REALIZATION OF A HEALTH SAVING EDUCATIONAL TECHNOLOGY «IN-MOVEMENT EDUCATION» IN ELEMENTARY SCHOOL

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Abstract

Topicality of the research is conditioned by the need to improve the children’s physical, psychological and emotional health by their involvement into active educational forms combining studying and physical movement activities. The aim of the study is to determine the ways of a health saving technology «In-Movement Education» in elementary school. Work Results. Health saving technology «In-Movement Education» is a methodological complex, serving the aim of recreational and educational activities, realized gradually, in dynamics of studying material acquisition based on both «child-mother (father)» and «pupils-teacher» relations. Above-mentioned technology ameliorates educational environment, stimulating new knowledge acquiring, motivating creating thinking and making students fulfill already known exercises in a new order. Conclusions. Health saving technology «In-Movement Education» presupposes intellectual, emotional and physical activities alteration, in individual, pair and group forms. This stimulates children’s mental processes, enhancing their physical movements, timely prevention of their brain fatigue, develops their responsibility by means of game situations creation and challenging integrated classes.

Key words: educational technology, in-movement education, elementary school, pupils, personality-oriented studies.

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детьми, яка реалізується послідовно, в динаміці розкриття змісту навчального матеріалу з опорою
на взаємозв'язок "ребенок—мама (папа)", так і "ученик—учитель". Технологія "обучення в діяннях"
сприяє створенню таких умов образовальної середовища, які стимулюють усвідомлення нових знань,
сприяють розвитку ініціативності для творчого вибуття, побудову членів до виконання
законодавних ім відомостей в новій послідовності. Висновки. Здоров'яодержання технологія "обучення в
dіяннях" просигнальзує змінення діяльності, перетворення інтелектуального, емоційного
та двигунного їх видів для індивідуальної, парної, групової форм роботи. Це стимулює виникнення
детей, сприяє розширенню их двигунної активності, зв'язаному з присутністю умовної усталості,
розвиває відповідальність за рахунок створення гри на ситуацій, нестандартних
інтегрованих уроків.

Ключові слова: технологія, обувення в діяннях, начальна школа, учні, личностно
орієнтоване навчання.

**Introduction.** Happy childhood, happy parents, flourishing country – all this means healthy children,
who combine good physical state with high intellectual and moral standards. Lately physical state of the
body has been spoken about more frequently not only as an abstract social phenomenon but also as
characteristics of individuality [4; 12; 19; 20]. The system of physical upbringing gives foundation to the
mechanism and impact results of the systemic exercising on intellectual development and cognition activity,
on the feelings and social behavior development, morality and spiritual demands [1; 5; 7; 11; 18].

Complex situation of the pedagogic, medical and social tasks can contribute to the improvement and
strengthening of children health accounting for their individual peculiarities in different age periods.

Contemporary conceptual grounding of physical upbringing consists in forming of person’s movement
entity, which is formed in mastering of movement skills for reaching of the definite result in running,
jumping and throwing. But all the results do not show the level of pupil’s individuality with his interests,
needs and goals. The process of physical upbringing does not take into account the fact that the indexes of
power, endurance and mastery are not only the interior factors which are far from being determined by the
inner psychological and physical state of a child. At the same time the child’s development and his health is
to be taken up in its correlation with his intellectual and social activity, his personal and individual
characteristics.

The development of children, their health improvement, creation of the conditions for rational day
planning, regular correlation between physical and mental loading is performed on the ground of
individuality-oriented approach to the upbringing process. The principal value of the individuality-oriented
approach is a child, his physical and common to all mankind culture. From this goes the essence of physical
upbringing as a activity, which concerns and develops a child, stimulating his harmonious development.

The aim of individuality – oriented upbringing lies not only in forming of self-perfection mechanisms,
but in their search, support for personal qualities in the interaction process with other people, in confronting
with nature, culture and civilization.

This approach is aimed at the revealing of the child’s interests, at the need of individual assistance in the
search for the potential, inner and physical reserves; moreover, it gives every child an opportunity for being
realized, found and acknowledged in the social context.

Learner-centered educational process takes into account not only individual peculiarities of pupils, but
primarily consists in their attitude towards them in the process of education and upbringing as individuals,
responsible and conscious actors. «Without seeing in the pupil something valuable and interesting, inherent
only to him, the teacher, in fact, cannot bring up a pupil, because in this case the teacher has no point of
support for human contact with his student», – notes I. Kon [10]. Educational situations of learner-centered
physical education should ensure the development of such level of consciousness that would encourage the
child to self-knowledge of physical condition and physical self-activity, so that he or she could become the
creator of his or her own spiritually rich, healthy life. Therefore, it is necessary to cultivate situations in
which the relations of teachers and parents with children are based on taking into account not only their
dignity and the right to be a person, but also physical abilities.

Learner-centered physical education of primary school age pupils must be carried out in two directions:
the first is mainly the socialization of the pupils’ personality, which takes into account the needs of the state
and aims at the maximum physical adaptation of the child in society; the second is aimed at maximizing the
disclosure of the person's physical abilities and child's assets, taking into account individual peculiarities of
growth and development, the main interests of certain types of sport and physical activity, the level of
psychological and physiological, and motor capabilities of organism.
Understanding the content of physical culture classes allows the teacher to manage purposefully the mastery of knowledge and skills, that is the process of self-improvement. After all, physical culture is transmitted through skills and knowledge, and is absorbed through the content. The quality of knowledge, skills and abilities is one of the criteria for the student's personal development. It should be appreciated that the psychological and pedagogical moments of development in physical education are influenced by the object of activity. The approach in which physical development and the formation of child’s health is not only a goal, but also the process and the result of purposeful interaction of teachers, parents and pupils, that is, educators and pupils.

The key tasks of a modern educational institution involve not only mastering the study program but also consolidating the school material while meeting the claims of children’s cognitive, aesthetic and motor development in order to maintain their healthy condition in general as well as to build up a harmonious and intellectually and physically developed personality. Considering that most cases of the child’s physical deviations (such as defect in bearing, scoliosis, vascular dystonia, neurosis, gallbladder ailments, shortsightedness clinical behavior, etc.) are linked to the great mental load as well as the decrease in amount of motor activity, one of the alternative approaches to remove children’s tiredness and exhaustion and to enhance the potency of the curricular material mastering is the health sustaining technology of ‘teaching in motion’.

The research aim is to indicate the ways of implementation of the health sustaining technology of ‘teaching in motion’ in the elementary school.

**Methods.** The research methods are the ones of analysis and synthesis applied to generalize the theoretical grounds of the research issue; the methods of abstraction and generalization used to define the influence of educational factors on the technology that is suggested; the method of modelling applied to test the guidelines of implementation of the ‘teaching in motion’ technology and to substantiate the efficiency of the suggested procedure.

**Results and Discussion.** The research results demonstrate that the health sustaining technology of ‘teaching in motion’ is a system of methodical approaches that are subordinated to the goal of children’s health improving and educational in-class training which is being implemented gradually through the dynamic exposure of the content of the school material within the frame of ‘pupil-mother (father)’ and ‘pupil-teacher’ relations. The technology promotes creation of such conditions of the educational environment that encourage learning new knowledge in the process of the educational and motor technologies’ implementation and fosters originating the hyped-up moments in class when the impulse of creative thinking may urge the pupils to do the familiar actions in a different order.

Health-saving technology «learning in motion» involves a change in the activity, alternation of its intellectual, emotional and motorized types for individual, dual, group forms of work, which stimulates the instantaneous thinking of children, promotes the spread of their motor activity, timely prevention of mental fatigue, teaches friendly and humane communication, develops patriotic responsibility in the team, ability to respect the thoughts and mistakes of others through the creation of game situations, non-standard integrated lessons.

One of the real approaches to solving this problem may be the creation of the «School of Health» on the basis of a comprehensive school in which the modular method is used to perform the tasks. This feature allows us to determine the stages of formation and management of the «School of Health», based on the following measures:

- diagnostics and introspection of the psychophysiological state of schoolchildren, teachers and parents;
- modelling educational environment, its organizational, methodological and content components;
- a special mode of motor activity;
- formation of individual correction programs.

The main purpose of modern education is the formation of a fully developed personality, which has not only a high level of knowledge and skills, but also a high potential of creative, moral, physical, psychological development and health. The effectiveness of the influence of the health-educational environment, the continuity between educational units depends on the timely assessment and consideration of the set of many factors that can be determined in the dynamics of the monthly, semester, academic year, with the help of a system for assessing the effectiveness of health education or monitoring of health and development of the pupil’s personality. Such a system has been developed and implemented through the «Diary of Health
Promotion». This monitoring is a real health monitoring tool and an objective criterion for age-related development of children. It is characterized by the following benefits:

- is affordable and reliable, does not require additional material costs for special equipment and large space for execution;
- provides an opportunity to assess the personal level of health, physical development, mental status, school performance and emotional attitude towards specific school subjects;
- helps to determine and measure your biological age in relation to the calendar (passport).

The implementation of the «Diary of Health Improving» into the system of education and training of junior pupils makes it possible to assess objectively the dynamics of educational and health work in the «school-family» system, the influence of integrated training technologies with a wide spectrum of directed recreational activities at the lessons in accordance with the content and peculiarities of the taught information in various general subjects, the level of experience of a supervisor, a teacher of physical education, singing, rhythmic, the whole teaching process at school with the effective implementation of a healthy lifestyle into the life of pupils and teachers.

With the help of the «Diary of Health Improving» one can solve the following tasks:

1. To raise the personal interest of each child in checking and subjective assessment of his physical and mental condition, as well as to stimulate self-improvement by means of physical education.
2. To involve children and their parents into leading a healthy lifestyle.
3. To satisfy everybody’s natural need in physical activity.
4. To obtain a comprehensive assessment of the pupil's physical preparation for training in the corresponding form.
5. To correct with the help of worked out sets of physical exercises for the violation of posture, feet and general level of physical preparation.

One of the main problems of education is the gap between physical training and other types of schoolchildren’s activities. The possible reason for this is the lack of real mechanisms for the interrelation of cognitive and motor activity. The essence of such interaction is the formation of an integrated educational, recreational and general educational effect of education. However, in a modern school, these components are implemented separately.

Scientists [3; 6; 14] has long come to the conclusion that individual abilities (thinking, perception, imagination) should not be considered in isolation, without the context of the child’s motor development. Game activities refer to normal conditions for the manifestation and development of children's abilities during studying, communicating with other children. A typical example is the quick and easy process of teaching immigrant children a foreign language, who during a conversation with their peers in a month of living in another country, obtain a large supply of words and more often become translators for their parents.

Psychologists [3; 15] believe that information is remembered quicker if the child not only hears, but also sees, figuratively imagines what she has heard, against the backdrop of gaming or any motor activity, which is considered to be a certain emotional background and mood. Based on these concepts we have worked out a system based on the educational pedagogy of cognitive-motor learning. Gaming situations in the system of cognitive-motor learning raise children’s interest, create and enhance interactions with the information that pupils get at a lesson in a particular subject. It is worth noting: the content of the material being studied is accompanied by motor actions of a certain structure, which helps to simulate the image-association of knowledge in parallel with the information provided by the teacher, in particular, on the essence of the topic of a particular subject, which contributes to the acquisition of knowledge. The transfer of knowledge during the didactic game makes it possible to use not only the conscious memory of the child in work, but also the intermediate associative thinking between the motor and mental processes.

It’s better to remember and understand the information when a person is standing or moving, and the most optimal is background motion activity, which is supplemented by associations (figurative-motor perception). In the system of cognitive-motor learning, the activity of a child improves the qualitative perception of incoming information. When installing on a conscious memory of the basic plot of the game involuntary reproduction of new material in the memory at the lesson is imposed and the child's desire to recreate motor actions that mean the correct answer.

Involuntary memorization is observed in a mobile didactic game and, due to the motor activity and physical exercises of a specified structure, the mental fatigue is mitigated, vision and posture are corrected,
the respiratory function and the emotional state of a junior pupil are improved. I. P. Pavlov [13] noted, «Associations are very important for the process of memory and thinking as their key factor».

Cognitive-mobile learning has a direct impact on children’s mental abilities. Children try to make use of them at the very beginning of a game, so as not to screw over their team (the row in which a pupil sits in a classroom), or their prestige before friends during mobile games in the gym, corridor, etc. The effect depends on the professional skills and creativity of a teacher, namely, on the rules of the game he suggests, its organization, the distribution of roles or the development of the plot.

The development of child’s thinking is clearly manifested in his/her activities. I. M. Sechenov [16] wrote, «Thinking at the time of movements is of great importance for the development of brainwork». Thus, the flow of nervous impulses gets into the cerebral cortex and increases tonus, promotes the update of content in the process of muscle activity.

The optimization of mobile activity in General Studies classes, organized due to the didactic material which pupils process, is the key point to their normal mental and physical development. Differentiated application of mobile instructional techniques in accordance with the tasks of mathematical or linguistic didactic material, as well as the change from the cognitive activity types into the mobile ones, allow to achieve active linguistic activity (regardless of the native or foreign language) not only in the process of games, but also in everyday situations. There is a close link between pupils’ auditory perception, linguistic and mobile reproduction during the game activity with the elements of the correlation between mathematical solutions, language and movements.

Each lesson should be started with the maximal intake of breath and the holding of it up to 20 s, and at the time of expiration it should be loudly counted ‘21, 22, 23…’. The duration of the calculation is directly proportional to the degree of fatigue, that is, the day of a week, the complexity of a subject and the order of a lesson in an academic school day.

It is extremely important to perform such breathing exercises after a teeming activity (it calms nervous system, slows children behaviour down, performs lungs hyperventilation, and increases blood circulation).

The application of additional exercises during lessons can vary, depending on the teacher's professional skills, his/her imagination, etc.

At the maths lesson:
- all learned numbers can be memorized not only during writing in the notebook, but also by the movements of the shoulder joints (the task: write the numbers 1, 2, 3 ... with the help of shoulders), or «write» them with the help of the nose in the air? It removes fatigue from the cervical and thoracic spine, which are the most statically loaded while sitting at the desk;
- to train in motion the speed of thinking during the reinforcement of mathematical operations (addition, subtraction or multiplication table), in conditions of competition between rows (task: standing between the desks, each team starts the game from the first pupil, who invents his case, and the next solves it and continues game with his own case, turning to 180 ° and clapping hands to the next. For example, 5 + 5 = 10; 10 – 2 = 8; 8 + 5 = 13; 13 – 3 = 10; and so on, the team that wins the game has to solve all the examples by all the pupils in a row.

At the lesson of the Ukrainian language:
- to reinforce the spelling of the letters, apply spelling by their shoulder joints and nose in the air;
- to display each learned letter in the form of improvised motions;
- to reinforce the parts of speech and develop the speed of thinking, you can apply the game «Recognize a part of speech»; each row of pupils raise only when they hear their part of speech: the 1st row - noun, the second row - adjective, the third row - verb. The teacher reads a familiar verse, and the pupils respond accordingly to their parts of speech. A team that has fewer mistakes will win.

At the reading lesson:
- for each correct answer the student has the right for additional movements - flanges, squatting, etc.;
- if the child that was called to the board moves correctly with the bag on the head, maintains a good posture during the response, and the bag does not fall from his/her head, then the student has the right for encouragement.

It should be noted that all of these movements do not require any additional time, because during the answer pupils do not wait until the previous one completes the movements, they begin to answer.

This methodological approach prevents mental fatigue and, ultimately, aids in solving educational and health improving problems. The advantage of this approach is that the methods and means of physical education are utilized not as the factors inhibiting the student’ motor activity, but as the efficient tools contributing to the integration of learning and cognitive skills. The students’ motor activity tailored as an interplay of didactic materials and specially designed physical and breathing exercises along with a directed
activity do not only provide a timely removal of mental and static muscular fatigue but also stimulate the central nervous system and improve the muscular-articular sensitivity and raise the students’ awareness of their body orientation in space. The students are trained to recognize images and symbols, to identify shapes through a generic similarity and a specific dissimilarity. Besides, the motor activity of the students makes it possible to reveal the typological and combined characteristics of physical objects.

The efficiency of a health improving and educational process depends upon a target-directed impact of a teacher. It must be underscored that its qualitative consequence is invariably a system of attitudes to ones own level of physical condition and health, the motor and functional potentialities of a human body and mind, the students awareness of themselves as unique individuals and their attitude to what they are doing. Of great importance in this case is the choice of the adequate tools of impact.

The teachers tend to regard, erroneously, the methods of a targeted health strengthening and educational job, however, is the methods by which the foundation of health improving and educational job, however, is the methods by which the conditions of organizing a teacher-student interaction are created. This is done during a comprehensive school class taught with an emphasis on integration of educational and health improving strategies. Under the circumstances, the interaction between teachers and students is an outgrowth of their joint life-sustaining activity over the same period of time, which brings about an automatic (or, more precisely, inevitable rather than coercive) formation of a set of attitudes towards the generation and development of the students’ stable motivation efforts to improve health by means of physical education.

**Conclusion and Prospects of Further Research.** The health saving technology of «teaching and learning in motion» is a continuing methodological techniques implemented in the classes of physical skills, trigger the student’s creative thinking and urge them to do familiar things arranged in a new sequence. This goal is accomplished sequentially and dynamically in terms of defining the teaching and learning activity and an alternation of its intellectual, emotional or motor types during the students’ individual, pair or group work. This approach spurs the students’ instant thinking, provides means for their motor activity, helps their body orientation in space. The students are trained to recognize images and symbols, to identify shapes within a framework of a game situation or an innovative integrated lesson.

The health-saving «teaching and learning in motion» has been designed to provide a change of mode of activity and an alternation of its intellectual, emotional or motor types during the students’ individual, pair or group work. This approach spurs the students’ instant thinking, provides means for their motor activity, helps to secure a timely prevention of mental fatigue, moulds the skills of friendly and humane communication, and develops the student’s sense of responsibility and teaches the students to respect the opinion of others within a framework of a game situation or an innovative integrated lesson.

Further research is focused on the implementation of the devised technology in preschool educational institutions.

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