Секция «Когнитивная психология»

Ethno-cultural differences in higher mental function (on the example of space perception)

Багратиони Константин Амиранович[1], Евпак Евгения Геннадьевна[2]
1 - Институт психологии РАН, Москва, Россия; 2 - Национальный исследовательский университет «Высшая школа экономики», Москва, Россия
E-mail: sau_ko@mail.ru

The hypotheses of the present research are based on Vygotsky's conceptions: space perception, as a lower mental function is universal for all individuals (it contains the invariants of world models) and as a higher mental function varies among peoples (different semiotic mediation of higher mental functions, as Europeans and Arabs use various cognitive models of written language).

The empirical basis of the research is represented by the examination data of 60 students (30 Europeans and 30 Arabs) of the Peoples' Friendship University of Russia, aged 19-24.

Research techniques: tests on the perception of realistic images, picturesque specimens.

Results: students from Arab world used the direction of the space perception vector “from right to left” strategy to a greater extent (83.3%). Students from Europe mostly (76.6%) used the direction of space perception vector “from left to right” strategy.

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The new proposed research incentives and perspectives are represented by another phenomenon of synesthesia: studies of space perception by professional musicians enrolled for learning score [3,7] following techniques (containing invariants for absolute pitch ability [1] possessors focus group and relative pitch ability possessors [1, 5, 6] control group) determining the sound perception as a complex process comprehending both lower and higher mental functions, with its linkages to natural mechanism of binaural hearing as a particular example of space perception, from one hand, and its mediated correlation with score following as a phenomenon of visual perception [4] and fast reading techniques, from another hand.

The empirical basis of the new research shall be represented by the examination data of 80 students (40 with absolute pitch and 40 with relative pitch) of Moscow State Conservatorium and Gnesin Academy, aged 19-24.

Research techniques: test on perception of regular scores of popular classical orchestral music listed as curriculum for the students of 1st and 2nd grades of higher cultural education institutions.

Hypotheses: students with absolute pitch may have lower speed of score reading due to priority of audial perception of sound signals, rather than visual perception of notation in the score.

Goals and objectives of the new research may include studies of semiotic mediation and stimulus for switching between the score reading (scanning) and analysis techniques in the process of anticipatory hearing in “G” and “Do” [4, 5] key scores.

Current task upon the research is elaboration of adequate metrics to interpret the results of the tests. Scales may include such parameters as “reading speed”, “interpretation latency”, “error ratio”, etc. Also, it's important to make a de-briefing for students participated in the experiment by checking their anxiety level before and after the experiment.

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