍덩 뛰어들어가지 뭐예요.
But the tiger who came out from the woods jumped into the spring.

An old goat admonished. (advised)
“여럿이 먹는 샘물에 들어가 풍덩거리면 안 돼요! 빨리 나와!”
“You shouldn’t have jumped into the spring that all others drink from. Get out of there, quickly!”

But the tiger pretended not to listen.
Several days later, the tiger picked up strange stones.

“What are these white stones used for?”

Becoming curious, the tiger hit the stones.

--- Conversation ---

(1) C: 3 ^M-Hf.
    [I think] Others are worried about something.
(2) M: 7477}T
    [They] were surprised to hear him (the tiger) roar at night. [They] came because they worried [about him].
(3) M: #£4^ iiEfl# 
[He] sings a song, 'cause he can't go to sleep?

(4) C: 응.
Yes.

(5) M: 너두 잡 안오면 노래 불려?
Do you also sing when you cannot go to sleep?

(6) C: 아니. (웃음) 노래 불려 뭐가 재밌어.
No (Laughing), why singing a song[?] What's so funny[?]

(7) M: 장난 장난친거야.
[He] was fooling around.

(8) C: 이.
Yeah.

(9) M: 자기 탕다구 막 샘물로 들어 갔어.
'Cause it was hot, he jumped into the spring water.

(10) C: 수영장에서 하면 될걸.
[He] could do that in the swimming pool.

(11) M: 그래. 우리 수영장에 들어가지 더우면?
Right. We go to a swimming pool when it's hot?

(12) C: 응.
Yes.

(13) M: 목욕을 하든가.
Or take a bath.

(14) C: 응.
Yes.

(15) M: 진짜 못됐다.
What a naughty one.

(16) C: “들은 적도”
"pretended not to hear"
엄마 근데 수영장 갈때 차타고 가지 우리?
By the way, mom, we take a car when we go to a swimming pool?

(17) M: 응.
Yes.

(18) C: 그치. 그러니까 혼들 경봐.
Right. So [he's afraid that] it may be hard.

Not exactly, there are other kinds of water besides this kind of water like valley
This conversation occurred between the mother and her seven-year-old child during the fourth session of the sharing of electronic book 2. The mother and the child talked about the story eight times. The mother explained what the characters were doing and what they had done in the story (line 2, 7, 9, and 21). She also provided a comment about the tiger's behavior (line 15), and an elaboration on what the tiger should have done to prevent his problematic behavior in the story (line 19). Moreover, the child provided elaborations about the solution for the tiger's problematic behavior (line 10) and about a possible reason for such behavior (line 18) in the story. Like mother-child interactions during the shared reading of electronic book 1, in this conversation they didn't talk much about the illustrations but mainly about the story.

This story discussion between the mother and the seven-year-old child provided the child with information about a problem based on the main character's actions and then offered some possible solutions to those problems. Such extratextual information in the discussion seemed to help the child understand what the problems (conflicts) in the story were, and how those problems could be overcome.

In short, the mother and the child's focus of talk appeared to be different in the print book context than in the electronic book contexts, since they talked more about illustrations in the print book context and more about the storyline in the electronic book contexts.
Furthermore, even though focuses of mother-child interactions differed across the contexts, extratextual information in these conversations in the different contexts similarly appeared to help the children understand the story.

Examination of the conversation between the mother and the children revealed different focuses of interactions across the contexts by the end of the sessions (Example 4.4, 4.5 & 4.6). Firstly, by the end of the session in the print book context, the mother and the children's conversation was mainly related to associating the story with the children's experiences (Example 4.4).

**Example 4.4 The mother and the three-year-old child's interactions in the second session of sharing the print book**

(P14)
(1) M: 재밌었어?
   Was it fun?
(2) C: 음.
   Yes.
(3) M: 성우도 친구들 도와줄거야?
   Will Sung-Woo help friends too?
(4) C: 어.
   Yeah.
(5) M: 엄마도 도와주고?
   Help mom too?
(6) C: 음.
   Yes.
(7) M: 뭐도와줄래?
   What will you help with?
(8) C: 빨래 개는거.
   Folding clothes
(9) M: 빨래 개는거?
   Folding clothes?
(10) C: 음.
   Yes.
(11) M: 청소하는거는?
What about cleaning [around the house]?

(12) C: 청소하는 것도.
   Cleaning too.
(13) M: 청소하는 것도?
   Cleaning too?
(14) C: 응, 또 빨래 너는 것도.
   Yes, and [...] hanging the clothes too.
(15) M: 빨래 너는 것도?
   Hanging the clothes too?
(16) C: 응.
   Yes.
(17) M: 응, 도와줘..
   Yes, please help [then].

Note. “ ” indicates the mother or the children read actual sentences in the text.
Literal translation was done. Words in the [ ] were not actually pronounced by participants, but put in the English version of transcription to show clear meaning of utterances.
M= the mother; C= a child (one of the children)

This mother-child conversation focused mainly on associating the story with the child’s future actions, as during the conversation, the mother and the child talked about how the child might help the mother in the future situations, based on the main idea of the story, which is helping others (line 3-17). For instance, the mother associated the story and the child’s experience by asking whether the child would help others (line 3 and 5) and how the child would help (line 7 and 11). Next, the child associated his idea with the theme, contributing a new idea about what he would do to help others (line 14). Thus, by the end of the session, the mother-child discussion mainly focused on association between the main idea of the story and the child’s experience.

Mother-child interactions were different in the electronic book 1 context from the other contexts in that the conversations at the end of each session were more focused on predicting possible future events of the story (Example 4.5). After reading the story, the mother and the children predicted about what was most likely going to happen after the story ended.
Example 4.5 The mother and the seven-year-old child’s interactions in the fourth session of sharing electronic book 1

(1) C: 엄청 더러워 졌어. 엄마 근데 이 물 (그림-아이옷) 다 떨어지면 어떻게 해?
   It got so dirty. Mom, but what is [she] going to do when this water (pointing to the illustration- the child’s clothes) drips all off?
   그 마루에서 다 떨어지면?
   If it all falls on the floor?
(2) M: 여기두 답아봐. 여기 다 홋 묻히면서 들어왔어. 집에까지.
   [We need to] wipe here. [She] came in with mud on her, even to the inside of home.
   이거 다 닦아봐되고..
   [We have to] clean this all.
(3) C: 엄청 나갔다. (웃음) 엄청 나갔다.
   It will be a lot of work. (laughing) It will be a lot.
(4) M: 엄마가 막 혼낼까?
   Will [her] mom scold her? [will her mom be mad at her?]
(5) C: 응.
   Yes.
(6) M: 아니면 그래 너 한번만 용서해 줄게 그럴까?
   Or will [her] mom say [she] will forgive her (Sae-Rom) this time only?
   어떻게 줄게 엄마가? 어떻게. 어떻게 했으면 좋겠어?
   What would [her] mom do? What, what do you want her to do?
(7) C: 응? 한번만 용서해
   Huh? Forgive [her] only this time.
(8) M: 그치 한번만 용서해주고 다시는 비온 다음에 나가서 일부러 막 미끄럼 타고, 나무를 막 혼들고...
   Right, [the mom] forgives [her] only this time, and [she] (Sae-Rom) will not go sliding after raining and shaking the tree again...
(9) C: 근데 이 엄마는 (그림) 홍 장난은 안했지만 그 미끄럼 타는거랑 그거랑 물랐잖아.
   But this mom (pointing to the illustration) did not know that even though [Sae-Rom] did not play with mud, [she] went sliding and did other things.
(10) M: 물랐지?
   [The mom] did not know?
(11) C: 응.
   Yes.
(12) M: 근데 응 그래 그건 물랐다.
   But, yes, right, [she] did not know about that.
   근데 옷을 보니가 어떻게, 다 홋이 묻었지?
   But when [she] saw (Sae-Rom’s) clothes... saw what they were like... they got all dirty?
(13) C: 응.
   Yes.
(14) M: 흔장을 한 거 같지?
   It seemed like [she] played with mud?
(15) C: 응.
   Yes.
(16) M: 뉴고 애가 꽁 거짓말 시키는 거 같아.
   So, it looks like [she]'s lying.
(17) C: 응.
   Yes.
(18) M: 그럼 애가 바른대로 얘기 해야 되겠지.
   Then, [she] should tell [the mom] the truth.
   엄마 크게 아니라 흔장난은 안했어요.
   [She should say] ‘Mom, I really did not play with mud.’
   하지만 벽에 붙어서 가서 먼저 다물히고 또 미끄럼 졸 타서 또 문히고.
   But ’cause [I] slid on the wall, my clothes got dirty. And [I] got dirty again from
   sliding down.
   그래서 엄마한테 혼날까봐 흔장물에다가 옷을 빼앗어요 하고.
   So [I] worried [I] might get scolded by mom [you], so [I] washed the clothes in
   the muddy water.'
   사실대로 얘기하면 어 그랬구나 그리고 다음부터 그러지 마라 하고
   용서해 주겠지?
   If [she] tells the mom the truth, then [the mom] would say ‘oh! That’s what
   happened. [You] shouldn’t do that again next time’, and will forgive [her]?
(19) C: 응, 그러면 빼앗아요
   Yes, then, [she] should wash [them].
(20) M: 그런데 계속 끝까지 엄마 나 흔장난 안했어요 정말이에요 계속 그러면
   엄마가 그렇게 믿겠어?
   But if [she] keeps saying that ‘mom, I did not play with mud. It’s true’, will her
   mom believe that?
(21) C: 아니.
   No.
(22) M: 안 믿겠지. 옷이 이렇게 더러운데.
   [She] will not believe [her] ’cause the clothes are dirty like this,
(23) C: 응.
   Yes.
(24) M: 흔장난 안했다는 걸 안믿겠지?
   [She] will not believe that [Sae-Rom] did not play with mud?
(25) C: 응.
   No.
(26) M: 그러면 사실대로 얘기하고 언제 다시는 안그렇게 해야 하면 엄마도
   용서해 줄거야.
   So, if [she] tells [the mom] the truth and say ‘[I] will not do it again’, then the
   mom will forgive [her].
This conversation occurred between the mother and her seven-year-old child during the fourth session of the sharing of electronic book 1. At the end of the session, the mother and the child conversed mainly about predicting what would happen in a sequel to the story that had just ended. The mother asked the child to predict what could possibly happen between Sae-Rom and her mother (line 4, 6, 18, 20, 24 and 28). The child provided some predictions (line 7, 19 and 29). This mother-child discussion could conceivably help the child expand his ideas about the story and develop skills related to causality.

At the end of each shared electronic book 2 reading session, mother-child conversation mainly revolved around recalling details of the story that they had read (Example 4.6). For instance, at the end of each session, the mother and the children recalled certain details of the story and talked about what had happened in the story.
Example 4.6 The mother and the three-year-old child during the second session of sharing electronic book 2

(1) M: 화장이가 왜 울었어?
   Why did the tiger cry?
(2) C: 타서
   Because [he's] burnt.
(3) M: 타서, 아파서?
   Because [he's] burnt, because of pain?
(4) C: 어.
   Yeah.
(5) M: 그러구 또 친구들이 도와 쳤어.
   And friends helped [him] too.
(6) C: 어.
   Yeah.
(7) M: 그래서 고마워서 아이구 아까는 내가 너무 잘못했구나 그랬지?
   So because [he] was thankful, [he] said ‘oh, I was very bad before’?
   아까 뭐 잘못 했어?
   What did [he] do wrong before?
(8) C: 물.
   Water.
(9) M: 먹는 물에 놀랑.
   Jumped into the drinking water.
(10) C: 어.
   Yeah.
(11) M: 또.
   And
(12) C: ...또...
   ...And...
   What else did he do wrong? A naughty thing.
(14) C: 물라
   I don’t know.
(15) M: 다들 잘 때 뭐했지?
   When everyone was asleep, what did [he] do?
(16) C: 춤썼어.
   Danced.
(17) M: 춤썼어?
   Danced?
(18) C: 어.
   Yeah.
(19) M: 노래 불렀지?
   Sang songs?
To reiterate, this conversation occurred between the mother and the three-year-old child during the second session of the shared reading of electronic book 2. At the end of the session, it was evident that the mother and the child’s talk centered around the recalling of the story (lines 1-24). The mother asked the child to recall what the tiger did in the story that they had read (line 1, 7, 13, 15, 19, 21 and 23), and she recalled a specific detail of the story (line 5). In answer to the mother’s questions, the child recalled some details of the story (line 2, 8 and 16). Thus, during the sharing of electronic book 2, at the end of each session, the mother and the child mainly recalled the story that they have read.

Moreover, it seemed that this extratextual talk helped to check the child’s understanding of the story and its sequences and details.

In short, even though mother and the child’s extratextual talk involved at the end of all three contexts, the mother ended sessions with a different focus of talk in each context.
4.2.2. Research Question Two

(2) Are there any differences or similarities in mother-child interactions between the two age groups in those activities? If so, what are the differences or similarities?

4.2.2.1. The frequency of mother-child interactions according to the children's ages.

Several differences and similarities in mother-child interactions during the shared reading according to the children's ages were found. Firstly, the total number of the mother and the children’s interactions was compared (Figure 4.8). A greater number of interactions during the shared reading occurred between the mother and the three-year-old child than between the mother and the seven-year-old child (Figure 4.8).

In terms of the number of interaction types, overall, a similar number of interaction types occurred between the mother and the three-year-old child and between the mother and the seven-year-old child during the shared reading (Figure 4.8). However, the seven-year-old child exhibited slightly more varied interaction types than the three-year-old child did in the electronic book 1 and 2 contexts, and the reverse was true for the print book context.

In general, the number of interaction types was similar between the two age groups in the three contexts.
Figure 4.8 The total number of mother-child interactions and interaction types during the shared reading according to the children’s ages.

**Total Number of Mother's Interactions During Activities**

<table>
<thead>
<tr>
<th>Types of Activities</th>
<th>3 years</th>
<th>7 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print Book</td>
<td>1012</td>
<td>543</td>
</tr>
<tr>
<td>Electronic book 1</td>
<td>631</td>
<td>401</td>
</tr>
<tr>
<td>Electronic book 2</td>
<td>375</td>
<td>283</td>
</tr>
</tbody>
</table>

**Total Number of Children's Interactions During Activities**

<table>
<thead>
<tr>
<th>Types of Activities</th>
<th>3 years</th>
<th>7 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print Book</td>
<td>665</td>
<td>356</td>
</tr>
<tr>
<td>Electronic book 1</td>
<td>495</td>
<td>319</td>
</tr>
<tr>
<td>Electronic book 2</td>
<td>276</td>
<td>220</td>
</tr>
</tbody>
</table>
Figure 4.8 The total number of mother-child interactions and interaction types during the shared reading according to the children’s ages (Continued)

**Total Number of Mother’s Interaction Types During Activities**

![Bar chart showing the total number of mother’s interaction types during activities for different types of activities and ages.](chart1)

**Total Number of Children’s Interaction Types During Activities**

![Bar chart showing the total number of children’s interaction types during activities for different types of activities and ages.](chart2)

*Note.* The number of major categories was counted to calculate the number of interaction types. Where sub-categories existed, in major categories, such as comments, explanations, elaborations and simple responses each sub-category was counted separately. (Maximum number of 29)
In addition, the ratio of the frequency between the mother and the children's interactions was examined in order to examine the responsibility between the mother and the children during shared reading according to their ages (Table 4.6). A similar percentage of the mother and the children's participations was shown between the two age groups in each context. Thus, the mother's level of participation was similar during mother-child shared reading with the three-year-old child and with the seven-year-old child. The children also contributed a similar amount of talk during shared reading with the mother.

Table 4.6 Percentage of the mother and the children's participations during shared reading

<table>
<thead>
<tr>
<th></th>
<th>Print Book</th>
<th>Electronic Book 1</th>
<th>Electronic Book 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 year old</td>
<td>7 year old</td>
<td>3 year old</td>
</tr>
<tr>
<td>Mother</td>
<td>60.35%</td>
<td>60.27%</td>
<td>56.04%</td>
</tr>
<tr>
<td>Child</td>
<td>39.65%</td>
<td>39.73%</td>
<td>43.96%</td>
</tr>
</tbody>
</table>

In short, even though a greater number of mother-child interactions occurred between the mother and the three-year-old child than between the mother and the seven-year-old child in the three contexts, the total number of mother-child interaction types did not differ distinctively between the two age groups. Moreover, between the two age groups, the ratio of the frequency between the mother and the children's interactions was similar.
4.2.2.2. The frequency of mother-child interactions over time according to the children’s ages.

The mother and the children’s interactions over time were compared according to the children’s ages (Figure 4.9). Several similarities were found in the number of mother-child interactions over time according to the children’s ages. The number of interactions increased over time in the case of the mother and the three-year-old child (the mother’s interactions: 152-346, the child’s interactions: 62-252), and in the case of the mother and the seven-year-old child (the mother’s interactions: 93-186, the child’s interactions: 38-134) in the print book context. However, interactions while sharing electronic book 1 decreased over time in both age groups. In addition, there was a difference in the number of interactions over time in the electronic book 2 context between the two age groups. During the sharing of electronic book 2, the number of interactions between the mother and the three-year-old child increased over time, while the mother and the seven-year-old child’s interactions decreased.

Figure 4.10 displays the mother and the children’s interaction types over time in the three contexts according to the children’s ages. Only during the sharing of the print book, were changes in the number of interaction types similar over time in both age groups. For instance, the number of interaction types increased over time between the mother and the three-year-old child and between the mother and the seven-year-old child. However, over all, distinctive tendencies in the number of interaction types during shared reading over time did not appear between the two age groups in the electronic book contexts.
Figure 4.9 The number of the mother and the children's interactions across sessions

Number of Mother's Interactions During Sharing the Print Book

Number of Interactions

Day 1  Day 2  Day 3  Day 4

Date of Session

Number of Children's Interactions During Sharing the Print Book

Number of Interactions

Day 1  Day 2  Day 3  Day 4

Date of Session
Figure 4.9 The number of the mother and the children’s interactions across sessions
(Continued)

Number of Mother’s Interactions During Sharing of Electronic book 1

Number of Children’s Interactions During Sharing of Electronic book 1
Figure 4.9 The number of the mother and the children’s interactions across sessions (Continued)
Figure 4.10 The number of the mother and the children’s interaction types across sessions.
Figure 4.10 The number of the mother and the children’s interaction types across sessions (Continued)
Figure 4.10 The number of the mother and the children’s interaction types across sessions (Continued)

Note. The number of major categories was counted to calculate the number of interaction types. Where sub-categories existed, in major categories, such as comments, explanations, elaborations and simple responses each sub-category was counted separately. (Maximum number of 29)

In short, in terms of the number of interactions over time, the changes in the number of mother and children’s interactions were similar between the two age groups in the print book and electronic book 1 contexts while differing between the two age groups in
Moreover, the changes in the number of their interaction types were similar between the two age groups in the print book context while differing between the two age groups in the electronic book contexts. Thus, there were no distinctive tendencies in the number of mother-child interaction and interaction types over time between the two age groups across the contexts.

4.2.2.3. The mother and the children's interaction types according to the children's ages.

Tables 4.7 and 4.8 display the frequency of the mother and children's different interaction types during the shared book reading depending on the children's ages. The mother provided an increased amount of certain types of interaction depending on whether she was interacting with her three-year-old child or with her seven-year-old child (Table 4.7). The mother exhibited the following interaction types more often while she interacted with the three-year-old child than with the seven-year-old child: labeling, explanations about the story, explanations about why questions, elaborations about illustrations, elaborations about the story, elaborations about the child's or her own previous talk, recalling previous parts of the story, and clarification of the child's or her own previous talk. Moreover, she used "managing talk" only in the interactions with the three-year-old child during the shared reading. Only while interacting with the seven-year-old child did the mother prompt the child's reading.
Table 4.7 The mother’s frequent interaction types during the shared reading according to the children’s ages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mother (3 years)</td>
<td>Mother (7 years)</td>
<td>Mother (3 years)</td>
</tr>
<tr>
<td>Prompting Reading</td>
<td>2</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Labeling</td>
<td>50</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Explanation (2)</td>
<td>78</td>
<td>53</td>
<td>75</td>
</tr>
<tr>
<td>Explanation (4)</td>
<td>29</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Elaboration (1)</td>
<td>48</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Elaboration (2)</td>
<td>33</td>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td>Elaboration (3)</td>
<td>79</td>
<td>22</td>
<td>58</td>
</tr>
<tr>
<td>Recalling</td>
<td>39</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>Clarification</td>
<td>66</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>Managing</td>
<td>7</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. Prompting Reading= Initiating reading by providing the first word of the sentence in the text; Labeling = Giving or asking a label for an item in the illustration; Explanation (2) = Explaining about the story (including statements and questions); Explanation (4) = Explaining about a reason for why questions (including statements and questions); Elaboration (1) = Elaborating about illustrations (including statements and questions); Elaboration (2) = Elaborating about the story (including statements and questions); Elaboration (3) = Elaborating about the child’s or own previous talk; Recalling = Recalling or asking to recall the story; Clarification= Clarifying the child’s or own previous talk; Managing= Managing to get the child involved

Bold numbers show the most frequently occurring interactions across the contexts.
The number of interactions for each category is the total of the interactions in all the sessions.
Please see Appendix B, page 153 for a complete list of categories.

The children displayed different interaction types more frequently during the shared reading according to their ages (Table 4.8). Firstly, the three-year-old child used the following interaction types more often than the seven-year-old child did in the three contexts: attention to illustration or print, explanations about the story, explanations about why questions, elaborations about illustrations, elaborations about the mother’s or own previous talk, recalling previous parts of the story, clarification of the mother’s or his own previous talk, expressing an intention to turn the pages, and responding with a “don’t
know", or giving no response to the mother’s questions. Secondly and expectedly, the
seven-year-old child read the author’s name, the title or the text of the book more often
than the three-year-old child did during the shared reading.

Table 4.8 The children’s frequent interaction types during the shared reading
according to the their ages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Child (3 years)</td>
<td>Child (7 years)</td>
<td>Child (3 years)</td>
</tr>
<tr>
<td>Read Author/ Title/ The text</td>
<td>1</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Attention to illustration or print</td>
<td>40</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Explanation (2)</td>
<td>14</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>Explanation (4)</td>
<td>41</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>Elaboration (1)</td>
<td>28</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Elaboration (3)</td>
<td>61</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>Recalling</td>
<td>18</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Clarification</td>
<td>26</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Intention</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Simple Response (2)</td>
<td>12</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Simple Response (4)</td>
<td>22</td>
<td>2</td>
<td>21</td>
</tr>
</tbody>
</table>

Note. Read Author/ Title/ The text = Reading or asking the author’s name, title of the book or
the sentences in the book; Attention to illustration or print=Directing attention to the illustration
or print without giving a label to an item in the illustration; Explanation (2) = Explaining about
the story (including statements and questions); Explanation (4) = Explaining about a reason for
why questions (including statements and questions); Elaboration (1) = Elaborating about
illustrations (including statements and questions); Elaboration (3) = Elaborating about the
mother’s or own previous talk; Recalling = Recalling or asking to recall the story; Clarification=
Clarifying the mother’s or own previous talk; Intention= the child’s intention to do something;
Simple Response (2)= Responding with ‘don’t know’; Simple Response (4)= No response to the
mother’s questions

Bold numbers show the most frequently occurring interactions across the contexts.
The number of interactions for each category is the total of the interactions in all the sessions.
Please see Appendix B, page 153 for a complete list of categories.
In short, certain types of interactions appeared more often in the interactions between the mother and the three-year-old child, while other types occurred more often between the mother and the seven-year-old child. Certain types of interactions were exhibited only in the interactions between the mother and the three-year-old child or only between the mother and the seven-year-old child.

4.2.2.4. The mother and children’s immediate and non-immediate talk during the shared reading according to the children’s ages.

Figure 4.11 displays the mother and the children’s immediate and non-immediate talk during the shared reading. The examination of mother-child’s immediate and non-immediate talk revealed different frequencies of these two types of talk depending on the children’s ages. Firstly, both immediate and non-immediate talk occurred more often between the mother and the three-year-old child than between the mother and the seven-year-old child in the print book and electronic book 1 contexts. However, the frequency of immediate and non-immediate talk was similar between the two age groups in the electronic book 2 context.

The percentage of non-immediate talk in mother-child interactions was then examined between the two age groups (Table 4.9). First, in terms of mother’s interactions, the mother showed a similar percentage of non-immediate talk in her interactions with both children during the shared reading of the print book and electronic book 2. However, she expressed a higher percentage of non-immediate talk with the seven-year-old child during shared reading of electronic book 1. Second, in terms of the children’s interactions, both children showed a similar percentage of non-immediate talk in the print book context. However, the seven-year-old child exhibited a higher percentage of non-immediate talk
during shared reading of electronic book 1 than the three-year-old child while the three-year-old child exhibited a higher percentage of non-immediate talk during shared reading of electronic book 2.

Figure 4.11 Mother-child immediate and non-immediate talk during the shared reading according to the children’s ages
Figure 4.11 Mother-child immediate and non-immediate talk during the shared reading according to the children’s ages (Continued)
Table 4.9 The percentage of mother and the children’s immediate and non-immediate talk during the shared reading across the children’s ages

<table>
<thead>
<tr>
<th></th>
<th>Mother</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3Y</td>
<td>7Y</td>
</tr>
<tr>
<td>Immediate talk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Percentage)</td>
<td>(53 %)</td>
<td>(44 %)</td>
</tr>
<tr>
<td>Non-immediate talk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Percentage)</td>
<td>(47 %)</td>
<td>(34 %)</td>
</tr>
</tbody>
</table>

**Note.** Bold numbers show the most frequently occurring interactions according to the children’s ages in each context. The number of interactions for each category is the total of the interactions in all the sessions. The percentage (%) inside of the parenthesis shows the percentage of the talk as a ratio between immediate and non-immediate talk. Please see Appendix B, page 153 for a complete list of categories for immediate and non-immediate talk. 3Y= the 3-year-old child; 7Y= the 7-year-old child

Overall, more immediate and non-immediate talk was exhibited in interactions between the mother and her three-year-old child than between the mother and her seven-year-old child during the shared reading. The mother and the seven-year-old child’s talk was slightly more focused on non-immediate talk than the mother and the three-year-old child’s talk was, but the difference in the percentage of mother-child’s non-immediate talk according to the children’s ages was small.

4.2.2.5. The use of mother and children’s questions according to the children’s ages.

The examination of the mother and the children’s question usage showed that the number of questions appeared to be different over the three contexts, according to the children’s ages (Table 4.10). A greater number of questions were exhibited in the interactions between the mother and the three-year-old child than between the mother and the seven-
year-old child in the three contexts, even though the seven-year-old child asked more questions than the three-year-old child during the sharing of electronic book 2.

Table 4.10 Total number of mother and children’s questions according to the children’s ages

<table>
<thead>
<tr>
<th></th>
<th>Mother</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 years</td>
<td>7 years</td>
</tr>
<tr>
<td>Print book</td>
<td>262</td>
<td>133</td>
</tr>
<tr>
<td>Electronic book 1</td>
<td>224</td>
<td>120</td>
</tr>
<tr>
<td>Electronic book 2</td>
<td>150</td>
<td>82</td>
</tr>
</tbody>
</table>

*Note.* Bold numbers show the most frequently occurring interactions according to the children’s ages in each context. The number of interactions for each category is the total of the interactions in all the sessions. Please see Appendix B, page 153 for a complete list of categories for questions.

The frequency of the mother and the children’s immediate and non-immediate questions was also examined based on the children’s ages (Table 4.11). Over all, the mother used more immediate and non-immediate questions in interactions with the three-year-old child than with the seven-year-old child in the three contexts (Table 4.11). Similarly, the three-year-old child used more immediate and non-immediate questions than the seven-year-old child in the three contexts. Thus, more immediate and non-immediate questions were asked in the interactions between the mother and the three-year-old child than between the mother and the seven-year-old child.
Table 4.11 The mother and the children’s immediate talk and non-immediate questions according to the children’s ages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother; 3 years</td>
<td>74</td>
<td>37</td>
<td>4</td>
</tr>
<tr>
<td>Mother; 7 years</td>
<td>39</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Child; 3 years</td>
<td>26</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Child; 7 years</td>
<td>7</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Non-Immediate questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother; 3 years</td>
<td>89</td>
<td>112</td>
<td>91</td>
</tr>
<tr>
<td>Mother; 7 years</td>
<td>44</td>
<td>56</td>
<td>58</td>
</tr>
<tr>
<td>Child; 3 years</td>
<td>70</td>
<td>55</td>
<td>26</td>
</tr>
<tr>
<td>Child; 7 years</td>
<td>32</td>
<td>25</td>
<td>13</td>
</tr>
</tbody>
</table>

Note. Bold numbers show the most frequently occurring question types across the contexts. The number of interactions for each category is the total of the interactions in all the sessions. Please see Appendix B, page 153 for a complete list of categories for immediate and non-immediate talk.

Overall, the mother asked more questions of the three-year-old than the seven-year-old in all three contexts. Moreover, both immediate and non-immediate questions were exhibited more often in the interactions between the mother and the three-year-old child than between the mother and the seven-year-old child.

4.2.2.6. Conversations between the mother and the children in different contexts according to the children’s ages.

The examination of the qualitative data provided some possible explanations for the finding of there being more frequent interactions between the mother and the three-year-old than between the mother and the seven-year-old, as was evident in the quantitative data. In particular, the examination of mother-child conversation in each context showed that the interactions between the mother and the three-year-old child were more detailed, and these necessitated higher number of interactions and questions than those between the mother and the seven-year-old child (Example 4.7, 4.8 & 4.9). First, different from
mother-child interactions during sharing of the electronic books, at the end of the print book sessions in which associations mainly occurred in mother-child interactions, the mother asked the three-year-old child more detailed questions in order to provide more related information to the child. However, the mother asked the seven-year-old child only general questions related to association, at the end of print book sessions (Example 4.7).

**Example 4.7 The mother-child conversations related to association at the end of the print book sessions**

1) 3-year-old

| (1) M: 성우도 엄마 빨래 너무도 도와줄거야? | Will Sung-Woo also help mom [me] hang the clothes? |
| (2) C: 응. | Yes. |
| (3) M: 그릇정리하는 건 도와주면 안돼. (책의 앞으로 가서 그 장을 보며) [You] should not help [me] put away the dishes. (As the mom turns the page which is about putting away dishes.) | Yes. |
| (4) C: 왜? | Why [not]?
| (6) C: 응. | Yes. |
| (7) M: 빨래 너무도 도와줄 수 있지? | [You] can help [me] hang the clothes? |
| (8) C: 응. 안유리인거. | Yes. Not glass thing. [things that are not made of glass] |
| (9) M: 응? | Huh? |
| (10) C: 안유리인거. 유리가 아닌거. | Not glass thing. Things that are not glass. |
| (11) M: 유리가 아니라서. 안까지나니까? | Because [they] are not made of glass, so [they] will not break? |
| 그리고 또 왜 도와줄래? | And what else will [you] help [me] with? |
| (12) C: 응? (나무 농드는 동작을 보임) | Huh? (Showing action: shaking the tree) |
(14) C: 응.
    Yes.
(15) M: Will [you] help mom clean or not??
(16) C: 도와줄거야.
    [I] will help.
(17) M: Will [you] help?
(18) C: 에.
    Yes
(19) M: 또 쭉 도와줄 수 있어?
    And what else can [you] help with?
(20) C: 장난감.
    Toys
    Putting away toys. [You] can put [them] away, right? By yourself.
(22) C: 응.
    Yes.
(23) M: 그리고 엄마 도와주면 도도 기분이 좋아?
    And, is Sung-Woo [are you] also happy when [you] help mom?
(24) C: 응.
    Yes.
(25) M: 에?
    Huh?
(26) C: 응.
    Yes.
(27) M: 엄마가 칭찬해 주니까?
    Because mom praises [you]?
(28) C: 응.
    Yes.

2) 7-year-old

(1) M: 경우도 엄마 도와준거 있어?
    Has Jung-Woo (you) also helped mom with something?
(2) C: 아니.
    No.
(3) M: [You] sure have.
(4) C: 뭐?
What?
(5) M: 엄마 봉상 차릴때 손가락 것가락 놓는거. 그건것도 도와주는데거야 그치?
   Helping mom (me) set up the table like placing spoons and chopsticks. That kind of thing is also helping, right?
(6) C: 응.
   Yes.
(7) M: 또 도와줄거야? 애니처럼?
   Will [you] help [me] again like these ones (animals in the story)?
   애니들은 엄마가 빨래 넣는 것도 도와주고, 또 토끼는 당근 채취로 도와주고, 너구리는 고구마 씻는거 도와 줬잖아. ( 다시 책의 앞으로 돌아가 각 각의 장을 넘기며)
   They helped mom hang the clothes. The rabbit helped dig up carrots, and the raccoon helped wash yams. (As the mother turned each page to show each event.)
(8) C: 응.
   Yes.
(9) M: 정우도 엄마가 정우야 좀 도와줘 그린다면 도와 줄거야?
   Will Jung-Woo [you] also help mom [me], when mom asks Jung-Woo [you] to help?
(10) C: 응.
   Yes.
(11) M: 도와주면 재밌잖아 그치?
   It’s fun to help others, right?
(12) C: 응.
   Yes.
   This one (Kom-Dol) also said that “helping others is so pleasurable”, right?
   (The mom turned the page that has the sentence “”, and pointed to the sentence.)
(14) C: 응.
   Yes.
(15) M: 그러니까 너무 엄마 도와줘야되?
   So you should help mom too?
(16) C: 응.
   Yes.

Note. “” indicates the mother or the children read actual sentences in the text.
Literal translation was done. Words in the [ ] were not actually pronounced by participants, but put in the English version of transcription to show clear meaning of utterances.
M= the mother; C= a child (one of the children)
These conversations took place between the mother and the three-year-old child, and between the mother and the seven-year-old child in the first session of the sharing of the print book. In both conversations, the mother and the children associated their experiences with the theme of the story. In the first conversation, in order to associate the child’s experience and the story, the mother asked the three-year-old child a general question about whether he would do to help her (line 1) as well as specific questions about how the child would help (lines 7, 11, 13, 15 and 19), things the child should be careful of (line 1) and how the child feels when helping (line 23). However, in the second conversation, the mother associated the seven-year-old child’s experience and the story by asking him only general questions about the child’s past experience about helping the mother (line 1), whether the child would help (line 7, 9 and 15) and how people generally feel when helping (line 11). As evidenced by these conversations, the mother asked the three-year-old child more questions than the seven-year-old child, and she asked specific questions to the three-year-old child more often than the seven-year-old child.

During the shared reading of electronic book 1, even though the topic of conversation was similar, the mother and the three-year-old child engaged in more interactions to clarify the content of the talk than the mother and the seven-year-old child did. Moreover, the mother’s explanations and elaborations about the story were frequent in the case of the mother and the three-year-old child’s conversation than in the case of the mother and the seven-year-old child’s (Example 4.8).
Example 4.8 The mother-child conversations, while reading electronic book 1

- Text -

Source: Hansol Education Jaeminara

脐渇脐渇 횂을 빨자.
Splash[,] splash[,] let’s wash the clothes
 kaldak게 횂을 빨자.
Let’s wash the clothes clean
 움덩이에 고인 물로
With the water in the puddle
脐渇脐渇 횂을 빨자.
Splash[,] splash[,] let’s wash clothes
Conversation

1) 3-year-old

(1) M: 옷을 어디서 빼고 있는가?
   Where is [she] washing the clothes?

(2) C: 여기 앉은 거 아니야? (그림) (발음 부정확)
   Doesn’t [she] sit here? (pointing to the illustration) (unclear pronunciation)

(3) M: 옹덩이에 고인물로 옷을 빼네.
   [She] is washing the clothes with water in the puddle.

(4) C: 어 드리운 물? (그림)
   Oh, [with] dirty water? (pointing to the illustration)

(5) M: 그래 웜을 어디서 빼야야되?
   Right, where should [we] wash the clothes?

(6) C: 몰라.
   I don’t know.

(7) M: 정에 와서 깨끗한 물로 빼야야 되지.
   [We] should come home and wash [them] with clean water.

(8) C: 어.
   Yeah.

(9) M: 근데 왜는 왜 옹덩이에 고인 이 물로 옷을 빼까?
   But why is [she] washing the clothes with this water in the puddle?

(10) C: 어.
    Yeah.

(11) M: 음?
    Huh?

(12) C: 몰라.
    I don’t know.

(13) M: 엄마한테 혼날까봐
    Because [she] worries if [she] is going to be scolded by mom.

(14) C: 어.
    Yeah.

(15) M: 엄마 물래 깨끗하게 빼율려고 하니까
    [She] tries to wash [them] clean to keep it secret from [her] mom.

(16) C: 어.
    Yeah.

(17) M: 음.
    Yes.

(18) C: 어.
    Yeah.

(19) M: 정에가면 엄마가 너 옷 더럽히지 않기로 약속했는데 왜 더러워 졌어 하면서 혼날까봐.
    Because if [she] goes home [with dirty clothes], the mom will scold [her] saying
    ‘you promised not to get the clothes dirty, but why did they get so dirty’.

(20) C: 어.
    Yeah.
(21) M: 엄마 물래 요 물에서 옷을 빨고 있는거야.
[She] is washing the clothes with this water to keep it secret from [her] mom.
(22) C: 아 안아? 
Si... sitting?
(23) M: أ؟ 
Huh?
(24) C: 않아? 
Sitting?
(25) M: 안써서 
Sitting and
(26) C: 왜? 
Why?
(27) M: 엄마 한테 혼날까봐 자기가 혼자 
Because [she] is afraid [she] will be scolded by mom, so [she] does it by herself.
(28) C: (알겠다는) 
Ea.. (Sound shows that the child now understands)

2) 7-year-old

(p14)
(1) M: 지금 어디서 옷을 빼고 있어?
Where is [she] washing the clothes?
(2) C: 여기 (그럼) 더러운 물 
Here (pointing to the illustration), dirty water.
(3) M: 바보 (웃음) 
Stupid. (laughing)
(4) C: (웃음) 
(laughing)
(5) M: 왜 여기서 옷을 빼냐 아는 
Why is she washing the clothes here?
(6) C: (웃음) 바보. 엄마한테 혼날까봐 
(laughing) Stupid. Because [she] worries [she] will be scolded by mom.
(7) M: 엄마한테 혼날까봐 이렇게 빼는거야.
Because [she] worries [she] will be scolded by mom, [she] washes [them] like this.
(8) C: 어.. (다음장의 번호를 가리키며) 
Yeah. (pointing to the next page number)

Note. “” indicates the mother or the children read actual sentences in the text.
Literal translation was done. Words in the [ ] were not actually pronounced by participants, but put in the English version of transcription to show clear meaning of utterances.
M= the mother; C= a child (one of the children)
Again, these conversations occurred between the mother and both children in the first session of the sharing of electronic book 1. In both conversations, the mother and the children explained the main character's action and elaborated about the reason why the main character decided to take that action. However, there were more interactions and reinforcements involved in the conversation between the mother and the three-year-old child than between the mother and the seven-year-old child. In the first conversation, the mother and the child explained the main character's action (line 1-4). Then, by asking the child to elaborate on what the main character should do, the mother pointed out the problem related to the main character's action (line 5-8). After that, they elaborated about why the main character preferred that action (line 9-28). The child did not clearly understand and was uncertain as indicated when he provided incorrect information to the mother's question (line 2), answered 'don't know' (line 6 and 12) and clarified the mother's question by asking again for an explanation of what the mother had already explained (line 26). Recognizing the child's uncertainty, the mother explained several times the reason for the main character's action, and elaborated on it (line 13, 15, 19, 21 and 27).

In the second conversation, the seven-year-old child showed he understood by answering the mother's questions correctly (line 2 and 6). Since the child understood the concepts in the story, the mother did not provide extra explanations about them, but only confirmed that the child's answer was right (line 7). In this way, more interactions occurred between the mother and the three-year-old child than between the mother and the seven-year-old child, due to the different levels of the children's comprehension of concepts in the story. Similar to the mother-child interactions in the other two contexts, the mother and the
three-year-old child asked more questions (7 times) than the mother and the seven-year-old child did (2 times), during conversations related to recalling details of the story at the end of the electronic book 2 sessions (Example 4.9).

Example 4.9 The mother-child conversations related to recalling details of the story at the end of electronic book 2 sessions

1) 3-year-old

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| (1) | M: 그래서 고마워서 아이구 아까는 내가 너무 잘못 했구나 그랬지?  
So because [he] was thankful, [he] said 'oh, I was so bad'?  
아가 뭐 잘못 했어?  
What did [he] do wrong before? |
| (2) | C: 물.  
Water. |
| (3) | M: 먹는 물에 놀랑.  
Jumped into the drinking water. |
| (4) | C: 어.  
Yeah. |
| (5) | M: 또.  
And. |
| (6) | C: ..또...  
..And... |
And what else did [he] do wrong? A naughty thing. |
| (8) | C: 올라.  
I don’t know. |
| (9) | M: 다들 잘 때 뭐했지?  
When everyone was asleep, what did [he] do? |
| (10) | C: 춤췄어.  
Danced. |
| (11) | M: 춤쳤어?  
Danced? |
| (12) | C: 어.  
Yeah. |
| (13) | M: 노래 불렀지?  
Sang songs? |
| (14) | C: 어.  
Yeah. |
1) 7-year-old

(1) M: 어떤 행동을 했어? 저 밖에 모르는 행동.
That did [he] do? The selfish thing.
(2) C: 응. 엄마 근데 개비들이 그렇게 샘물도 더럽혔고 밤에 울기까지 했는데도 왜 애를 도와줬어? 착해서?
Yes. Mom, by the way, even though [he] made the spring water dirty and roared at night, how come did they [friends] help him? Because [they] are good?
(3) M: 왜 그런지?
Why did [they] do that?
(4) C: 응, 진짜?
Yes, really?
(5) M: 응?
Huh?
개비는 착해서 그렇지.
Because they are good.
(6) C: 응, 착해.
Yes, [they are] good.
(7) M: 남을 도와줄 수 알고
[They] know when they [need to] help others.
(8) C: 응.
Yes.
(9) M: 왜 그 나라 하면 자기도 그렇게 어려움을 당할 때가 있어도 아니야.
[They] helped [him] because one day they might be in trouble like that.
(10) C: 어.
Yeah.
(11) M: 자기가 먼저 남을 도와줘야지. 남도 내가 어려울때 도와 줄 수 있는거
I should help others first, and then others will help [me] when I am in trouble.

(12) C: 이.
Yeah.

(13) M: 근데 이는 (그림-마지막 장면의 호랑이를 가리키며) 처음에는 자기 밖에 몰랐지.
But he [tiger] (pointing to the illustration- tiger at the last page) thought only for himself at first.

(14) C: 응.
Yeah.

(15) M: 남들이 먹는 물에 들어가고, 자기 자랑 안 온다고 막 노래 부르고
[He] jumped into the drinking water, and [he] sang songs because [he] couldn’t get to sleep.

(16) C: 응, 자기가 하는 것만 한다. 자기가.. 자기만 먹을 몰도 아니면서.
Yes, [he] just does what he pleases only. He,.. Even [though] the water is not only for him.

(17) M: 이, 거기다가 수영을하고.
Yeah, [he] swam there.

(18) C: 이.
Yeah.

(19) M: 그치만 나중에는 어떻게 됐지? (스크린을 가리키며)
But later how did [he] turn out to be? (pointing to the screen)

(20) C: 다.. 알. 뭐.
All, kn.. re..

(21) M: 뭐였겠지?
Regretted?

(22) C: 이.
Yeah.

Note. “” indicates the mother or the children read actual sentences in the text. Literal translation was done. Words in the [ ] were not actually pronounced by participants, but put in the English version of transcription to show clear meaning of utterances.

M= the mother; C= a child (one of the children)

As was stated previously, these conversations took place between the mother and each child during the second session of the sharing of electronic book 2. In the first conversation, the mother often asked the three-year-old child to recall details (line 1, 5, 7, 9, 13, 15 and 17). In response, the child provided unclear (line 6 and 8) and incorrect (line 10) answers. After the child’s vague responses, the mother provided the child with clues to help him answer the question (line 7 and 9). Furthermore, after the child’s incorrect
answer, she changed the question type to yes/no questions (close-ended questions) from why questions (open-ended questions) (line 13, 15 and 17). The three-year-old child’s unclear and incorrect answers invited more of the mother’s questions and the provision of related information. In the second conversation, in contrast to the conversation between the mother and the three-year-old child, the mother asked the seven-year-old child to recall some details of the story only two times (line 1 and 19). Moreover, she directly recalled details related to the story to the seven-year-old child, instead of asking him to recall those details (line 13, 15, and 17). With this it seemed that the mother might think that the seven-year-old child was capable of understanding and remembering the story, so that she did not need to confirm his understanding. Thus, these conversations clearly showed the differences in the frequency of mother’s interactions with the three-year-old child and with the seven-year-old child depending on the children’s ability to recall.

4.2.3. Research Question Three

(3) Do children initiate interactions in the three contexts? If so, what are the differences or similarities in the way children initiate interactions depending on their ages?

4.2.3.1. The frequency of the children’s initiations according to their ages.

The frequencies of the children’s initiations and initiation types during the shared reading according to their ages were next examined (Figure 4.12). The examination revealed that there were some differences depending on the age of the child. First, in terms of the frequency of their initiations, the three-year-old child displayed a greater number of initiations than the seven-year-old child did in the print book and electronic book 1 contexts. However, the seven-year-old child exhibited slightly more initiations during the

In addition, in terms of the frequency of initiation types, the three-year-old child’s initiations were slightly more varied than the seven-year-old child’s in the print book and electronic book 2 contexts while the seven-year-old child had a higher number of initiation types in the electronic book 1 context.

In short, the overall number of the three-year-old child’s initiations and the number of initiation types were slightly higher than the seven-year-old child’s.
Figure 4.12 The total number of children's initiations and initiation types during the shared reading.

**Total Number of Children's Initiations During the Activities**

<table>
<thead>
<tr>
<th>Types of Activities</th>
<th>Print Book</th>
<th>Electronic book 1</th>
<th>Electronic book 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 years</td>
<td>234</td>
<td>105</td>
<td>50</td>
</tr>
<tr>
<td>7 years</td>
<td></td>
<td>117</td>
<td>56</td>
</tr>
</tbody>
</table>

**Total Number of Children's Initiation Types During the Activities**

<table>
<thead>
<tr>
<th>Types of Activities</th>
<th>Print Book</th>
<th>Electronic book 1</th>
<th>Electronic book 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 years</td>
<td>19</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>7 years</td>
<td></td>
<td>15</td>
<td>13</td>
</tr>
</tbody>
</table>

Note. The number of major categories was counted to calculate the number of children's initiation types. Where sub-categories existed, in major categories, such as comments, explanations, elaborations and simple responses each sub-category was counted separately. (Maximum number of 29)
4.2.3.2. The frequency of the children's initiations over time during shared reading.

Figure 4.13 shows similarities and differences in the children's initiations and initiation types over time during the shared reading according to age. First, both children's initiations and initiation types over time showed similar trends in the print book context. The number of their initiations and initiation types increased throughout the sessions during the sharing of the print book. In contrast, there were differences between the children's initiations and initiation types over time in the electronic book contexts. During sharing of electronic book 1, the number of the three-year-old child's initiations and initiation types decreased over time while the number of the seven-year-old child's initiations and initiation types increased. However, this was reversed during the sharing of electronic book 2. The number of three-year-old child's initiations and initiation types increased over time while the number of seven-year-old child's initiations and initiation types decreased in the book 2 context.

In short, the changes in the number of the children's initiations and initiation types over time were similar between the two age groups in the print book context while differing between the two age groups in the electronic book contexts.
Figure 4.13 The children’s initiations and initiation types during the shared reading over time.
Figure 4.13 The children’s initiations and initiation types during the shared reading over time (Continued)

**Number of Children’s Initiations During Sharing of Electronic book**

<table>
<thead>
<tr>
<th>Date of Session</th>
<th>3 years</th>
<th>7 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Day 2</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Day 3</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>Day 4</td>
<td>16</td>
<td>11</td>
</tr>
</tbody>
</table>

**Number of Children’s Initiation Types During Sharing of the Print Book**

<table>
<thead>
<tr>
<th>Date of Session</th>
<th>3 years</th>
<th>7 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Day 2</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Day 3</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Day 4</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>
Figure 4.13 The children’s initiations and initiation types during the shared reading over time (Continued)

Note. The number of major categories was counted to calculate the number of children’s initiation types. Where sub-categories existed, in major categories, such as comments, explanations, elaborations and simple responses, each sub-category was counted separately. (Maximum number of 29)
4.2.3.3. Types of children’s initiations according to their ages.

The frequency of the children’s different initiation types based on their ages was then examined (Table 4.12). The children exhibited certain initiation types more frequently according to their ages. First, the three-year-old child used more labeling, elaborations about illustrations, clarification of the mother’s or his own previous talk, managing talk, and intention to control the shared reading. The seven-year-old child initiated talk by reading the name of the author, the title, or the text, and commenting about the story more frequently.

Table 4.12 The children’s frequent initiation types during the shared reading

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Child (3 years)</td>
<td>Child (7 years)</td>
<td>Child (3 years)</td>
</tr>
<tr>
<td>Read Author/ Title/ The text</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Labeling</td>
<td>10</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Comment (2)</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Elaboration (1)</td>
<td>23</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Clarification</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Managing</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Intention</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Note. Read Author/ Title/ The text = Reading or asking the author’s name, title of the book or the sentences in the book; text; Labeling = Giving or asking a label for an item in the illustration; Comment (2)= Commenting about the story (including statements and questions); Elaboration (1) = Elaborating about illustrations (including statements and questions); Clarification= Clarifying the mother’s or own previous talk; Managing= Managing to get the child involved; Intention= the child’s intention to do something

Bold numbers show the most frequently occurring interactions across the contexts.
The number of interactions for each category is the total of the interactions in all the sessions.
Please see Appendix B, page 153 for a complete list of categories.

In short, the children used different initiation types according to their ages; one of the children used certain types of initiations more than the other during the shared reading.
4.2.3.4. The children’s usage of immediate and non-immediate talk as initiations according to their ages.

The children’s initiations were next categorized as immediate and non-immediate talk and examined (Figure 4.14 & 4.15). The amount of immediate and non-immediate talk as children’s initiations during the shared reading differed depending on the child’s age (Figure 4.14). The three-year-old child initiated more immediate talk than the seven-year-old child in the print book and electronic book 1 contexts. In the electronic book 2 context, the seven-year-old used more immediate talk as initiations than the three-year-old did. In terms of non-immediate talk as initiations, the three-year-old child used twice the amount of non-immediate talk than the seven-year-old child in the print book context, but their use of non-immediate talk as initiations was the same in the electronic book contexts. Even though the children’s use of immediate and non-immediate talk as initiations in each context differed according to the their ages, overall there were no distinctive tendencies in comparing the amount of immediate and non-immediate talk in the children’s initiations between the two age groups across the contexts.

Figure 4.15 shows a comparison of the ratio between immediate and non-immediate talk in children’s initiations according to age. Overall, both the three-year-old and the seven-year-old exhibited more non-immediate talk than immediate talk as initiations in the three contexts, even though during the sharing of the print book, the three-year-old used immediate talk slightly more frequently than non-immediate talk. In addition, the ratio between the children’s immediate and non-immediate talk as initiations during the shared reading was similar between the two age groups. Both children used non-immediate talk approximately 1.5 to 2 times more than immediate talk as initiations.
Figure 4.14 The children’s use of immediate and non-immediate talk as initiations during the shared reading.
Figure 4.15 The ratio between the children’s immediate and non-immediate talk as initiations during the shared reading

<table>
<thead>
<tr>
<th>Types of Activities (3-years &amp; 7-years)</th>
<th>Immediate Talk</th>
<th>Non-immediate Talk</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB-3Y</td>
<td>35</td>
<td>48</td>
</tr>
<tr>
<td>PB-7Y</td>
<td>56</td>
<td>52</td>
</tr>
<tr>
<td>EB1-3Y</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td>EB1-7Y</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td>EB2-3Y</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td>EB2-7Y</td>
<td>27</td>
<td>18</td>
</tr>
</tbody>
</table>

Note. PB = the shared reading of the print book; EB 1 = the shared reading of electronic book 1; EB 2 = the shared reading of electronic book 2; 3Y = the 3-year-old child; 7Y = the 7-year-old child

In short, any distinctive tendencies in the amount of immediate and non-immediate talk in the children’s initiations during the shared reading did not appear between the two age groups across the contexts. In terms of the ratio between their immediate and non-immediate talk as initiations, overall both children exhibited more non-immediate talk than immediate talk during the shared reading. However, in the seven-year-old child’s initiations, the difference in frequencies between immediate and non-immediate talk was slightly greater than that in the three-year-old child’s initiations in the print book and electronic book 1 contexts.
4.2.3.5. Children's different uses of initiations in conversations with their mother according to their ages.

The comparison of children's initiations in conversations, according to their ages, showed that the three-year-old child initiated more talk than the seven-year-old child in mother-child interactions during the shared reading of the print book and electronic book 1 (Example 4.10 & 4.11). In the first session of the sharing of the print book and electronic book 1, especially, the seven-year-old child was much more passive than the three-year-old child. Evidently, the three-year-old child expressed more initiations than the seven-year-old child did in the session. Their recorded conversations clearly illustrated the differences in children's initiations according to their ages.
Example 4.10 The mother and each child's conversations showing children's different initiation uses according to their ages during the sharing of the print book.

"Fox, let's play."
"No, I have to help my father clean up. Let's play next time."

Source: © Ritsko Kadota

(P4)
“Raccoon, let’s play.”

“Sorry, I can’t because I am busy. Now, I am helping mom washing yams. Let’s play later, then.”
"I can't help it....."

-Conversation-

1) 3-year-old

(1) M: "어우 야 놀자. 안돼 아빠가 청소하시는데 도와드려야 해. 다음에 놀자" (그림을 가리키며)
   "Fox, let's play." "No, I have to help my father clean up. Let's play next time."
   (pointing to the illustration)
   여우는 아빠 청소하는걸 도와줘야하는데 그래서 놀수가 없네.
   The fox needs to help his father clean up, so [he] cannot play [with Kom-Dol].

(2) C: 그럼 어떻게 놀아?
Then, how can [he] (Kom-Dol) play?

(3) M: -§-?
   Huh?

(4) C: 어떻게 놀아?
   How can [he] play?

(5) M: 곰돌이?
   Kom-Dol?

(6) C: 응.
   Yes.

(7) M: 그러면, 또 누구한테 가볼까? (다음장 그림을 가리키며)
   Right, who should [he] go to meet? (pointing to the illustration in the next page)

(p5)

너구리한테 가볼까?
Let's go to [meet] raccoon?
“너구리야 놀자” 그랬더니 너구리가 “미안하지만 지금은 바빠서 안되겠어. 엄마의 고구마 씹기를 도와드리고 있거든. 나중에 놀자”
“Raccoon, let's play.” Then, the raccoon said, “Sorry, I can't because I am busy.
Now, I am helping mom washing yams. Play later, then.”
엄마가 고구마 씹는걸 도와주고 있는데. 그래서 너구리도 같이 못 논데.
The raccoon is helping mom wash yams, so he cannot play with [Kom-Dol].

(8) C: 왜?
   Why?

(9) M: 바빠서.
   Because [he] is busy.

(10) C: 응.
   Yes.

(11) M: 그럼 누구랑 노나? 응?
   Then, who should [he] (Kom-Dol) play with? Huh?

(p6)

(12) C: (그럼을 가리키며) 일루 갈아.
   [He] went here. (pointing to the illustration)

(13) M: 그래서 숲속으로 다시 돌아왔어. “할 수 없지 뭐” (책임음)
   So [he] returns to the woods. “I can't help it.....”
   심심해하는 가봐. 그리? 곰돌이가 아무도 놀아주는 사람이 없어서.
   [He] seems to be bored, right? Because nobody plays with Kom-Dol.

2) 7-year-old

(p4)

(1) M: “여우야 놀자.” 뭐라고했어?
   “Fox, let's play.” Then what did [he] say? (asking the child to read the next sentence)

(2) C: “안돼 아빠가 청소하시는 것을 도와드려야해. 다음에 놀자.”
“No, I have to help my father clean up. Let’s play next time.”

(3) M: 다 착하다. 그치? 엄마 도와드리고, 아빠 도와드리고.
   All of them (animals who Kom-Dol has met) are good, right? [They] help mom and dad.

(4) C: 是.
   Yes.

(p5)

(5) M: “너구리야 놀자.” (읽은 후 아이가 읽을 상태방 part를 가리킴)
   “Raccoon, let’s play.” (After reading this, the mom points to the next sentence to read)

(6) C: “미안하지만 지금은 바빠서 안되었어.”
   “Sorry, I can’t because I am busy.”

(7) M: “엄마의” (아이가 읽을 부분의 다음 문장을 가르키며)
   “Now” (In Korean the mother actually said “mother’s” which is the first word in the sentence. But for the purpose of smooth translations the first word of the sentence in English is put first.) (The mother points to the next sentence to read)

(8) C: “엄마의”
   “Now” (The child reads the first word in the sentence)

(9) M & C: “고구마 씻기를 도와드리고 있거든. 나중에 놀자.” (함께 읽음)
   “Now, I am helping mom wash yams. Let’s play later, then.” (The mother and the child read the sentences together)

(p6)

(10) M & C: “할 수 없지 못” (함께 읽음)
   “I can’t help it.....” (The mother and the child read the sentence together)

(11) M: 아무도 안 논데, 혼자 놀게 생겼어. (그림의 곤돌이를 가리키며)
   Nobody wants to play [with him] (Kom-Dol). It seems [he] will play alone.
   (pointing to Kom-Dol in the illustration)

(12) C: 是.
   Yes.

Note. “” indicates the mother or the children read actual sentences in the text.
Literal translation was done. Words in the [ ] were not actually pronounced by participants, but put in the English version of transcription to show clear meaning of utterances.
M= the mother; C= a child (one of the children)

Again, the conversations took place between the mother and the three-year-old child and between the mother and the seven-year-old child in the first session of the shared reading of the print book, pages 4 to 6. In the first conversation, the three-year-old child initiated the interactions with the mother several times (lines 2, 8 and 12). For instance, he asked the mother to elaborate on the main character’s possible further action to solve the
problem (line 2) and to explain the reason for the minor character's action (line 8) after
the mother read the text as well as by explaining the main character's action in the
illustration (line 12) before the mother read the text. Evidently, the three-year-old child
played an active role in conversation with the mother. Conversely, in the second
conversation, the seven-year-old child did not initiate interactions, while sharing pages 4
to 6 with his mother. Thus, it appeared that the seven-year-old was much more passive in
the conversation, and used less initiations than did the three-year-old child.
Example 4.11 The mother and each child’s conversations showing children’s
different initiation uses according to their ages during the sharing of the electronic
book.  

"I shouldn’t fall down, while going down the stairs.  
Sliding at once."
-Conversation-

1) 3-year-old

(p11)
(1) M: 왜 계단으로 안내려 오구 일루 쪽 내려 왔냐?
   Why didn’t [she] go down by the stairs, instead coming down through here?

(2) C: 어.
   Yeah.

(3) M: 계단으로 내려오다가 넘어 걸까봐 이쪽 미끄럼 타고 쪽 내려온데.
   In case [she] falls down while going down by the stairs, [she] comes down directly by sliding like this.

(4) C: 왜?
   Why?

(5) M: 세롬이는 (웃음)
   Sea-Rom is (laughing)

(6) C: (웃음)
   (laughing)

(7) M: 형아도 이렇게 이런데로 내려온 적 있잖아요.
   Your older brother also came down like this.

(8) C: 어.
   Yeah.

(9) M: 미끄럼타고 쪽..
   Sliding straight down..

(10) C: 언제?
    When?

(11) M: 저번에.
    The other day.

(12) C: 엇날에?
    Long time ago?

(13) M: 음.
    Yes.

(14) C: 그러면 넘어지면 (손으로 내려가는 시늉)
    Then, what if [he] falls down (showing sliding action with his hand)

(15) M: 아니요 미끄럼처럼 쪽 타고 내려오는데가야 한번에.
    No, just sliding down all at once like a slide.

(16) C: 왜?
    Why?

(17) M: 세롬이는 이 “계단으로 내려가다 넘어지면 안돼. 한번에 주름직 내려가야지.”
    Sea-Rom said, “I shouldn’t fall down, while going down the stairs. Sliding at once.”

(18) C: 근데 내려오구 여기 (계단 난간 그림) 일루 올라가?
    By the way, coming down by here (pointing to the handrail in the illustration)
and then going up by there?

(19) M: 일루 올라갈 수도 있고, 내려 갈 수도 있고
[You] can go up and down here.

(20) C: 왜?
Why?

(21) M: (그럼) 여기서 쪽 미끄러지면 한번에 쪽 내려올 수가 있잖아요.
(pointing to the illustration) If sliding down here, then [she] can come down all at once.

(22) C: 왜? 미끄러있어요? (그럼)
Why? Because there is a slide? (pointing to the illustration)

(23) M: 응 미끄럼하고 비슷하지?
Yes, it's like a slide?

(24) C: 응.
Yes.

The puppy slides down, too.

(26) C: 어 근데 타고 내려가? 
Oh, by the way, [Sea-Rom] is coming down by riding on top of [the puppy]? 

(27) M: 강아지도 미끄러져 내려오는거야 예처럼.
The puppy also slides down like her.

(28) C: 근데 왜 타고 내려가?
But why does [she] come down by riding on top of [the puppy]?

(29) M: 타고 내려오는거 같애?
Does it look like [she] is coming down by riding on top of [the puppy]?

(30) C: 어.
Yeah.

(31) M: 이것봐. 여기 옆드려 있잖아.
Look at this. Here, [she] is lying face down.

이렇게 손을 이렇게 하고( المل래 쪽 빼는 시늉) 옆드려 내려오잖아.
Putting [her] hands like this (showing action by stretching hands out straight) and coming down by lying on her face. It would be fun?

(32) C: 어.
Yeah.

(33) M: 강아지는 왜 애만 쫓아서 해?
Why does the puppy follow only her actions?

(34) C: 몰라.
I don't know.

(35) M: 살금살금 가는 것도 쫓아하구.
[He] followed [her] walking carefully.

(36) C: 어.
Yeah.

(37) M: 그치?
Right?
(38) C: 데 쫓아하지
   [He] follows everything [she does].

(39) M: 데 쫓아하는게 재밌나봐.
   It's fun for [him] to follow everything [she does].

(40) C: 어.
   Yeah.

(41) M: 한번에 쥐루룩 내려 갔지?
   [She] slid down all at once?

(42) C: 응.
   Yes.

2) 7-year-old

(1) M: 계단으로 가다가 넘어질까봐 (그럼) 너처럼. 너무 이런거 잘하지아. 쪽 내려간데.
   In case [she] falls down, while coming down by the stairs, (pointing to the
   illustration) like you, you often do this. [She] slides down.

(2) C: 왜?
   Why?

(3) M: 계단으로 가다가 넘어질까봐.
   Because [she worries that she] falls down, while coming down by the stairs.

(4) C: 그럼 더 안돼 (그럼)
   Then, that's worse (pointing to the illustration)

(5) M: 그래, 어떻게 되겠냐?
   Right, What will happen?

(6) C: 이렇게 여기 있는 먼지가 다 묻지 (그럼)
   Like this, [she] will get all the dirt here. (pointing to the illustration)

(7) M: 그러니까 먼지랑 물이랑 다 묻겠지?
   Right, [she] will get all the dirt and water?

(8) C: 어, 그냥 계단으로 내려가면 됐겠네.
   Yeah, it will be fine, if she just goes down by the stairs.

(9) M: 큰일 났다 인제.
   [She] is in trouble now.

Note. “” indicates the mother or the children read actual sentences in the text.
Literal translation was done. Words in the [ ] were not actually pronounced by participants, but
put in the English version of transcription to show clear meaning of utterances.
M= the mother; C= a child (one of the children)
These conversations took place between the mother and the three-year-old child and between the mother and the seven-year-old child in the first session of the shared reading of electronic book 1, page 11. In the first conversation, the three-year-old child asked the mother to elaborate about the reason for the main character’s action (line 4) and to explain why something happened (lines 16, 20 and 22). Also, to initiate interactions, he used an association question about a past event (line 10), an elaboration question about a possible incident (line 14), and explanation questions about how something works (line 18) and an event in the illustration (line 26). Consequently, the three-year-old child asked a range of questions frequently, while sharing a page in electronic book 1 with his mother. However, the 7-year-old child initiated interactions with the mother in these instances, while sharing page 11 of electronic book 1. He asked the mother to explain the reason for the main character’s action (line 2), and elaborated on the story (lines 4 and 8). Overall, these conversations showed that the 3-year-old child initiated discussion more often by asking questions about more varied things than the 7-year-old child did.
5. DISCUSSION

5.1. Introduction

In Chapter V, the findings of the present study are summarized and discussed. Limitations and implications for practice, theory and research are presented, along with a concluding statement.

5.2. Research Question One

(1) Are there any differences or similarities in the types and frequency of mother-child interactions across the three contexts (a print book and two different versions of electronic books)? If so, what are they?

5.2.1. The frequency of the mother and the child's interactions across the contexts

As the results showed, there were differences in the frequency and in the types of interactions across different contexts. Mother-child interactions were most frequent during the sharing of the print book. For instance, the mother and the children exhibited the greatest number of interactions in total and over time, and the greatest amount of immediate and non-immediate talk in the print book context. They also asked the greatest number of questions in that context. Overall, the least amount of talk occurred during the sharing of electronic book 2.

The finding that a higher frequency of mother-child interactions occurred in the print book context compared to the electronic book contexts is consistent with a previous study conducted by Worden et al. (1987). In their study comparing the interactions between three- and five-year-old children and their parents, when sharing a print book and literacy computer software, a higher frequency of parent-child interactions occurred during the
print book activity than during the literacy computer software activity. Even though Worden et al. (1987) pointed out the potentially negative effect of the slow speed of the software in their study on parent-child interactions, as it appeared to disturb the flow of the interactions, their finding is consistent with the present study using high-speed electronic books. Even in the present study, this result consistently emerged when examining mother-child interactions during the shared reading of the books over a certain time frame. Moreover, the discrepancy between the total number of mother-child interactions in the print book context and the electronic book context increased as time elapsed. Thus, it seemed that sharing a print version of the book involved more mother-child interactions on various occasions. Therefore, in this study, the difference in the medium of presentation appeared to be related to the frequency of mother-child interactions during shared reading.

It was also apparent that mother-child interactions seem to be related to the different formats of the medium. Even though both electronic book 1 and 2 are a computer-based medium, these books have different formats, namely a CD-ROM like format (electronic book 1) and a video clip like format (electronic book 2). In the electronic book 1 context, there were more mother-child interactions and a greater range of interaction types than in the electronic book 2 context. According to Henninger (1994), open-ended software encourages children’s explorations in computer use, as it provides users control over their computers and the ability to take an active role in computer use. However, close-ended software (a drill-and-practice program) limits a user’s control and relegates the users to a more passive role. Based on Henninger’s notion about computer software (1994), electronic book 1 provides more open-ended material than electronic book 2, since it
gives users more control over the use of the material, such as icons for turning each page and places no restrictions on time spent on a page. However, electronic book 2 is more close-ended, since it provides less control and has greater restrictions on the user’s freedom, for example each page is automatically turned after a certain amount of time passes and the icons only allow for controlling the playing, stopping, forwarding and rewinding of the text. Consequently, this study’s finding concurs with Henninger (1994) in that a higher frequency of mother-child interactions was observed during the use of the more open-ended material than in the closed-ended one in this study. Similarly, Shade and Watson’s study (1987) showed that mothers paid closer attention to their child’s needs when they were working on software that provided the users with open-ended activities compared to close-ended software such as drill and practice based activities. Thus, as in Shade and Watson’s study (1987), the results in the present study consistently showed this mother’s mediation behaviours varied depending on the different formats of the computer software.

5.2.2. The types of mother-child interactions across the contexts.

There were observable differences in the types of mother-child interactions across the contexts. Particularly noticeable was the different focus of conversation between the mother and the child in the print book context as compared with the electronic book contexts. For instance, mother-child conversations were more focused on illustrations in the print book context while their conversations were more focused on the story in the electronic book contexts. The greater focus on illustrations during the sharing of the print book compared to during the sharing of the electronic books in this study is consistent with the results in previous studies (e.g., Goodsitt et al., 1988; Bus & van Ijzendoorn,
1995; Worden et al., 1987). In Worden et al’s study (1987), there were considerable
differences in parent-child’s use of labeling objects in the book during the sharing of the
print book compared to their sharing of alphabetic software. Furthermore, in the present
study, the qualitative examination of the mother and the child’s interactions at the end of
the sessions revealed that their conversation patterns varied according to the contexts; and
the conversations were more related to: bridging their experiences and the story (in the
print book context), making predictions (in the electronic book 1 context), and recalling
the story (in the electronic book 2 context). Moreover, their interactions were focused
more on immediate talk in the print book context and on non-immediate talk in the
electronic book contexts. Thus, the focus of mother-child interactions differed depending
on the contexts.

Smith’s study (2001) showed that a child has a different focus of talk while reading a
print book than a CD-ROM book, illustrating that focus appears to be related to types of
media. In her study, a child’s talk focused more on usage of computer skills, such as using
a mouse and the arrow and interpreting the narrator during electronic book reading but
focused more on language while reading a print book, such as the author’s language and
book language and interpreting this language. Similar to Smith’s study (2001), based on
the examination of mother-child conversations, the results in this study suggested that the
different focus of mother-child interactions seems to be related to the different features of
the storybook media involved. Moreover, it also appeared that different features of each
medium provided different contexts for the mother-child’s shared reading. For instance,
narrations of the story in the electronic books seemed to influence the mother-child
interactions. As the mother read the text in the print book, she focused on practicing
literacy skills, such as requesting the seven-year-old child to read the author, the title or the text and prompting the child's reading. Doty, Popplewell and Byers (2001) pointed out the potential use of electronic books as listening materials rather than reading materials. Here also, the mother and the children mainly listened to narrations of the story during the sharing of electronic book 1 and 2, even though they could lower the volume or mute the narration. On some occasions, the mother asked the seven-year-old child to read the outline section in which narration effects were not provided, before shared reading of the main story of electronic book 1. Based on this, it seemed that when a narration of the story was not provided, the mother asked the seven-year-old child to read the text, while conversely she read the text to the three-year-old child. That is, without narrations of the story, the mother appeared to focus more on the text. Overall, it appeared that, with narration effects, the electronic books were more likely used as listening materials, so the electronic books were less likely to involve interactions that focused on the text than the print book. Consequently, different features of the medium seemed to be related to mother-child interactions during shared book reading.

In short, these results showed the potential influences of different media and format on mother-child interactions during the shared reading of the books. Moreover, the different formats and features of materials appeared to provide different contexts for the mother-child interactions during shared book reading. Sigel (1993) indicated contexts may possibly influence parent's interventions during parent-child shared activities. Therefore, the results in the current study consistently showed the potential relationships between the media and format of texts and parent-child interactions as were shown in previous studies (e.g., Worden et al., 1987; Shade & Watson, 1987), and between the context and
the parent-child interactions in earlier research (e.g., De Temple & Beal, 1991). Finally, as extratextual talk has been stressed as an important aspect in emergent literacy development (e.g., Snow, 1983), it was assumed that different frequencies and types of parent-child interactions that generate extratextual talk, depending on the different media, may influence children’s literacy development differently, which Smith also indicated (2001). For instance, the greater amount of non-immediate talk in the electronic book contexts suggest that these types of books may promote higher levels of mediation which would encourage children’s higher level of cognitive abilities according to Sigel (1993).

5.3. Research Question Two

(2) Are there any differences or similarities in mother-child interactions between the two age groups in those activities? If so, what are the differences or similarities?

5.3.1. The frequency of the mother-child interactions according to the children’s ages.

The frequency of mother-child interactions appeared to be different, depending on the children’s ages. More interactions and more questions were exhibited between the mother and the three-year-old child than between the mother and the seven-year-old child in all three contexts. The biggest discrepancy occurred during the sharing of the print book. The different frequency of interactions and questions, depending on the children’s ages, appeared to be related to the children’s cognitive ability, which plays an important role in the child’s understanding of a story (Bruning, Schraw, Norby & Ronning, 2004). For instance, the examination of the conversations between the mother and the children showed that the mother asked the three-year-old more questions and provided more
explanations to help him understand the concepts they were discussing and/or encountering in the texts. It seemed that the three-year-old child could not instantly grasp some aspects of the story or their discussion; he needed more of the mother’s facilitations, compared to the seven-year-old child. Moreover, the three-year-old child asked the mother more questions to clarify the concepts than did the seven-year-old child. In fact, the three-year-old child often displayed uncertainty and misunderstandings during the shared reading of the books. In these instances, the mother appeared to change her questions from why questions to yes/no questions, or to provide some clues or extra information related to the topic of the discussion. By contrast, the seven-year-old child seemed to understand the concepts right after reading the story or with fewer questions and explanations provided by the mother than the three-year-old child needed.

As a consequence and based on Vygotsky’s ZPD (Zone of Proximal Development) theory (1978), some concepts in mother-child talk, such as cause-effect relationships of the events in the story, seemed to be around the seven-year-old child’s actual developmental level, so that the mother did not need to provide him much facilitation to comprehend the story. On the other hand, some concepts seemed to be between the three-year-old child’s actual developmental level and his ZPD, making it necessary for the mother to provide the child with facilitations to help him understand the concepts that were beyond his comprehension. As a result of the children’s differing abilities to understand the concepts and as would be expected, there was more reinforcement and facilitation involved in the interaction between the mother and the three-year-old child than between the mother and the seven-year-old child. This showed how mother-child interactions differed in each age group depending on the children’s cognitive abilities.
The ratio of frequency between the mother and the children's interactions appeared to be similar between the two age groups. This result is inconsistent with the notion of a gradual shift in responsibility as found in van Kleeck's review of literature (2004). According to her, a gradual shift of responsibility occurs from adults to children during shared reading, as children mature. Thus, the more mature children are, the less adults talk and the more children talk while reading. However, in this study, even though there was a lower occurrence of mother's interactions with the older child, the older child's talk occurred less frequently than the younger child's talk. The latter is opposed to the notion of a gradual shift of responsibility. In contrast, the examination of the qualitative data revealed that the mother, in fact, shifted responsibility to the seven-year-old child during shared reading. The mother provided the seven-year-old child with opportunities to take the lead role while sharing the books by asking him to read the text, which did not appear in her interactions with the three-year-old child. Thus, even though the comparison of the frequency of mother-child interactions between the two age groups did not show the notion of a shift in responsibility, in the examination of the qualitative data, the mother appeared to shift responsibility to the older child, which seemed to follow the notion of responsibility shift (van Kleeck, 2004).

The inconsistency between the results of the present study and the notion of a gradual shift of responsibility in terms of the frequency of mother-child interactions seemed to be due to the children's different sociocultural experiences. In fact, the children's different sociocultural experiences appeared to be related to the frequency of mother-child interactions during shared reading. Over the course of formal schooling experience in Korea, the seven-year-old child became more accustomed to school life than the three-
year-old child. Like other Korean students, the seven-year-old child behaves differently in a play context than in a study context, in which he is expected to be more passive and follow an adult’s guidance. In the first session of shared reading, especially, the mother and the seven-year-old child appeared to consider shared reading a study context, even though they were reading together at home (as explained in the findings about research question 3). For instance, in the first session of shared reading with the print book, the mother acted like a teacher with both children, as she led the shared reading and instructed the seven-year-old child to read the text. The child played the role of a student, as he passively followed the mother’s instructions. By contrast, without formal educational experience, the three-year-old child had much less of an ability to differentiate his behavior between a play context and a study context. Based on his sociocultural experience, the three-year-old child played an active role during shared reading and seemed to behave as much as he did in the other daily contexts that were observed during informal visits before conducting the actual study. Consequently, the children’s sociocultural experiences (e.g., Rogoff, 1991; Vygotsky, 1978) seemed to be related to their roles in shared reading, and the children’s different roles during shared reading appeared either to promote or inhibit their talk. The seven-year-old child’s more passive role appeared to inhibit his interactions in the first session, and may have caused the lower number of interactions compared to the three-year-old child. Thus, the notion of a gradual shift of responsibility between adults and children in shared reading did not appear in the frequency of mother-child interactions in the present study, perhaps due to the fact that the children’s different roles were influenced by their social experiences. Moreover, it is assumed that the shift of responsibility between adults and children may
vary in different cultural groups, as shown by van Kleeck’s review (2004), which indicated that children’s verbal displays of knowledge varies among different cultures.

5.3.2. The different mother-child interaction types depending on the children’s ages.

The mother engaged in different types of interactions depending on the child’s ages. Certain types of interactions occurred more frequently between the mother and the three-year-old child and between the mother and the seven-year-old child. Mother-child interaction types appeared to be related to children’s level of literacy competence. In fact, the three-year-old child in the current study seemed to be in the first stage of early reading development, which is considered as “focusing on the function-meaning foundation for reading” (van Kleeck, 2004, p.194). This stage was apparent with the three-year-old child, as the mother-child talk focused more on meaning making, such as explaining about illustrations and the story, rather than literacy-related elements, such as print forms. Alternately, the seven-year-old child in the current study is a conventional reader, as the mother asked him to read the text, and he read it by himself. However, the mother did not emphasize the print-related elements, such as vocabulary.

Based on the different levels of the children’s literacy abilities, it was shown that the mother exhibited more interactions related to the story or illustrations with the three-year-old child, while she exhibited more interactions around the text with the seven-year-old child. As the three-year-old child has not learned the Korean alphabet and does not have the ability to read, the mother read the text to him, and needed to talk more about the story and illustrations, in order to help him understand. As an example, the mother engaged in labeling, explanations about illustrations and elaborations about the illustrations, as well as elaborations about the story and recalling the earlier parts of the
story more frequently while sharing the books with the three-year-old child than with the seven-year-old child. The mother’s almost exclusive focus on meaning during the shared reading with the three-year-old child in the present study is consistent with van Kleeck’s review (2004), which reported that parents of 3- and 4-year-old children focused on meaning, while sharing storybooks. In contrast, as the seven-year-old child was an independent reader, the mother asked him to read the text or title by himself over the course of the three activities. Thus, compared to interactions between the mother and the three-year-old child, the mother and the seven-year-old child involved a greater number of requests for reading the author, the title and the print and prompting the child’s reading while sharing the books, even though the mother did not display a great number of such interactions. Consequently, the mother in the present study, appeared to adjust her interactions to the children’s literacy abilities, and used the interactions that would be more effective for the children depending on their capabilities, as illustrated by her use of different interaction types according to the children’s ages. This finding is consistent to the notion in Sigel’s distancing theory (1984) that claims that parents use different level of interactions to facilitate their children’s understanding depending on his or her ability.

5.3.3. Mother-child’s immediate and non-immediate talk according to the children’s ages.

Comparison between mother-child’s immediate and non-immediate talk according to the children’s ages showed that both types of talk were greater during the shared reading between the mother and the three-year-old child than between the mother and the seven-year-old child in all three contexts. Similarly, the mother and the three-year-old child asked a greater number of immediate and non-immediate questions during shared reading
than the mother and the seven-year-old child. However, the examination of qualitative data revealed that in some instances, mother-child non-immediate talk utilized much more difficult concepts in interactions between the mother and the seven-year-old than between the mother and the three-year-old. That is a greater number of more difficult concepts were exhibited between the mother and the seven-year-old child, while less difficult concepts and a similar level of concepts occurred between the mother and the three-year-old child. For instance, the seven-year-old child asked the mother how a rainbow is made during the sharing of electronic book 1. In another instance, the mother explained how a fire can be started with stones and that people in prehistory used this method to start a fire, during the sharing of electronic book 2. These concepts did not appear, or appeared in a later session between the mother and the three-year-old child. Previous studies have consistently shown a greater use of immediate talk between mothers and younger children than between mothers and older children, and a greater use of non-immediate talk between mothers and older children than between mothers and younger children (e.g., Goodsitt et al., 1988; Martin & Reutzel, 1999; van Kleeck & Beckley-McCall, 2002; Wheeler, 1983). Moreover, Sigel (1993) posited that parents adjust the level of abstraction in their interactions according to their children’s cognitive level. Thus, in terms of the frequency of immediate and non-immediate talk, the results in this study, indicating the higher occurrence of immediate talk between the mother and the younger child than between the mother and the older child, is consistent with those studies, while the more frequent use of non-immediate talk between the mother and the younger child contradicts the results in those studies. However, the appearance of more difficult concepts in the mother and the older children’s non-immediate talk than between
the mother and the younger child in the examination of qualitative data is consistent with the results in those studies (e.g., Goodsitt et al., 1988; Martin & Reutzel, 1999; Sigel, 1993; van Kleeck & Beckley-McCall, 2002; Wheeler, 1983). In short, even though the result in the frequency of non-immediate talk between the two age groups is not consistent with the results in the previous studies, a consistency between the present study and previous studies appeared in the results from the examination of qualitative data.

The comparison of the ratio between immediate and non-immediate talk during mother-child interactions showed a similar percentage of non-immediate talk between the two age groups. Van Kleeck, Gillam, Hamilton and McGrath’s (1997) study with 35 mothers and their children aged from 3 years and six months to 4 years and one month old showed that the mothers engaged 65% immediate talk (or lower level) and 35% non-immediate talk (or higher level) during shared reading with story books. Similarly, 37% of higher level mother’s talk was shown in van Kleeck and Beckley-McCall (2002)’s study. Moreover, van Kleeck (2003) pointed out that 70% of lower level talk and 30% of higher level talk is considered to be an effective ratio in adults’ interactions with preschool aged children for children’s learning. According to van Kleeck et al. (1997), both kinds of mothers’ talk enhanced the children’s abstract language development in different ways; mothers’ immediate talk provided the children with successful experiences in shared reading while mothers’ non-immediate talk challenged the children in terms of language development. They concluded that both kinds of talk seem to help children’s more abstract language learning. Thus, together, it appeared that three-year-olds may need 70% lower level adults’ talk to experience success and to engage successfully in the shared
reading experience that in turn boosts their confidence and encourages further participation in learning. Furthermore, 30% higher level adults’ talk promotes cognitive development and further learning.

In contrast to this, in the current study, the ratio between immediate and non-immediate talk in mother’s interactions with the three-year-old child was 56% of immediate talk and 47% of non-immediate talk in the print book context, 44% of immediate talk and 56% of non-immediate talk in the electronic book 1 context and 25% of immediate and 75% of non-immediate talk in the electronic book 2 context. The results in the present study are inconsistent with van Kleeck et al.’s study (1997), even though both studies were conducted with similar aged children. In terms of older children, van Kleeck’s review (2003) indicated that the percentage of mothers’ non-immediate talk increased, while interacting with older children. Thus, the mother’s overall use of more non-immediate than immediate talk during shared reading with the seven-year-old child is not surprising.

It seems that whereas the ratio between immediate and non-immediate talk in mother’s interactions with the seven-year-old child were not unexpected, the mother exhibited higher percentage of non-immediate talk than what had appeared in the previous studies (van Kleeck et al., 1997; van Kleeck & Beckley-McCall, 2002) while interacting with the three-year-old child.

The inconsistent results in the percentage of mother’s immediate and non-immediate talk while interacting with the three-year-old child between the present study and the previous studies seemed to be related to the child’s initiations and the media of the texts. In the current study, the mother appeared to talk similar concepts and aspects while interacting with both children, even though more difficult concepts were occasionally discussed
between the mother and the seven-year-old child. Due to the fact that some of those concepts and aspects seemed to be difficult for the three-year-old child to understand easily, he frequently asked the mother why something happens. That kind of child's questions appeared to elicit various kinds of the mother’s non-immediate talk, such as elaborations, comments, associations, and explanations about general facts and reasons of some events. Thus, this can show one possible cause of the mother’s frequent use of non-immediate talk, even though this cannot explain overall use of higher percentage of the mother’s non-immediate talk during sharing the books with the three-year-old child.

In addition, the media of the texts seemed to be related to the appearance of a greater amount of mother’s non-immediate talk in the present study than the previous studies. The difference in the percentage of mother’s immediate and non-immediate talk while interacting with the three-year-old child between the previous studies and the present study was greater in the electronic book contexts than in the print book context. The percentage of the mother’s non-immediate talk was higher in the electronic book contexts (approximately 56-75% non-immediate talk) than in the print book context (47% non-immediate talk). Previous studies (van Kleeck et al., 1997; van Kleeck & Beckley-McCall, 2002) were only conducted with the print book. Thus, the higher percentage of non-immediate talk in the mother and the three-year-old child’s interactions in the electronic book contexts in the present study may have resulted from the different media of the texts used in the previous studies and the present study.

In short, different mother-child interactions appeared, depending on the children’s ages. In terms of frequency of interactions, the children’s age, cognitive ability and sociocultural experiences, such as the children’s formal schooling, appeared to influence
the number of mother-child interactions. In addition, even though the difference was not
great, the mother used different types of interactions depending on the children’s literacy
abilities. Consequently, the results of this study suggest that children’s level of cognitive
and literacy development and sociocultural aspects may possibly be related to mother-
child interaction types according to the children’s ages during shared reading, in
accordance with the influence of children’s level of cognitive abilities (Sigel, 1993) and
sociocultural factors (Rogoff, 1991; Vygotsky, 1978) on parent-child interactions. In
terms of immediate and non-immediate talk, the finding of the greater amount of
immediate and non-immediate talk between the mother and the three-year-old child than
between the mother and the seven-year-old child is not consistent with previous studies
(Goodsitt et al., 1988; Martin & Reutzel, 1999; van Kleeck & Beckley-McCall, 2002;
Wheeler, 1983). Moreover, the percentage of non-immediate talk in the mother’s
interactions with the three-year-old child appeared to be higher than that in earlier
research (van Kleeck & Beckley-McCall, 2002; van Kleeck et al., 1997). This
inconsistence between the previous studies and the present study seemed to be related to
the child’s initiation and the different media of the texts.
5.4. Research Question Three

(3) Do children initiate interactions in the three contexts? If so, what are the differences or similarities in the way children initiate interactions depending on their ages?

5.4.1. The frequency and types of children’s initiations during shared reading according to their ages.

The frequency of the total number of initiations was greater for the three-year-old child within the print book and electronic book 1 contexts. On the other hand, the frequency of initiations was similar between the two children in the electronic book 2 context. The examination of mother-child conversation also showed that the three-year-old child played an active role and asked a range of questions in the print book and electronic book 1 contexts. However, due to the constrained time while sharing actual text in electronic book 2, it seemed that the children did not have a chance to initiate interactions as much as in the other two contexts. As a result of this, differences in children’s initiations due to age in the electronic book 2 context were not as clearly exhibited as in the other contexts. Thus, differences in different format of the books seemed to be related to children’s initiation use depending on their ages. Moreover, this finding suggests a possible relationship between children’s initiation uses and format of the text.

In addition, there were some differences in children’s initiation types. While the three-year-old child did not show any initiations related to the text, the seven-year-old child exhibited literacy related initiations, such as reading the author, the title and the text. This result suggests that besides children’s cognitive abilities, their literacy abilities may be related to their use of initiation types, even though the number of the seven-year-old child’s use of literacy related initiations was not great.
In terms of immediate and non-immediate talk in the children’s initiations, overall, both children exhibited more non-immediate than immediate talk during shared reading. Because van Kleeck et al.’s study (1997) showed, 65% of immediate and 35% of non-immediate talk in mothers’ interactions with their three-year-old children during shared storybook reading, and some previous studies (e.g., Rogoff, 1991) showed a close relationship between parents’ talk and their children’s talk, it was assumed in this research that three-year-old children would exhibit more immediate than non-immediate talk. However, the three-year-old child exhibited more non-immediate talk than immediate talk in this study. Furthermore, the ratio between immediate and non-immediate talk was similar in both children. Based on theories about children’s cognitive development (e.g., Vygotsky, 1978), older children would have a higher level of cognitive abilities and exhibit a higher level of talk than younger child would. Consequently, it was expected that even though both children showed more higher level talk (non-immediate talk) than lower level talk (immediate talk), the differences between these kinds of talk would be greater in the seven-year-old child’s initiations. However, the results were not consistent with this. Thus, the younger child’s initiation uses in the present study seemed not to follow the results in the previous studies, and not to be related to the child’s age and cognitive abilities.

5.4.2. The children’s initiations and the mother-child interactions during shared reading.

Many researchers point out that children’s initiations influence parent-child interactions (Rogoff, 1991) and appear to guide parents’ interactions in shared reading (van Kleeck, 2004). In the current study, there appeared to be a relationship between child’s initiations
and mother-child interactions, since there was a greater number of child initiations and more mother-child interactions between the mother and the three-year-old child than between the mother and the 7-year-old child. Some instances in qualitative data also showed a close relationship between the mother’s talk and the child’s talk. For instance, a greater number of clarifications, responding with ‘don’t know’ and “no” responses in the three-year-old child’s initiations and interactions appeared to promote a greater number of the mother’s interactions. Just as previous studies have shown a relationship between the parent’s interactions and the child’s initiations (e.g., Rogoff, 1991; van Kleeck, 2004), the present study also suggests that the frequency or type of a child’s initiations may be related to the number of mother-child interactions.

In short, the age differences in the frequency of children’s initiations seemed to be related to the contexts. This is because both the total number of initiations, and the instance of immediate and non-immediate talk occurred more frequently with the three-year-old in the print book and electronic book 1 contexts while the numbers were similar between the two children in the electronic book 2 context. Moreover, the children’s level of literacy abilities appeared to be related to the types of initiation. However, their use of immediate and non-immediate talk seemed not to be related with their cognitive abilities. In the current study, a child’s initiations seemed to be related to mother-child interactions during shared reading, consistent with Rogoff (1991) and van Kleeck (2004)’s notions about a child’s role in parent-child interactions. Thus, children’s initiations, their literacy abilities, mother-child interactions, and book medium seemed to be related to each other in mother-child shared reading.
5.5. Conclusion

In the present study, mother-child interactions differed during shared reading in the different contexts; a traditional print book, an electronic book in a CD-ROM book like format and an electronic book in a video-clip-like book format. Moreover, the mother-child interactions appeared to be related to the different formats of the electronic books. These findings are consistent with previous studies that showed a relationship of parent-child interactions and the medium of text (Worden et al., 1987; Shade & Watson, 1987). Furthermore, as with the narrations of the story, mother-child interactions were more focused on listening to the story rather than reading the texts in the electronic book contexts; some features of the medium seemed to influence the focus of mother-child interactions which was also evidenced in Smith’s study (2001). These findings contribute to a greater understanding about the potential relationship between mother-child interactions and the format of the text. Based on the results, different media seemed to generate different mother-child extratextual talk, which is considered to be essential for emergent literacy development (Snow, 1983). Thus, it is expected that different media may influence children’s literacy development in various ways, concurrent with Smith’s views (2001). However, there have not been many studies about medium differences in shared reading of different text formats. Therefore, studying the potential influence of different formats of books on parent-child shared reading and on a child’s emergent literacy is essential in our technologically-advanced society. More studies of the potential effects of different kinds of formats and features of electronic books on parent-child shared book reading are necessary in order to develop more effective electronic books for young children’s literacy development, an issue which has not been studied in depth.
The children's age also seemed to affect mother-child interactions in this study. These differences seemed to be related to each child's cognitive and literacy abilities and the sociocultural backgrounds of the mother and the children. The mother's mediation appeared to depend on the child's age, in terms of frequency and focus of their talk. The mother's adjustment of her talk depending on the children's ages or abilities seemed to be in accordance with the notions in Sigel's distancing theory (1993) and with previous studies (Goodsitt et al., 1988; Martin & Reutzel, 1999; van Kleeck & Beckley-McCall, 2002; Wheeler, 1983). Similarly, the examination of qualitative data showed the appearance of more difficult concepts in some instances between the mother and the older child than between the mother and the younger child. However, contrary to Sigel's distancing theory (1993), in terms of the frequency of immediate and non-immediate talk, the mother and children's level of interactions did not appear to be related to the children's ages. There was a higher percentage of mother's non-immediate talk (higher level of interactions) between the mother and the three-year-old child during shared reading than that in previous studies (Goodsitt et al., 1988; Martin & Reutzel, 1999; van Kleeck & Beckley-McCall, 2002; Wheeler, 1983). In addition, in this study, even though the shift of responsibility between the mother and the children appeared from the examination of qualitative data, it did not appear clearly in the comparison of the frequency of mother-child talk between the two age groups because of the children's different roles during shared reading as influenced by their sociocultural experiences. That is children's roles in shared reading seemed to be related to their sociocultural experiences, which appeared to generate their different participation in shared reading. This result suggests that children may play different roles in shared book reading,
depending on their sociocultural experiences, and the shift of responsibility between adults and children may differ in different cultural groups. Thus, this study suggests that in addition to children's cognitive and literacy abilities, their sociocultural background may be related to their home literacy practices. Based on this, it is assumed that understanding cultural diversity in children's home literacy practices that occurred before schooling are essential to encouraging and supporting children's school literacy learning (e.g., Heath, 1983).

Children's initiations appeared to be dependent on their ages. Because the age differences in the frequency of the children's initiations appeared in the print book and electronic book 1 contexts while not clearly appearing in electronic book 2, the frequency of the children's initiations seemed to be dependent on the different media formats of the books. Moreover, the children's different levels of literacy abilities seemed to be related to different types of initiations. For instance, the older child exhibited print related initiations, such as reading the text, as he is a conventional reader. However, children's use of immediate and non-immediate talk as initiations did not appear to be related to their cognitive abilities, as both children exhibited a similar ratio between these two kinds of talk in their initiations. In terms of the relationship between children's initiations and their mother's interactions, these seemed to be related to each other, as van Kleeck posited (2004). The results suggest that the media of the books and children's literacy abilities may be related to their initiations, and that there is potentially a relationship between children's initiations and mother-child interactions during shared reading.
5.6. Limitations

This study has a number of limitations that may affect the generalization of the results.

1. As this is a case study, the results cannot be generalized and only show differences in the mother-child interactions of the participating family in the shared reading activities.

1-1. The reader is reminded that literacy practice differences vary in families from different backgrounds. For example, Heath’s study (1983) showed different home literacy practices among families from different home culture.

1-2. Since this study was conducted with a mother and her sons, the results may be gender specific. Schwartz’s study (2004) illustrated that the frequency of a parent’s interactions differed, depending on the child’s gender during shared reading. Furthermore, Anderson et al. (2004) found that mothers’ interactions with their child differed from fathers’ interactions with their child during shared reading. Mother-daughter interactions with same texts may differ from these in the current study.

1-3. Even though this study showed the differences in mother-child interactions during shared reading of a print book and two electronic versions of books, the results cannot be generalized to differences between print books versus electronic books in mother-child shared reading. Different genres and formats of print books influence parent-child interactions (Pellegrini et al., 1994). Moreover, there are many different formats of electronic books besides the ones utilized in this study. Therefore, these other formats could influence parent-child interactions differently.

2. Even though the researcher built a close relationship with the participants before conducting her observation sessions, her presence during shared reading may have affected their interactions. However, the researcher participated as an observer, several
times, in their shared reading activities before conducting the actual study; therefore, it is believed that the potential effects of the researcher's presence were minimized.

3. In this study, the order of the children in each activity was counter-balanced, but the order of the activities was not counter-balanced. A counter-balanced design could not be set up for both aspects with 4 session observations; this can be done with 6 session observations. Because of the time aspect, the participant’s load of participations and the adequacy of data, conducting 4 session observations was decided, even though 6 session observations satisfied a counter-balanced design for both the order of the children and the activities. Due to the fact that this study was not counter-balanced by order of the activities, the results in comparing mother-child interactions in different contexts may possibly be influenced by the order of the activities. For instance, in the first ordered activity, participants may have less pressure and tiredness from participating in the sessions than in the last ordered activity because they participated over three succeeding days. However, as a shared reading activity was the participating family’s daily activity, by observing each activity each day, the pressure and tiredness of participating that can be greater in the last ordered activity and can influence their interactions may be minimized.

4. This study was conducted with a mother and her sons from one family, in order to compare mother-child interactions during shared reading according to children’s ages. However, besides age differences, the children’s different personalities and their attachment to their mother may have also affected their interactions with her during the shared reading. Bus and van Ijzendoorn’s study (1995) clearly showed the influence of mother-child attachment on parent-child interactions during shared reading. For this
reason, age differences in mother-child interactions during shared reading in the present study may, in some ways, be due to the children's different levels of attachment to their mother.

5. The books in this study were provided by the researcher, however the mother's and children's selection of books may differ in their real home environment when they may freely choose what to read. The interview with the mother revealed that, in fact, she selects different levels of books for her sons, according to their ages. It follows that, by providing the same books for both children, the mother-child interactions in this study may be somewhat different from those in their daily literacy practices. As Pellegrini (1991) pointed out, the nature of books can influence parent-child interactions during shared reading.

5.7. Implications

Educators

1. In the present study, different mother-child interactions that would influence children's literacy development appeared to be dependent on different text formats. Thus, educators should be aware of the potential influence different text formats have on young children's literacy development. In addition, educators need to inform parents about the different aspects of each medium, in order to help parent's understand the potential each holds for their children's literacy development.

2. In the present study, children's sociocultural experiences appeared to influence their roles in mother-child shared reading. Particularly, the seven-year-old's more passive role seemed to differ from children's typically active role during shared reading in
mainstream cultural families in Western society (van Kleeck, 2004). Such a difference may discourage the child’s literacy learning at school in Canada, as Heath (1983) showed disadvantages of inconsistency between home and school literacy practices in children’s literacy development, and that the discrepancy between literacy practices with a computer at home and at school discouraged school-aged children’s literacy learning when using a computer at school (Snyder, Angus & Sutherland-Simon, 2004). Thus, educators should understand differences in children’s home literacy experience in order to bridge between home and school literacy experiences. However, this shouldn’t mean that children’s home literacy should simply conform to school literacy practices, but that educators and school administrators need to adjust their program appropriately to insure that children from minority cultural groups have meaningful literacy learning at school, as Pellegrini (1991) has suggested.

Researchers

3. In this study, some reasons for the different frequency of mother-child interactions during shared reading could be understood more thoroughly through the examination of the transcription. In addition, the examination of qualitative data showed qualitatively higher level interactions between the mother and the older child and the shifting of responsibility from the mother to the older child that did not appear in the results from quantitative data analysis. Thus, researchers should examine qualitative data as well as quantitative data, when they conduct research about parent-child interactions during shared book reading, a suggestion which was also pointed out by Lynch (2003).

4. Both children’s cognitive and literacy abilities appeared to be related to age differences in mother-child interactions during shared reading. Some studies conducted in this topic
appeared to consider children’s abilities within each age group. For instance, when conducting a study about age-conditioned parent-child’s shared book reading, van Kleeck and Beckley-McCall (2002) checked children’s normal communication development while Martin and Reutzel (1999) and Goodsitt et al. (1988) did not test children’s abilities, but selected children based only on age. However, even children in same age group may have different levels of literacy. This difference within an age group may influence parent-child interactions during shared reading. Thus, if there are some children who have distinctly high or low abilities, results may differ because of children’s abilities, not their ages. Consequently, in order to make equivalent conditions within each age group, when researchers conduct research in this area, they should consider children’s cognitive and literacy abilities when selecting participants, not just age.

*Future Research*

5. Even though Hess and McGarvey’s study (1987) showed the positive effects of home computer use in addition to school computer use on kindergartener’s reading abilities, there have not been many studies about the influence of text format during parent-child shared reading. As many societies are technologically advanced, and children’s access to the technology is increasing (Rideout et al., 2003), understanding the potential influences of different text formats on parent-child shared reading would provide a deeper understanding of children’s literacy development.

6. This study showed mother-child interactions in a Korean family during shared reading of the print and electronic books, but mother-child interactions with these versions of books may differ with families from another culture. Hence, to have a better
understanding of the influence of text format on parent-child interactions during shared reading, examining these aspects in families from different cultures would be necessary.

7. This study illustrated parent-child shared reading with print and electronic books only between the mother and her sons. However, mothers’ interactions with their child differ from fathers’ interactions with their child during shared reading with print books (e.g., Anderson et al., 2004; Schwartz, 2004) and with electronic software (e.g., Worden et al., 1987). Thus, comparing mothers’ interactions with their child and fathers’ interactions with their child during shared reading with print and electronic versions of books is necessary to obtain a better understanding of possible gender effects.

8. Since computer technology has advanced rapidly, there are many different formats of electronic books for young children, such as those with a hyperlink feature. This study showed the potential influence of formats of medium on mother-child interactions, as other studies have shown the influence of the nature of print books, such as genre (Anderson et al., 2004) and format (Pellegrini, 1991), on these interactions. To understand the potential use of electronic books in young children’s literacy practices, it is necessary to further study parent-child interactions during shared reading with different formats of electronic books. Furthermore, this understanding would help to develop more effective formats of electronic books for children’s literacy development.
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APPENDICES

Appendix A

*Interview with the mother about children’s literacy and computer experience at home*

### -About a shared book reading activity at home-

<table>
<thead>
<tr>
<th>Question</th>
<th>3-year-old child</th>
<th>7-year-old child</th>
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<tbody>
<tr>
<td>1. How often do you read books with your child?</td>
<td></td>
<td></td>
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<tr>
<td>The 3-year-old child</td>
<td>Shared reading with the mother: 5 times per week</td>
<td></td>
</tr>
<tr>
<td>The 7-year-old child</td>
<td>Shared reading with the mother: once a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Independent reading: every day.</td>
<td></td>
</tr>
<tr>
<td>2. What kinds of books do you usually read with your child?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The 3-year-old child</td>
<td>Narrative story book containing 2-3 sentences per page and pictures</td>
<td></td>
</tr>
<tr>
<td>The 7-year-old child</td>
<td>Narrative story book</td>
<td></td>
</tr>
</tbody>
</table>

### -About a home computer activity-

1. How often do you do computer activities with your child?

<table>
<thead>
<tr>
<th>Question</th>
<th>3-year-old child</th>
<th>7-year-old child</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 3-year-old child</td>
<td>Once a week</td>
<td></td>
</tr>
<tr>
<td>The 7-year-old child</td>
<td>Hardly ever (but usually done by himself)</td>
<td></td>
</tr>
</tbody>
</table>

2. What kinds of computer software/program do you usually use with your child?

<table>
<thead>
<tr>
<th>Question</th>
<th>3-year-old child</th>
<th>7-year-old child</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 3-year-old child</td>
<td>No use of computer software</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of Internet websites for children, such as story reading and computer games</td>
<td></td>
</tr>
<tr>
<td>The 7-year-old child</td>
<td>No use of computer software</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of Internet websites for children, such as story reading and computer games</td>
<td></td>
</tr>
</tbody>
</table>

### -Children’s experience with literacy and computer-

(Experience with literacy)

1. What kinds of literacy activities does your child usually do at home?

<table>
<thead>
<tr>
<th>Question</th>
<th>3-year-old child</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 3-year-old child</td>
<td>Reading-related: shared reading of storybooks</td>
</tr>
<tr>
<td></td>
<td>Writing-related: drawing, and writing alphabets and numbers (recently started)</td>
</tr>
</tbody>
</table>
| The 7-year-old child | Reading-related: reading storybooks  
Writing-related: homework and diary-writing |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 When did your child start to write, draw or read?</td>
<td></td>
</tr>
<tr>
<td>The 3-year-old child</td>
<td>3 year-old</td>
</tr>
<tr>
<td>The 7-year-old child</td>
<td>2 year-old (started drawing in the daycare and at preschool)</td>
</tr>
<tr>
<td>3. How often does your child write, draw or read?</td>
<td></td>
</tr>
</tbody>
</table>
| The 3-year-old child | Reading: almost everyday (mostly shared reading)  
Writing or Drawing: once or twice a week |
| The 7-year-old child | Reading: everyday  
Drawing: 3-4 times per week  
Writing: 4-5 times per week |
| 4. What kinds of books does your child read or is read to? |
| The 3-year-old child | Narrative story books (Modern children’s tale, Korean traditional story books) |
| The 7-year-old child | Narrative storybooks (Modern children’s tale) and comic books  
*(Experience with a computer)* |
<p>| 1. When did your child have his first experience with a computer? |
| The 3-year-old child | 2 year-old |
| The 7-year-old child | 5 year-old |
| 2. How often does your child usually use a computer? |
| The 3-year-old child | Once a week |
| The 7-year-old child | Once a week |
| 3. What kinds of things does your child usually do with a computer? |
| The 3-year-old child | Computer games and story reading on the Internet websites, such as Juniver. |
| The 7-year-old child | Computer games, usually car racing games |
| 4. What kinds of computer software or program does your child usually use? |
| The 3-year-old child | No software, computer games on the Internet website |
| The 7-year-old child | Racing games |
| 5. How long does your child do computer activities per day or per week? |</p>
<table>
<thead>
<tr>
<th></th>
<th>The 3-year-old child</th>
<th>The 7-year-old child</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What kinds of books do you usually buy for your child? And what is the purpose of purchasing these books?</td>
<td>Series of storybooks</td>
<td>Series of storybooks, particularly narrative storybooks (modern children’s tale, famous story books, Korean traditional story books)</td>
</tr>
<tr>
<td>1-1. If you buy a book for your child, what kind of book would you want to buy?</td>
<td>Narrative storybook containing 4-5 sentences per page</td>
<td>Scientific, non-fiction books explaining nature</td>
</tr>
<tr>
<td>2. How often do you usually buy books for your child?</td>
<td>1-2 books per month</td>
<td>1-2 times per month</td>
</tr>
</tbody>
</table>

(About home computer software)

<table>
<thead>
<tr>
<th></th>
<th>The 3-year-old child</th>
<th>The 7-year-old child</th>
</tr>
</thead>
</table>
| 1. What kinds of computer software do you usually buy for your child? And what is the purpose of purchasing this software? | Never bought software because the child just uses Internet websites  
The mother thinks software is not necessary for the child. | Kinds: computer games  
Purpose: bought because the child requested it |
<p>| 1-1. If you buy one for your child, what kinds of computer software would you want to buy? | None, although she is willing to buy it, if requested. | Although she does not want to buy software for the child, she usually does buy computer game software. |
| 2. How often do you usually buy computer software for your child? | | |</p>
<table>
<thead>
<tr>
<th>Age of Child</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 3-year-old child</td>
<td>Never. The child uses his brother’s software</td>
</tr>
<tr>
<td>The 7-year-old child</td>
<td>Once per year</td>
</tr>
</tbody>
</table>
## Appendix B

### Categories of mother and child’s verbal and non-verbal events

<table>
<thead>
<tr>
<th>Categories</th>
<th>Explanations of Categories</th>
<th>Examples of Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read Author/Title/Text ** ** **</td>
<td>- Reads the author’s name or title of the book/Reads sentences in the book</td>
<td>- “What does it say?”/pointing to the sentence</td>
</tr>
<tr>
<td></td>
<td>- Asks to read the author or title of the book/Asks to read the sentences in the text</td>
<td></td>
</tr>
<tr>
<td></td>
<td>either verbally or non-verbally</td>
<td></td>
</tr>
<tr>
<td>Prompting Reading</td>
<td>Provides the first word of the sentence in the text to induce the child to read the whole sentence</td>
<td>“Let…” (The text says ‘Let’s play’.)</td>
</tr>
<tr>
<td>Attention to illustration or text</td>
<td>Directs attention to the illustration or text (excluding labeling and non-verbal responses)</td>
<td>-“This one”</td>
</tr>
<tr>
<td>*</td>
<td></td>
<td>-Pointing to a illustration without saying anything</td>
</tr>
<tr>
<td>Labeling ** ** ** **</td>
<td>- Gives a label for an item in the illustration</td>
<td>“Fox.”</td>
</tr>
<tr>
<td></td>
<td>- Asks for a name or label for an item in the illustration</td>
<td>“What is this?”</td>
</tr>
<tr>
<td>Comment (providing evaluation):</td>
<td>Focuses on non-perceptual qualities (e.g., ‘stupid’) and internal states (e.g., ‘sad’) of</td>
<td></td>
</tr>
<tr>
<td>** **</td>
<td>characters, objects or ideas; judgments (e.g., ‘funny’); provides point of view (an</td>
<td>(1) “It’s so funny.”</td>
</tr>
<tr>
<td></td>
<td>interpretation of what a character is thinking or feeling):</td>
<td>(2) “He did very good.”/“He was so bad.”</td>
</tr>
<tr>
<td></td>
<td>(Including both statements and questions)</td>
<td>(3) “It’s good.”/“I am also kind.”</td>
</tr>
<tr>
<td>Explanation ** ** **</td>
<td>Explains about the actual content of story or illustration, general knowledge, reason</td>
<td></td>
</tr>
<tr>
<td></td>
<td>why questions or vocabulary: (Including both statements and questions)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Explains the content of an illustration (Including counting the number of objects in</td>
<td>(1) “She is working now.”</td>
</tr>
<tr>
<td></td>
<td>the illustration) *</td>
<td>(2) “He said ‘no’ because he is playing.”</td>
</tr>
<tr>
<td></td>
<td>(2) Explains the content of the story *</td>
<td>(3) “If you strike stones together, a fire can break out”</td>
</tr>
<tr>
<td></td>
<td>(3) Explains general knowledge (Factual knowledge: general)</td>
<td></td>
</tr>
<tr>
<td><strong>Elaboration</strong>*</td>
<td>Expands ideas related to the story, illustration, or partner’s or own talk: (Including both statements and questions)</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>1</strong></td>
<td>Elaborates about the illustration **</td>
<td></td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Elaborates about the story **</td>
<td></td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Elaborates about the partner’s or own talk (expanding a previous utterance with new information)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Association (Relates life to text)</strong>*</th>
<th>- Relates a concept in the book to the child’s experiences including past, present and future experiences - Asks about child’s experiences related to the story or illustration in the book</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“They are fighting to get a big acorn.”</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>“He was bored because nobody wants to play with him.”</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>“She slid.” ➔ “The puppy also” (Similar to expansion)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Prediction</strong>*</th>
<th>- Makes predictions - Asks a partner to predict what will most likely happen.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“She will get wet.”</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>“What do you think the mom would say?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Recalling</strong>*</th>
<th>- Reviews story details, plots and/or theme either after or during the reading - Requests a partner to recall or retell earlier parts of the story</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“He did not help mom at first.”</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>“What did he do wrong?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Clue</strong></th>
<th>Provides a partner with some information to answer the request</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“When others are sleeping… what did he do?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Revisiting</strong></th>
<th>Revisits the earlier parts of the story either after or during the reading (by looking back at previous pages)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Clarification</strong></th>
<th>- Rephrases the statement or question - Repeats previous utterances to clarify partner’s or own utterance - Re-inquires (a counter question)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“Not glass. Things that are not glass.”</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>“Si..t?” ➔ “Sitting?”</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>“What?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Confirmation Question</strong>*</th>
<th>Asks to confirm something that is related or unrelated to the story</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“Did he help?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Managing</strong></th>
<th>Gets the partner involved</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>“Let’s look at this.” or “Let’s read this book.”</td>
</tr>
<tr>
<td>Intention</td>
<td>The child’s intention to do something</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Simple</td>
<td>Gives a short answer to the inquiry.</td>
</tr>
<tr>
<td>response</td>
<td>(1) Yes/ No/ Non-verbal responses</td>
</tr>
<tr>
<td></td>
<td>(Nodding or Pointing to items in the</td>
</tr>
<tr>
<td></td>
<td>illustration)</td>
</tr>
<tr>
<td></td>
<td>(2) Don’t know</td>
</tr>
<tr>
<td></td>
<td>(3) One word answer that cannot be</td>
</tr>
<tr>
<td></td>
<td>included in other categories such as</td>
</tr>
<tr>
<td></td>
<td>Labeling</td>
</tr>
<tr>
<td></td>
<td>(4) No response</td>
</tr>
<tr>
<td>Approval/</td>
<td>Confirms/ Disapproves of and/or</td>
</tr>
<tr>
<td>Disapproval</td>
<td>corrects the partner’s talk or answer</td>
</tr>
<tr>
<td></td>
<td>“She slid.” → “Yes, she slid.”</td>
</tr>
<tr>
<td></td>
<td>“Dancing.” → “He did not dance, but he sang a song.”</td>
</tr>
<tr>
<td>Other</td>
<td>- A short utterance that does not</td>
</tr>
<tr>
<td></td>
<td>really affect interaction</td>
</tr>
<tr>
<td></td>
<td>- Talks about other things that are</td>
</tr>
<tr>
<td></td>
<td>not related to joint reading</td>
</tr>
<tr>
<td></td>
<td>- Simple repetition</td>
</tr>
<tr>
<td></td>
<td>- Requests a non-linguistic response</td>
</tr>
<tr>
<td></td>
<td>- Incomplete utterances</td>
</tr>
<tr>
<td></td>
<td>- Completes the partner’s incomplete</td>
</tr>
<tr>
<td></td>
<td>utterance, excluding prediction</td>
</tr>
<tr>
<td></td>
<td>- Soliloquies</td>
</tr>
</tbody>
</table>

Note. * indicates interactions included as immediate talk; ** indicates interactions included as non-immediate talk; *** indicates interactions included as questions