Development of the Text Reading Strategies: The Eye Tracking Study in 9-11- and 12-14-years Children

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During the reading acquisition, children master both the decoding and the text processing skills. The last one is related with an elaboration of some particular strategies. This issue is not well studied.

The current eye tracking study is devoted to a development of the text processing strategies in the scientific vs narrative texts reading. The study involved 40 children of two groups of age: 9-11- (24 children) and 12-14-years (16 children). In this study, eye movements were recorded by using an eye tracker system SMI RED500, while children read two scientific texts and two narratives. The eye movement fixations and saccades measures were analyzed.

Statistical analysis revealed differences between the groups in the spatio-temporal characteristics of oculomotor behavior. In particular, we found that the elder children used progressive saccades of longer amplitudes. Apparently, this is a consequence of their ability to anticipate and to analyze more information in a unit of a time. The elder children demonstrated more mature ability to monitor the concordance between their inferences in some passages and the whole context of the text. For example, in 93% of them, the first continuous reading was followed by rereading of the most important fragments, in contrary to 60% of the same cases in the younger group. Children of the younger group usually read the text only in a continuous manner. Apparently, text processing strategies in 9-11-years children is still not sufficiently developed in comparison to the participants from the elder group.

Keywords: children, strategies of reading, eye tracking.