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Mothers' Mediation with an E-Book and its Influence  
on the Early Literacy Skills of First Grade Students At-Risk  
for Learning Disabilities Compared to  
Typically Developing First Grade Students

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## **Abstract**

Numerous studies conducted in recent decades have demonstrated the importance and contribution of the electronic book (e-book) to the promotion of young children's early literacy skills. Researchers and educators emphasize the importance of adults' mediation during activities with e-books with young children and with those at risk of learning disabilities.

The studies that have been conducted to date have explored the nature of parents' mediation to a typically developing child during shared reading of a print book or an e-book. However, adult mediation surrounding an e-book with a child who is at risk for learning disabilities has not been examined. The current study thus aimed to explore the nature of mothers' mediation during an activity with an e-book with a typically developing child compared to mothers' mediation with a child at-risk for learning disabilities. The study also examined the impact of mediation characteristics on the development of early literacy skills (vocabulary, story comprehension, story recall) among children at-risk for learning disabilities compared to typically developing children.

Participants in the study included 63 mothers and their first-grade children from middle-high socioeconomic homes. The participants were divided into two groups: one included first grade students who were evaluated in kindergarten and were at risk for learning disabilities (based upon developmental delays) and their mothers. The second group included first grade students who were typically developing and their mothers.

The study included three stages: pretest, intervention, and up to one week post-intervention. At the pretest stage, children were given a verbal and non-verbal intelligence test as part of inclusion criteria in the study. Following this, the children took a vocabulary test. At the intervention stage, a meeting with the researcher and the mother and child took place in a quiet room within the school. The mother and child were instructed to read the e-book together. The dyads received brief instructions

regarding the use of the software. The first mother-child interaction was video-recorded, and then transcribed and analyzed using the OMI-L program that examines cognitive and emotional utterances during the interaction. After the first interaction the mother completed a demographics questionnaire and a questionnaire regarding familiarity with computers. Following this, the mothers were asked to listen to the story on the e-book with their child three additional times in their home over the course of a week. During the post-test phase, the child's early literacy skills were evaluated: vocabulary, story comprehension, and story recall.

The study's results indicate similarities and differences between mother's mediation with typically developing children or children at-risk for learning difficulties during activities with an e-book. Mothers from both groups used a "give" and "demand" mediation style to a similar degree, as well as the following mediation characteristics: behavior regulation, focus, excitement, encouragement, and providing a feeling of capability. Mothers of children at-risk for learning disabilities elaborated more, but at a lower level (labeling characters or objects, describing characters' actions, relating text to illustrations, labeling details in the illustrations that were not mentioned in the text, and paraphrasing) than mothers of typically-developing children, who elaborated on a higher level (discourse relating to personal experiences, drawing extra-textual connections, discussing the writing system). While mothers in both groups elaborated primarily on word definitions, mothers of typically developing children encouraged their children to read the story independently while mothers of at-risk children did not. In addition, whereas mothers of at-risk children largely initiated the discourse with their children, the typically developing children initiated the discourse more often with their mothers.

Results regarding early literacy skills after the intervention reveal that children at-risk for learning disabilities demonstrated greater progress compared to typically developing children. However, the gaps in language development between the groups

influenced the at-risk children's ability to comprehend and recall the story, and they performed at a lower level on these tasks than the typically developing children.

The regression analyses that were conducted revealed that for both groups of children, the child's language ability and variables relating to the nature of the interaction influenced the child's early literacy skills after the intervention.

This study's results contribute to a growing body of literature that demonstrates the contribution of e-books, and particularly with a mediating adult, to the promotion of early literacy skills among children at-risk of learning difficulties. This study has the unique contribution of examining the characteristics of maternal mediation to children at-risk of learning disabilities compared to mothers of typically developing children, from middle-high SES, and their contribution to children's early literacy skills. Nonetheless, it is important to continue to explore the variables that influence maternal mediation to children at-risk and their influence on early reading and writing skills.