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# **INNOVATIVE DEVELOPMENT OF SCIENCE AND EDUCATION**



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# PSYCHOLOGICAL SCIENCES

## THINKING ABOUT SOME ASPECTS OF TYPOLOGIES STUDY IN PHYSIOLOGY AND PEDAGOGY

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**Introduction.** Brain functional asymmetry represents unique human being feature as a species [1, p.1-474]. This aromorphosis in phylogenetic development proves interhemispherical interaction processes big significance for adaptive behavior specifically-human forms cerebral organization. Unfortunately education system in its majority is directed to left hemisphere development [2, p.1-256]. There is a consideration that only left-handed teacher should teach left-handed pupil or student for his/her educative, scientific and artistic potential discovery and development in the biggest possible extent, his/her best health, natural and social adaptation reaching due to his/her needs, psycho-physiological and psychological peculiarities understanding much better than right-handed teacher can do. Sinistrality represents asymmetry populational-species level and there is a tendency to sinisters amount increase in a human population in different countries. There are “left diseases” [3, p.1-58] and left-handers have weaker natural and social adaptation. It requires attention to them, in part in pedagogical process. Only 5% of left-handers are real (born by both left-handed parents), 95% represent hidden or forced and unreal left-handers [4, p.98-102].

Temperament characterizes only character inheritant peculiarities such as emotionality, sensitivity, activity and being energetic [5, p.1-192].

The student as a human being of a definite age and as a personality can be characterized from psychological (in part temperament), sociological (in part nationality) and biological (in part higher nervous activity type and constitution) sides [6, p.1-544].

**The work aim:** determining the interhemispherical asymmetry individual profile and Eysenk's questionnaire indices in the UMSA Iranian students.

**The works tasks:**

1. To assess the interhemispherical asymmetry individual profile among the UMSA Iranian students.
2. To assess the temperament type in the Iranian students.
3. To assess the extra-introversion type among the Iranian students.
4. To perform survey on sinistrality character determining among left-handed students from Iran.
5. To perform surveys on „favorite” and the most successful educating methods from the teachers' side and the students' own dependently on interhemispherical asymmetry individual profile and temperament of the examined Iranian students.

**The investigation methods:** 1) interhemispherical asymmetry individual profile assessment methods by Luria (dominant extremity, dominant finger, dominant eye, the Napoleon's pose, the probe with applauding) [7, p.1-368]; 2) Eysenk's questionnaire for the students' temperament and extra-introversion assessment [8, p.1-288]; 3) survey for sinistrality character (real, hidden or unreal) determining and for „favorite” and the most successful educating methods from the teachers' side and the students' own.

**The work results and their discussion.** 35 sinisters (70%,  $p < 0,05$ ) and 15 dexters (30%,  $p < 0,05$ ) at 42 hidden sinisters and 1 ambidexter presence were among the Iranian students. The melancholics were prevalent and the phlegmatics were absent among the Iranians-sinisters. The phlegmatics were absent at the other temperament types equal distribution among the Iranians-dexters. 50,0% (25 people) extraverts and 50,0% (25 people) introverts were among the Iranian students.

99% of left-handed students were complaining about limit in time given for the tasks performing. These data correspond to the literary ones that sinisters mustn't be given any time limit and that as a whole time given for the same task must be more for left-handed person than for the right-handed one [9, p.1-232]. Their brain is directed to one thing dominant for him/her at the moment. May be because of sinistrality dominance in males whose brain has such a peculiarity due to testosterone action [10, p.1-431]. 95% of left-handers were visuals and preferred colored multimedia presentations, tables and few texts. Such manuals for "lazy students" and for left-handed students were created in Moscow in Physiology in Russian and English [11, p.1-200]. At the same time, right-handers did not pay so much attention to the way of the information presenting. On the other hand, left-handers should use different colours in their notes to emphasize and underline the main while it is not of crucial importance for right-handers. Next, we mentioned about necessity not to hurry the left-handed person up. Writing velocity is less in sinisters than in dexters. In part it is so because they must not link the letters in words together (there is a good advice to the left-handed children parents not to teach their off-springs to do this). It is so nice if the lecture deliverer is able to record the lecture/s information to flashes or other information electronic sources and give it to the left-handed students. Left-handed students can be better in foreign languages. It is very important in Bolon's educating system. But not all foreign languages are similar to them: for instance it is difficult to remember Arabic and Persian alphabet to non-careers of Arabic and Persian because the letters are seemed to be very similar. It is difficult to differentiate the similar and to unite letters for left-handers because their brain can not analyze, can not make deduction. Right hemisphere dominant in left-handers has not successive but has simultant pathway of information processing. Its ways of work are induction and synthesis comparatively to left hemisphere dominant in right-handers which applied operations are deduction, split, analysis. It determines and explains the fact that 99% of left-handed pupils of any age are bad in tests where it is necessary to choose one or some correct answers id est to split, to analyze. They don't like tests and the teachers must not pay the attention to tests marks so much in them while



assessing the left-handed students. And again we would like to mention that writing the tests by left-handed pupils and students needs much more time comparatively to it performed by the right-handed ones. American teachers have introduced tests system first and have refused from it first because 95-98% of all the Americans are left-handed. They proposed clinical tasks where left-handed person will unite, will synthesize knowledge received from various topic of one subject, from different subjects while demonstrating not only intradisciplinary but interdisciplinary integration as well, while uniting theoretical knowledge and clinical thinking. Clinical Physiology is considered to be as a separate academic discipline nowadays [12, p.1-432] which goal is to create link between fundamental subjects such as Normal and Pathological Physiology and clinical academic disciplines.

All Iranian students demonstrated deep knowledge up to such an extent that could be the teachers on some topics, used very wide interdisciplinary integration between Biology, Chemistry, Biochemistry and Physiology. We had such an experience of being the teacher in one academic dental English group in Medical Biology, Parasitology and Genetics at the 1<sup>st</sup> course of study, Physiology and Biological Chemistry at the 2<sup>nd</sup> course. Such students demonstrated especially high level of common-biological knowledge (some of them from Iranian college on the base of Shahid Beheshti University) and interdisciplinary integration especially ambidexter who was good both in tests, and oral answers, at the lessons and at the conferences while having 56 printed works and diplomas when a student in UMSA.

We found out following peculiarities of the students belonging to different temperament types. Choleric had passion while studying but the exhaustion velocity was rather big. Sanguinics demonstrated high adaptability. Foreigners and even left-handers sanguinics possessed the best natural and social adaptation among all temperaments. Good results were only if the lessons and activity type were interesting for the students. Phlegmatics showed good results at durable work which was seemed to be exhausted for people with other temperaments but phlegmatics could not react adequately in sudden, rapidly-changed situations. They were distinguished by very strong memory but expressed difficulty to refuse from their

stereotypes and weak adaptation (both natural and social). Melancholics students were differed by necessity to the most durable and often rest, especially the left-handed ones.

Sanguinics need in telling the concrete aim to them, phlegmatics and melancholics students – in boasting (especially the second ones). If you criticize melancholics (especially left-hander and especially the student from foreign country) do it especially accurately and only tet-a-tet. Choleric students need very quiet speaking of the teacher. It is of crucial importance especially concerning to the foreigners. Also like sanguinic students choleric need concrete tasks. We think that if to demonstrate activity possible results to choleric students the education effects will be much better. All-temperamented students from Iran needed their activity positive assessing.

**Conclusions.** Thus, such human typological aspects as interhemispherical asymmetry individual profile and temperament indeed should be taken into account in pedagogical process especially of foreigners. Belonging to human typologies contribute to students physiological and psychological peculiarities.

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