

Popular science abstract

Developmental dyslexia is the learning disorder widely known among people that are not experts in the field of education. It belongs to the class of disorders called specific learning disorders and manifests itself in impairment of both reading fluency and reading accuracy. Moreover, it is often connected with spelling ability impairment. Difficulties encountered by people with dyslexia are all the more severe for them, because in developed countries (e.g. Poland) ability to read is an essential requirement of everyday life (at work or during education, but also in entertainment).

Reports about increasing percentage of people suffering from specific learning disorders seem to be even more alarming. Problems with reading skills can lead to closure of many career paths as well as causing a decrease of self-esteem of children, adolescents or adults with these learning disorders. For this reason studies on etiology of dyslexia, and among them studies on cognitive, emotional and social functioning or searching for ways to counteract the effects of those disorders seem to be of high importance.

Development of knowledge concerning any sort of mental disorder should go hand in hand with development of theories, which describe functioning of mental processes considered as most important in case of a given disorder. Likewise, new ways to collect and analyze data should lead researchers to reinvestigation of given problems, especially those with rising uncertainty. Presented project aims to investigate memory functioning of people with developmental dyslexia in the context of modern theoretical approaches concerning human memory functioning, that were practically not used so far. The following are fuzzy-trace theory and dual recollection hypothesis. Furthermore, it aims to conduct studies with the use of more sophisticated data analysis methods than standard ones, which allows to investigate memory functioning on the level of elementary memory processes. Multinomial models provide information that is otherwise inaccessible when standard analysis methods are used. As a result it will allow the investigation of differences between people with developmental dyslexia and people without learning disabilities at a deeper level than ever before.

Obtained results will allow to investigate specifics of memory functioning among people with dyslexia, and as a result they will open new possibilities in education. Showing strengths and weaknesses of memory of people with dyslexia to teachers and educators will help to create better curricula and apply more appropriate requirements for the students with this disorder. Regarding the therapy field, on the one hand possible results will extend the range of diagnostic methods (specific memory functioning profile could be one of the indicators of developmental dyslexia of the diagnosed person). On the other hand, results of proposed research could point out new paths of therapy for people with this disorder (e.g. training of specific processes, or memory strategies).