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**Understanding a Story and Retrieving it after Reading the Electronic Book
with a Support Level of Detail, Support Level of Inference and Support
Level of the Combination between them**

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Abstract

The ability to comprehend stories is an important skill that develops with age, and the assistance of an adult in this matter may help the child in developing these skills. Parents with a low economic status read to their children infrequently, and the quality of their intervention most often falls short when compared to that of parents in the middle class economic status. Beside joint parent-child book reading, kindergarten children, today, can listen to narrated books through the utilization of electronic books (e-books) designated, specifically, for children. Such e-books can, at times, provide assistance with regard to the understanding of the content of the story. In this study we've focused on kindergarten children from low economic backgrounds and tested reading e-books with the aim to improve their ability to comprehend and retrieve stories. The relevant literature on this particular topic, so far, has examined e-book applications that provide combined assistance both in the manifest information revealed in the text (the stratum of detail), as well as the concealed information evident within the text (the stratum of inference).

In the current study, the books read by the children include three strata of Assistance: Assistance in the stratum of detail, assistance in the stratum of inference, and combined detail and inference assistance. The objective of the current research is to deepen our understanding with regard to the kind of assistance provided, with emphasis on the effect of the Assistance on the comprehension of the story and its retrieval.

The research questions were as follow:

- (a) Which of the following better promotes the young child's comprehension and retrieval: combined assistance - both in the stratum of detail and in the stratum of inference, assistance only in the stratum of detail, or assistance only in the stratum of inference?
- (b) Will (do) the various strata of assistance promote the comprehension of the story in the stratum of detail differently, as compared to the stratum of inference?

- (c) Is there a relationship between progress in story comprehension and progress in story retrieval? If so, is this relation different between the various strata of assistance?

The study examines 145 preschool children (ages 5-6) of low socio-economic status. In order to examine each child's initial level in story comprehension, the children were instructed to read from an e-book one time in a sans assistance setting (pre-exam). The examinations included a closed book exam of story comprehension and a request for the child to tell the story themselves while using a printed illustration book side-by-side to the e-book. At the stage of intervention the kindergarten children were separated into 4 groups - each with a different task:

- (1) Reading an e-book designed to assist in the stratum of detail.
- (2) Reading an e-book designed to assist in the stratum of inference.
- (3) Reading an e-book designed to assist with both detail and inference settings.
- (4) Fluently reading an e-book with no assistance (control group).

The post intervention exam was identical to that of the pre intervention exam.

Our assumptions prior to conducting the research were as such:

- (1) The children's progress in story comprehension will be in accordance with the following order, from highest to lowest: Combined assistance with both settings of detail and inference assistance, reading with a setting of assistance only in inference, reading with a setting of assistance only in detail, reading with no assistance (control).
- (2) The children's progress in retrieval will be in accordance with the following order, from highest to lowest: Combined assistance with both settings of detail and inference, reading with a setting of assistance only in inference, reading with a setting of assistance only in detail, reading with no assistance (control).
- (3) The progress in story comprehension will be greater in the stratum of detail than in the stratum of inference.

- (4) A positive connection will be found between progress in story comprehension and progress in story retrieval.
- (5) The connection between progress in story comprehension and progress in story retrieval will be stronger in the combined reading (assistance with both settings of detail and inference), than in the other reading groups.

The results of the study indicated that, in accordance with the first assumption, the rate of progress was higher among children that received combined assistance when compared to children that received assistance in the stratum of detail or received no assistance. However, no significant differences were observed in the rate of improvement when comparing the groups that received assistance in inference, in detail and in the combination of the two. The second assumption has not been confirmed. No differences were found between the groups in the rate of improvement in any of the components. Meaning, the rate of the children's progress in story retrieval (time specification, location, problems and solutions characters face) was not affected by the intervention program, whether information was received in the stratum of detail, inference or combined information. Still, no group was capable of retelling the story better than the other groups. Our third assumption was confirmed. Greater improvement was found in comprehension at the stratum of detail than the stratum of inference, but no interactions were found in the rate of improvement in story comprehension within the research groups. Meaning, the differences in the rate of improvement in the stratum of detail and the stratum of inference are identical between the different research groups. The fourth assumption was partially confirmed. Positive corollaries were found between the general score of story comprehension and retrieval of the reference to time in the story, and retrieval of secondary characters. Furthermore, a correlation was observed between story comprehension at the stratum of inference and retrieval of secondary characters. The rest of the relations were found to be indistinct. Our fifth assumption was not confirmed. No distinct corollaries were found for the combined group between the rate of improvement in measurements of comprehension and the rate of improvement in measurements of story retrieval. The findings of the study indicate

combined assistance to be advantageous particularly with regard to story comprehension. These findings may have implications upon the act of reading to children both in the normative instance of human intervention while reading from a printed book, as well as to the development of e-books designed for the development of story comprehension skills. We recommend that further research will deepen the examination of story retrieval following the reading of an e-book that includes assistance in additional strata including evaluation of children's progress in story comprehension and retrieval also in the post intervention exam.