

**Repeated E-Book Reading and Its Influence On  
Words' Learning and Story Comprehension Among  
Preschoolers And First-Graders**

Tamar Shoham-Gueta

School of Education

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## **Abstract**

The current research examined the effectiveness of an electronic book (e-book) that includes a dictionary, and the influence of re-reading it, on learning new words and on understanding a story among preschoolers and first-graders from a low socioeconomic status. This study had several goals. The first goal was to examine the influence of the re-reading of an educational e-book in the channel “read the story with a dictionary” on the advancement of learning new words at three levels (receptive understanding, word interpretation, and word production) and on understanding a story (information revealed in the story and information deriving from the story). The second goal was to examine the number of repeats on words of the electronic dictionary (three or six repeats) that are required to achieve an advancement in learning new words and understanding a story. The third goal was to examine the degree of advancement in learning new words that were supported by a dictionary, versus words that were not supported by a dictionary. All variables were compared between preschoolers and first-graders.

The study included 155 children, of which 78 were preschoolers and 77 were first-graders. Each age group was divided to two groups – experimental and control.

The children in the experimental group read the e-book that includes a dictionary and heard, in the voice of an electronic reader, the meaning of the hard words in the book. After listening to the explanation on a word, the children were asked to press the word and listen to the explanation two more times. Altogether, in each interaction with the e-book, the children listened to the explanation of the hard words three times. This activity was conducted twice, such that the children in the experimental group listened to the meaning of the word six times and listened to the e-book three times in total (once continuously without the electronic dictionary and twice with the electronic

dictionary). Children in the control group used the e-book, without the dictionary, only once and then continued their regular kindergarten and school activities.

All participating children were examined at three time points; prior to the intervention program, after the first reading in the e-book that includes a dictionary, and after the second reading in the e-book that includes a dictionary. The learning of new words by the children was evaluated by a receptive understanding test, a word interpretation test, and a word production test. Understanding the story was evaluated by an understanding questionnaire, part of which regarded the revealed information in the story and the other regarded the information deriving from the story.

We hypothesized that (a) the children in the experimental group (both preschoolers and first-graders) will advance in the research variables more than the children in the control group, but that the advancement of first-graders will be greater than that of preschoolers; (b) that a repeated activity of six repeats with the words of the electronic dictionary will advance the children in the experimental group in the various research variables more than a repeated activity of three times; (c) that an advancement will be found in learning new words (receptive understanding, word interpretation, and word production) when the words are supported by the dictionary, as compared with when the words are not supported by the dictionary.

The findings of the study show that, for the first hypothesis – according to which activity with an e-book will advance the children in the experimental group (both preschoolers and first-graders) in the various research variables more than the children in the control group, and that this advancement will be greater among first-graders in the experimental group than among the preschoolers in the experimental group – a confirmation was found for the first part of the hypothesis, in the variables word interpretation, word production, and revealed/overt information in the story. The

second part of the hypothesis, which regarded the difference between preschoolers and first-graders, was not confirmed. The second hypothesis – according to which repeated activity of six repeats with the words of the electronic dictionary will advance the children in the experimental group in the various research variables more than repeated activity of three repeats – was fully confirmed for the variable word interpretation and partly confirmed for the variable receptive understanding, which was confirmed only for first-graders. This hypothesis was also partly confirmed, for preschoolers only, for the research variable word production. Regarding the third hypothesis – according to which the children will advance in learning words that are supported by the electronic dictionary in the research variables that examine learning new words (receptive understanding, word interpretation, and word production) more than words that are not supported by the dictionary – the hypothesis was partly confirmed for the variable word interpretation, and only among preschoolers. The conclusions of this study are innovative in that they demonstrate that it is the preschoolers – who are at the preliminary stage of their formal learning of the written language – who can benefit more from the repetitive usage of an e-book, such as the one described in this study, in the field of learning new words. In some variables (receptive understanding), preschoolers can benefit from such an activity similar to first-graders, whereas in other variables, which are considered harder (word interpretation and word production), they can benefit even more than first-graders. Thus, it seems that such a technology is effective mostly among younger children.