Independence of Children and Youth in Motor Activity

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Abstract—Independence of children and young people in motor activity is inextricably linked with activity, which is the most important condition determining physical and mental working capacity. The attraction of children, adolescents and young people to do physical training is an important component in forming a healthy lifestyle. The development and further improvement of organized forms of physical training and active individual physical exercise are both very important. The study of the phenomenon of independence in motor activity makes it possible to draw the following conclusion, namely independence is one of the leading volitional qualities of individuals. This quality is displayed in the ability to set a certain goal, persistently pursue its fulfillment on their own, take responsibility for their activities, act consciously and proactively not only in a familiar environment, but also in new conditions that require non-standard decisions.

Keywords—indispendence, activity, children, youth, preschoollers, students, need, habit, motor activity

I. INTRODUCTION

Many progressive thinkers have said about the need for the development of independence in different age periods of a person.

A. Diesterweg [1] wrote that “no one can be taught anything, you can only help to learn something; only by organizing students’ self-activity, helping them to acquire knowledge themselves from the proposed material, we can contribute to their successful learning”.

In the recent years, the problem of children and young students’ independence in the educational process has become one of the core problems of didactics. In their research works, the authors distinguish between cognitive independence [2,3], mental independence [4-6], organizational and technical [7] ones, etc.

The interest in the problem of independence and activity primarily lies in the fact that “…the desire for independence is peculiar to small children. This is an internal need of a growing organism, and it is necessary to maintain and develop it” [8].

Scientists are still discussing such a problem as at what age and what form of independence a child shows and what behaviour of a child can be considered independent. Some scientists believe that true independence is peculiar only to an adult, a mature person. Others consider independence to be a developed quality of a personality, manifested already in adolescence; the third group of scientists believes that six-year-olds already show great independence.

Researchers think that as a component of an individual’s ability, independence is an ability to state reasons for certain actions, i.e. the choice of behaviour [9]; an ability to independently implement structural units of activity [10]; an ability to plan, organize, regulate and actively carry out his / her activities without constant external guidance and assistance [11]; an ability to correlate his / her aspirations and opportunities, to adequately assess the process and the result of his / her activities [12].

II. THEORETICAL CONCEPTS OF THE RESEARCH

Independence is an ability to see, pose and solve a new question or problem by himself / herself [13, 14]; organizational skills; an ability to foresee the consequences of his / her actions and behaviour of other people, to plan his / her activities [15]; an ability to find something to do, to defend his / her point of view, without being stubborn, if he / she is not right [16].

Prerequisites for independence are created approximately when a child is two or three years old, when he begins to move relatively freely over short distances.
and, to some extent, can already independently satisfy some of his needs. Moreover, he begins to seek for meeting his needs within his family and other social groups, for example, within a game group, i.e. begins to join social relations.

Available scientific data [12] show that if the conditions of upbringing and education are optimal, by the end of the senior preschool age, children can reach a considerable degree of independence in different types of activity, namely in games, labour, learning and communication.

The indicators of senior pre-schoolers’ independence are a desire to solve problems without other people’s assistance, an ability to establish a goal of their activity, do elementary planning, implement a plan and get a result that is adequate to the goal, as well as an ability to show initiative and creativity in solving emerging problems.

It can be said that the independence of a pre-schooler, which is considered as a desire and ability of a child to persistently solve activity tasks that are relatively independent from an adult, mobilizing existing experience, knowledge, using search procedures, is a significant factor in social and personal maturation and readiness for school education.

If we compare the independence of six or seven-year-old children, then it is clear that the older ones show it differently; its character and orientation are different than those of three-year-old children. The initiative and independence of six-seven-year-old children are much more diverse. Their independence is displayed in planning and unravelling plots of complex collective games, in an ability to independently perform a difficult and responsible task entrusted to their group. The increased independence of children is reflected in their ability to evaluate the work and behaviour of other children.

A distinctive feature of the independence of children of the older group is its organization. Children of senior preschool age are able and know how to use their own initiative to carry out the task assigned to them or conceived by them better and faster in accordance with the requirements of adults.

The independence of pupils is shown, first of all, in the need and ability to think independently, in the ability to cope with a new situation, understand a question, a problem and find their solutions. It is displayed, for example, in the ability to analyse complex educational tasks by themselves and get on with them without assistance. Pupils’ independence is characterized by critical thinking, an ability to express their own point of view, independent of the judgment of other people.

There are such external signs of pupils’ independence as planning their activity by themselves, performance of tasks without direct teachers’ participation, systematic self-control over a course and result of the work carried out, its correction and improvement. The inner side of independence is formed by the need-motivational sphere, the efforts of pupils aimed at achieving a goal without any assistance.

According to psychologists [17], the motives for the manifestation of independence among schoolchildren of different ages are different. Younger children, showing independence, use it as a means to achieve private goals. Adolescents take independent actions in order to emphasize that they have a right to independence. At the same time, they take a position of maximum independence, namely they seek to assert their independence more than it is really possible. Moreover, even in the case of giving independence to a teenager, he is still not satisfied.

The desire to test themselves, to test their capabilities is a motive of high school students for manifestation of independence. This desire already exists in adolescents who want to be like adults and therefore prove themselves in ‘adult’ affairs. Hence their desire for self-fulfilment of tasks will be manifested to a greater extent, if, from their point of view, this task is prestigious for adults.

According to A.K. Osintsy [18], independence begins with imitation, which requires initiative, aspiration and desire. The action of this mechanism is supported by the synergistic participation of natural mechanisms that sustain and reinforce imitation; feelings of sympathy, empathy, emotional support, interest are added to them. Then the mechanisms of ‘transfer’ and representation begin to appear, they are complemented by mechanisms of anticipation. Later an intense test of their capabilities begins. Variability research mechanisms and improvement mechanisms follow after that. At the highest stage of this process, elements of creativity are introduced.

Therefore, the measure of child’s independence is characterized primarily by the predominant mechanism mediating his activity, i.e. imitation, transfer, representation, etc. In adolescence, the formation of mechanisms of activity awareness is completed. And self-consciousness (cognitive and regulatory aspects of self-consciousness are most represented in reflection) can both develop and improve, helping to find a solution of complex problems, or ‘stop’ in its development as an insufficiently significant mental formation.

The procedure of complex development of pupils’ independence in the course of physical education, studying the problem about how to develop skills of self-mastering physical culture values by younger pupils, forming the foundations of an independent health-improving activity as a part of educational process in physical training, etc. are of theoretical and practical interest.

Modern studies say that it is necessary to analyse the problem of developing the independence of children and
youth in educational institutions; these studies provide scientific and practical recommendations which help to successfully solve tasks that educational institutions are entrusted with. But, at the same time, they have not devised a pedagogical system for developing the independence of children and students, which represents a unity of methodological, theoretical and methodical foundations, and provides continuity in developing independence in the motor activity of children and students.

Another important aspect in solving this problem should be highlighted, i.e. the development of independence in the motor activity of children and youth is inseparably connected with activity.

Activity is a necessary factor that ensures the adaptation of the body to environmental conditions and thereby its survival.

Activity is an active state of an individual, characterized by a desire for learning, leadership role, independence, manifestation of volitional efforts in the process of acquiring knowledge and skills.

According to experts [19], activity by its nature is a purely biological phenomenon. This is a manifestation of the energy inherent in a healthy body and acting in the form of action needs. Through actions an exercise is performed, and hence there is a development of those organs and systems which are involved in this activity. In research works on activity there are different forms of its manifestation, namely imitative, performing, initiative, or creative ones.

Personality activity undergoes a complex historical and ontogenetic evolution. So, the child has the most developed motor and motor-speech activity at an early age, up to three years. Cognitive activity comes to the fore at preschool age. Cognition at this age is predominantly emotional and figurative in nature and is based on great curiosity, inquisitiveness of a child, and this in its turn contributes to the development of the creative activity of an individual.

All basic forms and types of human activity are formed in ontogenesis. E. Erikson [20] identified eight stages of the individual psychological development of a person and considered the characteristic features of activity manifestation at all of them.

The fourth and fifth stages of human development, which will allow us to identify the characteristic features of activity at both of them, are of concern for our study.

The fourth stage of middle childhood (from 5 to 11 years) is characterized by the desire for achievements, the development of cognitive and communication skills.

The fifth stage is a stage of puberty, adolescence and youth (from 11 to 20 years). At this stage adolescents try to understand what to be and who to be, actively search for themselves and choose their roles in life [21].

The subject field of activity study is very wide.

Motor activity is the most important condition for the vital activity of the organism; it determines health, physical and mental capacity, and creative longevity of a person.

According to A.G. Sukharev [22], the concept of ‘motor activity’ includes the sum of movements made by a person in the course of his life. In childhood and adolescence, motor activity can be divided into 3 components, namely activity in the process of physical education; physical activity, in which children and youth participate when being trained, doing socially useful work; spontaneous physical activity in their free time. These components are closely related.

The analysis of children’s motor activity allows V.A. Balandin [23] to make the following conclusions: a) when preschool children leave the kindergarten and begin to go to primary school, they suffer from shortage of independent and organized motor activity and this problem is not solved at home; b) the attitude of 6-10 year-old children to sports activity identified by studying the regularity of doing physical exercise testifies that there is a decrease in the amount of motor activity when children leave the kindergarten and begin to go to primary school, and when they begin to go to secondary school leaving the primary one; c) since the age of eight, children of both sexes give priority to comprehensive or children’s sports schools for going in for sports; d) as children grow up, the number of those who prefer to study independently increases.

V.A. Balandin [23] suggested various methods of stimulating children to do motor activity, namely active forms of agitation and propaganda; improvement of sports facilities; providing students with plenty of opportunities for choosing different types of physical activity; increasing emotionality and attractiveness of physical education and sports events; assessing level of physical and motor (technical) readiness of children, taking into account their individual development; including all children in extracurricular sports activities.

Ya.S. Vainbaum, V.I. Koval, and T.A. Rodionova [24] have come to the conclusion that schoolchildren who are not involved in sports or other additional forms of physical education demonstrate the lowest level of physical activity. It decreases very sharply in the first form. The level of locomotion of first-form schoolchildren is 30-40% less than that of their peers who do not attend school. The level of daily motor activity decreases among high school students during the final exams at school, and among high school graduates when they prepare for entrance examinations to a university.

In this regard, for the harmonious development of a person, motor activity training should become an integral
part of the education process in educational institutions and the family, since the timely development of motor activity influences the development of mental processes, and this in its turn contributes to mental development.

III. PURPOSE AND METHODS

A. Purpose of the Study

The main goal is to study independence and activity of children and youth in motor activity, to identify the levels of independence development; as well as to assess if needs and habits to do physical exercise are formed.

B. Research Methods

The purpose and objectives of the study make the authors to use a wide arsenal of mutually testing and complementary methods adequate to the nature of the phenomenon being studied, that is methods of theoretical analysis (comparative, retrospective); diagnostic methods (testing the level of independence development, assessing to what extent needs and habits to do physical exercise are formed, etc.); methods of mathematical statistics.

The analysis of the scientific and methodological literature allows us to devise such diagnostic techniques as ‘Assessment of the level of independence in motor activity’, ‘Identification of the type of motor activity’, ‘Level of forming the habit to do regular physical exercise’, ‘Level of forming the need to do regular physical exercise’ [25].

The study was conducted in several stages:

1) Theoretical and experimental study of the problem of forming activity and independence in motor activity.

2) Study of the level of independence in motor activity, the level of forming the habit to do regular physical exercise, the level of forming the need to do regular physical exercise of schoolchildren and university students.

3) Systematization, integration and discussion of research results.

In order to analyse the level of independence in motor activity of 7-20 year-old respondents we conducted a study.

Pupils of secondary schools No. 2, 5, 14 of Birobidzhan from the 1st to the 11th forms and students of Sholom-Aleichem Priamursky State University took part in the research.

Respondents were offered the techniques devised by the authors and adapted to their ages, namely ‘Assessment of the level of independence in motor activity’, ‘Identification of the type of motor activity’, ‘Level of forming the habit to do regular physical exercise’, ‘Level of forming the need to do regular physical exercise’ [25].

The analysis of the level of independence in motor activity (Table 1) shows that this level is not high among schoolchildren of 1-4 and 5-8 forms. Most students have an unstable interest in physical culture. They seldom do physical exercise, they are almost not interested in sports events, and they do not use sports equipment in independent motor activity. This indicator is 53% for schoolchildren of 1-4 forms, and 67% for schoolchildren of 5-8 forms. The majority of students of 9-11 forms (51%) do not show any interest in physical culture, have little interest in sports events and do not want to participate in them. Among students this indicator rises to 55%.

Unfortunately, the percentage of respondents who demonstrate a high level of independence decreases from 26% (primary school age) to 8% (student age). They show interest in physical education, know how to organize independent classes, attract others to join their activities; they are often interested in sports events, watch sports events and participate in them, and also use sports equipment in independent motor activity, know outdoor games, like to play them and can organize a game with friends, show initiative and creativity, can take responsibility for actions and deeds.

| Levels | 1-4 forms | 5-8 forms | 9-11 forms | 1-5 years of study at the university |
|--------|-----------|-----------|------------|-------------------------------------|
|        | n = 600   | n = 610   | n = 540    | n = 584                             |
| High   | 26        | 13        | 8          | 8                                   |
| Average| 53        | 67        | 41         | 37                                  |
| Low    | 21        | 20        | 51         | 55                                  |

The analysis of the level of independence of motor activity in the ontogenesis shows that among schoolchildren of 1-4 and 5-8 forms, as well as among schoolchildren of 9-11 forms and university students the level of independence is almost the same.

The study of the level of forming the need to do regular physical exercise (Table 2) shows that all respondents demonstrate a low level. We can observe a tendency for this level to increase from 50% to 77%.

| Levels | 1-4 forms | 5-8 forms | 9-11 forms | 1-5 years of study at the university |
|--------|-----------|-----------|------------|-------------------------------------|
|        | n = 600   | n = 610   | n = 540    | n = 584                             |
| High   | 3         | 8         | 3          | 7                                   |
| Average| 33        | 42        | 30         | 16                                  |
| Low    | 64        | 50        | 67         | 77                                  |

This category of respondents understands the importance of doing physical exercise, but does not have a desire for systematic physical training. 16-42% have an ability to do physical exercise, and only 3-8% have a need for regular physical training.

When forming skills, it is necessary to develop appropriate habits. The latter is very important because the
habit is not only a skill, but also a need, a desire to perform certain actions. Development of habits, as well as formation of skills, requires a certain understanding of what is being done and multiple systematic exercises.

The study of the level of forming the habit to do regular physical exercise shows that all schoolchildren of 1-8 forms demonstrate an average level.

This indicator decreases among schoolchildren of 9-11 forms and the level is below the average (56%). Among university students this indicator is 54%.

The study also shows that among respondents who have a level above the average, this indicator decreases from 23% in 1-4 forms to 16% in 5-8 forms, to 12% in 9-11 forms and to 11% among students. This tendency can be explained by the decrease of the need for motor activity with the increase of years.

IV. RESULTS AND DISCUSSION

Human need for motor activity, as well as such a need of animals, is innate. However, throughout ontogenesis motor activity changes in a wave-like manner.

Having reached the first peak at the age of 2-3 years, motor activity gradually decreases, and, girls’ activity decreases faster than boys’ one. According to N.M. Ledovskaya [26], the average volume of locomotion among 5-7 year-old children is 7.1-9.0 km for boys and 6.4-7.7 km for girls. However, afterwards, motor activity increases among schoolchildren of 8-9 forms.

The results of experimental studies by A.S. Chesnokov, K.M. Smirnov, A.G. Shchedrin [27] show that the volume of average daily motor activity is 13.9-15.8 thousand steps among 13-15 year-old schoolchildren. In 9-11 forms, according to A.S. Chesnokov [27], motor activity decreases again. Thus, the average daily volume of the locomotion of tenth-form schoolchildren is 10.4-12.3 thousand steps. It is 19-28% lower than the volume of the locomotion of seventh-form schoolchildren.

Yu.N. Chusov and V.A. Skovorodko [28] have found that adults’ motor activity continues to decrease with the increase of years.

The decline in interest in physical culture is caused by factors that prevent from improving health, namely medical state, lack of time, long school day, lack of will, lack of knowledge and skills, fatigue at school, just laziness [29, 30].

his survey reveals that the majority of schoolchildren (from 36% to 44%) think that ‘lack of time’ is the main factor that prevents them from going in for sports; ‘a long school day’ was chosen by 8-25% of schoolchildren; ‘lack of will’ by 0-15%; ‘lack of knowledge and skills’ by 0-6%; ‘school fatigue’ by 0-25%. The factor ‘just too lazy’ was selected by 1-5% of schoolchildren, except schoolchildren of 8-10 forms; 14-15% of them chose this factor.

Students cannot go in for sports because of medical state (14.3%), lack of time (50%), long university day (7.1%), lack of will (39%), fatigue after university day (14.3%), just laziness (7.1%). The same factors are chosen by university respondents in research works of different scientists.

V. CONCLUSION

The analysis of scientific literature makes it possible to define independence as a mental state of a personality, a multifaceted quality of a person manifested differently in various life situations, an integral expression of many emotional and intellectual features of a person, of orientation and will, the result of a large internal work of a person, his ability to set not only individual tasks, goals, but also to determine the direction of his activity, a method of performing activities used by the child to solve organizational and technical problems assigned by the teacher, an ability to perform actions of varying degrees of complexity without any assistance, an ability to stop an unwanted action in time, change its orientation, subordination of behaviour to their own views and beliefs.

The study of the phenomenon of independence in motor activity makes it possible to draw the following conclusion, namely independence is one of the leading volitional qualities of individuals. This quality is displayed in the ability to set a certain goal, persistently pursue its fulfilment on their own, take responsibility for their activities, act consciously and proactively not only in a familiar environment, but also in new conditions that require non-standard decisions.

Solving questions on the development of independence, it should be remembered that the development, according to L.S. Vygotsky [31], is a process of forming a human being as a personality. This process concludes in the emergence of new qualities specific to the person at each stage of his development; they are prepared by his evolution, but not contained in a ready-made form at earlier stages. According to the author, the development takes place by adopting historically developed forms and methods of activity.

Independence of children and young people in motor activity is inextricably linked with activity, which is the most important condition determining physical and mental working capacity.

Motor activity is an essential component of the lifestyle and behaviour of children and young people, it is determined both by socio-economic conditions and the level of society culture, and by the organization of physical education, as well as individual and typological features of higher nervous activity, physical characteristics and functional features and capabilities of schoolchildren.
According to experts, age-related changes in quantitative indicators of daily motor activity are genetically determined and are a biological feature of a growing organism.

The analysis of the level of independence in the ontogenesis of motor activity shows that among schoolchildren of 1-4 and 5-8 forms, as well as among schoolchildren of 9-11 forms and university students the level of independence is almost the same.

It is revealed that the need for physical activity among males is higher than among females. This is confirmed by a study conducted by E.A. Sidorov [32], who identified students having high, medium and low physical activity at physical training lessons. In all forms (from 1st to 10th), there were more boys among highly-active schoolchildren, and in some forms more girls among low-active schoolchildren.

The results of experimental data of E.P. Ilyin [27] show that low physical activity in childhood becomes a habit to adulthood, and such a person finds many reasons not to increase his motor activity through, for example, physical training.

The attraction of children, adolescents and young people to do physical training is an important component in forming a healthy lifestyle. The development and further improvement of organized forms of physical training and active individual physical exercise are both very important.

Therefore, the development of independence of schoolchildren and students in motor activity requires close attention and study of the basic conditions for its development.

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