

The parallelogram of memory development: not a myth, but requires specification

B.G. Meshcheryakov

Ph.D. in Psychology, Head of Psychology Department
at the International University of nature, society and human «Dubna»
borlogic@yahoo.com

E.V. Moiseenko

Post-graduate student
at the International University of nature, society and human «Dubna»
moiev@mail.ru

V.V. Kontorina

Bachelor degree, Graduate
at the International University of nature, society and human «Dubna»

This report discusses a research on direct and mediated word memorizing in preschool and school-age children (7 age groups, average age: 4,0; 6,3; 7,1; 8,9, 13,4, 15,2 and 21,1 years). One of the aims of the research was to replicate on modern children the classic research carried out by A.N. Leontiev (1931) in which, in accordance with L.S. Vygotsky's cultural-historical theory, the age-specific dependences of the two types of memory were represented as a parallelogram. Apart from the two experimental conditions introduced by A.N. Leontiev (that is, direct memorizing and picture-mediated memorizing) this research included another one: letter-mediated memorizing, which made it possible to 'shift' the parallelogram to the right along the age scale. The following conclusions can be drawn from the results obtained in the study: (1) Age dynamics of reproducing words within direct and picture-mediated memorizing is similar to the one described by A.N. Leontiev; (2) Leontiev's experimental method has proved to be reliable and resistant to procedural variations; (3) Mediated memory develops faster in modern preschool children than in children of 1920s; (4) Applying a more difficult, letter-mediated memorizing method in preschool children results in the reduction of their ability to reproduce words in comparison with direct memorizing; (5) It has been proved that children of late preschool and early school age in a majority of cases use the first-letter mnemonic rule correctly, but this, however, does not help them to remember words more effectively. This fact is interpreted basing on the idea of mnemonic and cognitive task interference proposed by P.I. Zinchenko (1961) according to which insufficiently acquired means is worse than none. The general conclusion from this research is the confirmation of the parallelogram model of memory development (A.N. Leontiev, 1931). However, since mediated memorizing in the stage of the acquisition of means is less effective than direct memorizing, a more appropriate model would be that of a parallelogram with two 'tails' representing the stage of interiorization of operations with mnemonic means.

Keywords: direct memorizing, mediated word memorizing, a parallelogram of memory development, replication of A.N. Leontiev's research.