

Physical Development And Cognitive Abilities

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Introduction

The relation between indicators of the physical development of the adult person and his cognitive abilities is studied. (Piaget, 1952) Strength, speed, flexibility, and balance are studied as indicators of physical health. Parameters of creative thinking are measured as intellectual indicators, including flexibility, originality, ingenuity, and others. The correlation analysis is carried out. The existence of authentic relations between the powers to the coordination of movements and some indicators of divergent thinking (its flexibility and efficiency), as well as ingenuity, is shown in the process of task solutions by adults. Student age is a period of pronounced changes aimed at the development of the individual, the realization of social potential, and individual abilities. Educational and professional activity at this age is characterized by a high dynamics of development of intellectual abilities, has a great influence on the formation of the psyche and psychophysiological qualities, and promotes intellectual formation.

In connection with the technology of the life of society, the increase in the flow of information, the acceleration of the pace and rhythm of life, and the load on the sphere of the human psyche increases, which leads to a decrease in physical and mental performance. These processes are especially traced among the younger generation and young people who spend a lot of time communicating on social networks, which leads to a passive perception of cognitive information without objectifying the specific goal of personal development. In turn, through the game of chess, you can form a new type of personality – purposeful, initiative, pragmatic, and creative, with a certain life position and worldview.

Analysis

The parameters of physical development used at this stage are too “rude” (height, weight, learning to walk) in order to directly affect the intellect. If there is a connection, it is much thinner. Thinking as a particularly complex form of behaviour” spoke of the motor nature of all thought processes. He maintained that “every thought connected with motion causes in itself some preliminary tension of the corresponding musculature, expressing a tendency to be realized in movement. He also stressed that the stronger and tighter the thought, the clearer and more complex its motor nature. The most clearly linking the motor abilities of a person with intellectual development is manifested in the transition of the senior preschool and primary school age. Namely, it is connected with the readiness

of the child for school. This is due to the fact that it is during this period that psychological neoplasms form in all spheres of development: cognitive, personal, and social, which are the foundation for the further full development of man. (Erikson, 1968) Also, at this age, it is an intensive process of developing the motor functions of the child, and there is clearly pronounced psychomotor progress. Begin to enter into the system of higher cortical levels of organization of movements.

All this has undeniable significance for the general mental development of the child. There are quite a few criteria for assessing whether a child is ready for school or not. For our study, the most interesting is the approach that placed emphasis on the degree of formation in the child of the fine motor skills of the hand- the ability to perform small complex movements by hand. Within the framework of this direction, a well-known test for determining the readiness of the child for school has been created – an indicative test of the school maturity of Kern-Jirasek. It is interesting that this test was considered by its authors as a technique that studies the intellectual development of a child. The test includes three tasks: “drawing a male figure, copying text, and copying letters. However, as noted by I.V. Dubrovina: “All three tasks of this graphic test are aimed at determining the development of fine motor skills and coordination of vision and hand movement. These skills are necessary for the school to master the letter / ... /. Y. Yerasek conducted a study to establish the connection between the success of the performance of the school maturity test and success in further education. It turned out that children coping well with the test, as a rule, are good at school, but children who do not cope with the test can do well at school. It is interesting that the formation of fine motor skills can fairly successfully predict the intellectual development of the child.

Physical education, in general, promotes the all-round development of the child; he noted the important role of physical exercises in the development of sensations, and primarily musculoskeletal; mental operations, which are particularly fruitful in sports exercises, games; memory, especially motor, which constantly trains when memorizing movements. And intellectual development can, later become the basis for the development of spiritual abilities. And, finally, there is proof “from the contrary”. As we already mentioned above, everyday consciousness objects to the existence of a connection between good physical development and high intelligence. However, no one denies the obvious – the relationship between physical underdevelopment and mental retardation. Almost always, the violation of intelligence in a child is combined with abnormal development of the motor sphere, the formation of which is inseparable from the knowledge of the world, the mastery of speech and work skills, in most cases, almost all characteristics of the motor sphere (strength, endurance, flexibility, .p.).

Conclusions

First, there is a relationship between the intellectual and physical development of an adult. The existence of this relationship is emphasized by many researchers, beginning with Farmhand, which is confirmed by the existence of correlations between the level of physical and mental development of a person (for example, parallel mental and physical acceleration of children in the 20th century, the

diagnosis of fine hand mechanics in determining intellectual readiness for school). Differences in physical abilities (flexibility, speed, accuracy, balance) of mentally retarded children and their normal peers are widely known. Secondly, we established a correlation between the integral ability to coordinate movements (balance) and some indicators of divergent thinking (flexibility and productivity), as well as the overall verbal productivity in adults (part-time students). With more developed coordination of movements, the indicators of flexibility and productivity of thinking are higher. This pattern can be used to develop training and special classes aimed at developing thinking through training physical abilities.

References

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