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**Reading Comprehension Deficits of Poor comprehenders:
Inference Generation, Text Processing and Working Memory**

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Ramat-Gan, Israel

2016

Abstract

Poor comprehenders are readers who experience significant difficulties in reading comprehension, in spite of the fact that their reading ability and level of intelligence falls within the normal range. Many studies have shown that the basis of this deficit is their poor abilities to integrate, conceptually, different parts of the text and the text with their general knowledge (inference generation). Nonetheless, it is still unclear why poor comprehenders have difficulties with integration and generation of inferences and whether these difficulties are general or specific to certain kinds of inferences. This study examined the intactness of several cognitive and processes that can explain why poor comprehenders have difficulty in generating inferences while they read. Specifically, we examined their ability to retain, suppress and reactivate information from the text that is critical for making inferences.

In this research, children between the ages of 10–12, with and without specific difficulties in reading comprehension, were studied. Processes that support reading comprehension, such as inference generation and text processing, were examined online using short stories and single-word probes. This probing paradigm examines the immediate and spontaneous activation of information in reader's mind. The participants were asked to read, as quickly as possible, inference and textual that appeared in three different places within the short stories. Inference probes examined the activation of predictive and bridging information from background knowledge that are implied by the text. Text probes examined the retention, suppression and reactivation of information critical for inferencing. Response time/ to the probe was measured by a special kind of microphone called Voice Key, which measures the time from presentation of the word until the participant begins reading it.

The results of the study showed that poor comprehenders generated predictive inferences only one sentence after the predictive sentence (after an intervening sentence), when the inference became less relevant, presumably because they were slower than good

comprehenders in representing and maintaining the textual predictive information in working memory. Furthermore, poor comprehenders generated less bridging inferences than good comprehenders, presumably because they had difficulties in reactivating prior textual information critical for inferencing. These results indicate on the cognitive deficits of poor comprehenders that impair their ability to perform integration and inferential processing while reading. These findings are important for the development of remedial interventions for poor comprehenders.