

BAR-ILAN UNIVERSITY

**The Impact of Dictionary Enrichment in E-
Book on Novel Words Learning:
Comparison between Kindergarteners
With and Without SLI**

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Abstract

Vocabulary is an important component of learning a language and has implications on future learning in school, including reading and reading-comprehension abilities.

Scientific evidence from recent years suggests that e-books have a positive impact, encouraging the learning of new words among pre-school children. Some researchers focused on children at risk for learning disabilities and the use of e-books. Some studied the effects of dictionary use on learning difficult words. Though the specific method of defining the words with these programs seems important, this aspect has not yet been explored yet. In this project, we examined whether the type of dictionary enrichment, provided in e-book form, influences the effectiveness of learning new words in pre-school children with typical language development (TLD) as opposed to those with specific language impairment (SLI).

We studied 40 children from middle SES neighborhoods between the ages of 4-6. They were Hebrew speakers with normal IQ and hearing. This issue was examined with the use of an e-book, specially developed for this project, that includes a dictionary with three forms of enrichment: (a) giving a definition of the word (b) giving a definition of the word by using the context of the story (c) a combination of these two forms. We focused on receptive and expressive learning of the dictionary words.

Half had TLD and half were from special education pre-schools, previously diagnosed with SLI. Pre-testing included (a) tests aimed at evaluating the child's general language abilities, used as background measurements; via a test for general vocabulary level, repetition of pseudo-words and repetition of sentences, and (b) tests that focused on target words included in the research by use of a receptive test, defining words and using words in producing a story. Both research groups read an e-

book that defines words in three ways: a third of the words were given a dictionary definition, a third were defined with a context and a third were given a combined definition (both dictionary definition and context). The reading of the book was done in pairs in the children's' pre-school. The children read the book five times, with 1-3 days between each reading intervention. The post-reading tests conducted 1-3 days after the last intervention, and included testing for target words on a receptive level, giving a definition and using words in producing a story.

The findings showed that both the children with TLD and those with SLI had progressed from the pre-reading testing in learning the new words, receptive understanding of the dictionary words, defining the words and using the words. The extent of progress was similar in both groups, except for the use of the dictionary words in producing a story. Which children with TLD progressed more in this area than those with SLI. Additionally, the results show that the different forms of dictionary enrichment (dictionary definitions, context-based definitions and a combination of the two) were to a similar extent useful in both research groups for receptive understanding of the dictionary words and defining the dictionary words. Despite this, words that had a combined definition promoted the child's use of the dictionary words in the most useful way only in children with TLD.

Additionally, the results show that the basic language level (before intervention) was correlated the learning of the new words in children with SLI and the use of the dictionary words when given the combined definition. The lower the basic level had been in this group, the greater their improvement.

At the regression analysis that was conducted, the basic language level was not correlated by the type dictionary enrichment used. However, in the TLD children, the higher the basic language level was, the greater the improvement in receptive

understanding of the dictionary words. Moreover, the higher basic language level was, the greater the improvement in used dictionary word was, when given a combined enrichment.

We will discuss the pedagogical impact of the results of this research on enriching the vocabulary of children with TLD and those with SLI. Likewise, we will present the limitations of this research and suggest further ideas for research.