

INNOVATIVE APPROACHES OF UNDERSTANDING HEALTH SAVING TECHNOLOGIES IN CONDITIONS OF UPDATED EDUCATIONAL CONTENT

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Abstract: The article discusses the issues of innovative approaches to the introduction of health saving technologies in terms of new educational content. The authors propose a solution to the problems encountered by participants in the educational process with the help of health-saving technologies. New content of education requires the application of new value orientations and strategies of health-saving technologies.

Keywords: Health saving technologies, Updated educational content, Value orientation, Education strategies, Physical state, Students' psychophysiological characteristics.

1 Introduction

The 2017 Report on the Situation of Children in the Republic of Kazakhstan, prepared by the Sange Research Center by request of the Ministry of Education and Science of the Republic of Kazakhstan, the following strategic measures that demonstrate major positive changes in the use of health saving technologies in the education system are noted:

- the range of normative legal acts on the protection of the rights of children has been expanded;
- the interdepartmental collaboration has been activated;
- population growth has stabilized, about 400 thousand babies are born annually;
- the growth of incomes of the population increased the percentage of financial security of the subsistence minimum;
- the availability of social support such as fertility stimulation, increasing the prestige and authority of mothers of many children, support for families with disabled children, support for low-income families, etc. (1)

According to sociological polls of the population of Kazakhstan, 79% of parents note that their children do not have health problems and evaluate their health to 4.5 points out of 5 possible, 13% of children indicate that when they are ill, their parents do not pay any attention to it, 4% of children say that they have never been ill, and 84% of children say that they trust their parents in their treatment, while 72% of children do not always receive medical care and for 5% of children, medical assistance is not available due to the absence of any medical assistance. (2)

Thus, the state support of the population is carried out in accordance with the strategies of the country, but the existing problems orient teachers-researchers to all emerging issues of applying health saving technologies in the process of training and education in the educational system.

The following subjects have been introduced as part of the renewal of educational content:

- Natural History and Information and Communication Technologies and the new content of the discipline Learning the World for elementary school;
- Introduction to Science in grades 5-6;
- History of Kazakhstan will be studied in parallel with the World History from the 5th grade;
- integrated subject Mathematics (Algebra + Geometry)

Also, in high school there will be a choice of subjects and, most importantly, in our opinion, the introduction of a trilingual learning model, subjects of natural and mathematical cycles will be studied in English and therefore English is included in the program from grade 1. And such subjects as Kazakh Literature, History of Kazakhstan and Geography will be studied in the Kazakh language, and World History in Russian regardless of the language of instruction.

The process of introducing the updated content of education in the school is purposefully implemented, however, there is a perception that it has become more difficult to study, as a survey of parents of primary school students (1-4) of secondary school No. 11 in Almaty showed the following results (Figure 1).

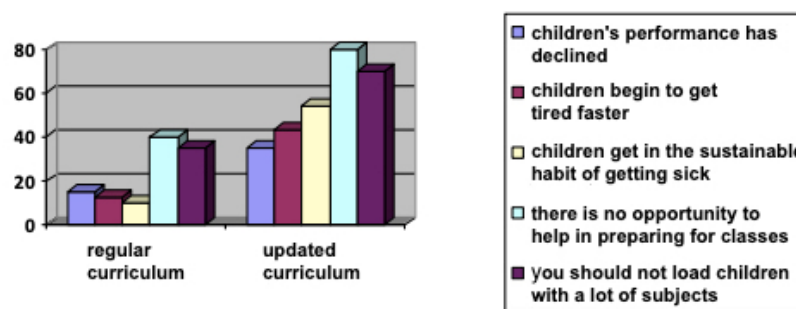


Figure 1. Parents' Satisfaction with Teaching Children with the Updated Educational Content

As the Figure 1 shows, parents who are actively involved in the child's life experience difficulties because it is difficult for them to help with assignments and therefore they believe that it's impossible to study subjects in different languages as part of the implementation of updated educational content. Training according to the updated curriculum, according to parents, entails various diseases, disorders, and a decrease in children's academic performance.

A survey of school teachers showed different opinions on the introduction of updated content, the majority accepted the update as a way to improve new professional skills (61%), other

teachers (43%) complained that they were not ready to update the content of education, others (19%) did not see the perspectives of children to learn under the new content of education.

All these problems that arose in the process of introducing the updated content of education in all schools of Kazakhstan, despite the training of teachers, for example, up-skilling of teachers (2016 - PC for 10 programs, 2017 - 25 programs), still require the readiness of children to learning. And an important place in the system of teaching children in school is occupied by the use of health-saving technologies.

2 Materials and Methods

It is known that health-saving technologies in the education system are especially significant because, as mentioned above, students experience difficulties in moving to the updated content of schooling: firstly, teaching in three languages requires enhanced visual attention and perception; secondly, information overload affects their emotional state; thirdly, the new knowledge assessment system baffles parents and students accustomed to concrete and understandable assessments; fourthly, the applicable nature of certain objects, despite their interest in them, is still quite difficult, because it requires the presence of such qualities of mental activity as breadth and depth of mind.

In addition to the above-mentioned difficulties for students, the following reasons such as environmental hazard and social tension are quite objective. On the issue of environmental hazard, it should be said that, by the nature of the impact on a person, they are divided into harmful and traumatic. In the last decade, environmental pollution in many regions of the Earth has caused a sharp increase in diseases of the population, increased child mortality and impaired psychophysical development of the younger generation. (3) Social tension is such a state of social consciousness and behavior when a person comes to the realization that the satisfaction of any needs is threatened or the specific situation of perception and assessment of reality becomes impossible. (4) In such a situation, children have dissatisfaction, apathy, pessimism, fear, etc.

From the point of view of modern psychologists, in order to preserve the mental, psychophysiological and physical health of students in school, it is necessary to use health saving technologies. Psychological and pedagogical literature traditionally distinguishes three subgroups such as organizational and pedagogical, psychological and pedagogical, and educational technologies. Organizational-pedagogical technologies help prevent states of overwork, sedentary lifestyle, and other desadaptative states; psychological and pedagogical technologies associated with the direct work of a teacher with children and provide psychological and pedagogical support of the educational process; educational technologies are aimed at organizing training on taking care of one's health and developing a culture of health among students.

Traditionally, it is customary to single out the following principles for the introduction of health-saving technologies such as the complexity of the usage of health technologies, taking into account the state of health of students, the structure of the educational process, the conditions of training and education; continuity of recreational activities throughout the year; the use of non-drug means of recovery, the widespread use of agents that stimulate the body's defenses; implementation of activities to increase motor activity, mental health-care, as well as to improve the health of children with functional disorders and chronic diseases. (5)

Innovative approaches to the use of health-saving technologies in the context of updating the content of education should be holistic and systematic. There are 7 known principles of health-saving education such as "no harm", "the priority of effective health care", "the triune notion of health", "continuity and succession", "subject-subject relationship with students", "conformity of consciousness and the organization of training age features of students", "a combination of protective and coaching strategy".

In terms of introducing updated content of education in secondary school, the principle of priority of effective health care for students and teachers is, in our opinion, clearly seen in the presence of long-term, medium-term and short-term goals for studying subjects, in such way long-term goals orient the student and teacher to understand the approaches and ways of their joint activities, which means the preparedness of the participants of the educational process to the procedure of long-extensive training. Such a mindset to the implementation of intellectual, physical and psycho-physiological learning opportunities

requires careful preparation of the teacher for choosing health saving technologies, for example, directed to the teacher's constant attention to the student's correct posture and constant support understanding of correct posture for students that leads to a comfortable perception of knowledge, i.e., the student will not often get tired and overworked with a healthy back.

Important, in our opinion, is the understanding by participants in the educational process of the triune notion of health, this postulate must be clearly followed by the school administration, teachers, but also, importantly, each student is obliged to monitor their own health. (6) From this point of view, the preservation of the physical health of students is a primary task of the school; here, measures aimed at preserving health should be traditional, for example, a comprehensive study of students' health, continuous monitoring of the health of children with a weak or weakened state.

So, in practice at school we introduced a monitoring system not only of general health indicators, but also conducted constant monitoring of changes in physical health after, for example, physical education classes, determined how much different physical education classes affect the student's general condition, how weak they are not only in physical condition but also in matters of tension, anxiety, emotional and cognitive perception of knowledge in subsequent lessons.

In the presence of deviation after physical education lessons, in the form of a breakdown or, on the contrary, a state of emotional arousal, we offered the teacher various exercises with health-saving technologies to support the general condition of children. We have proposed school administrations a quarterly examination of children by general practitioners with a view to identifying the physical health and physical abilities of schoolchildren in order to attract them to active sports activities. (7, 8)

The use of health saving technologies to determine the psychophysiological state of children should be continuous, which means that every lesson introduces elements of health protection, for example, when studying Natural History in elementary school, aimed at developing skills in design and research activities, the ability to understand the causes of investigative relations, the formation of a holistic vision of the surrounding world, the child's general idea of his uniqueness as a living and contemplating and In turn, the teacher is focused on the organization of group work, taking into account the age characteristics of the trainees.

An important factor in personal development is considering the principle of combining protective and coaching strategies, which is how effective the learning environment is in terms of the level of the study load, the degree of responsibility for one's health, and the presence of control on the part of parents and teachers. The following problems should be solved at school:

- the organization of proper nutrition of schoolchildren during their stay in an educational institution;
- prevention of harmful effects on students' health factors directly related to the educational process (prevention of school diseases);
- protection and promotion of mental health of students (prevention of school stress, distribution of bad habits, addictions, etc.) among students;
- the formation of a culture of student health and competence of teachers in matters of health and health-saving technologies;
- organization of cooperation with parents of students on the issues of preserving and strengthening the health of their children.

Mental health of children in the context of the introduction of updated education curricula requires closer attention from scholars and teachers since the transition to a new system for assessing students' knowledge causes perception difficulties, not only among students but also among teachers and parents. The traditional assessments are replaced by new forms of assessment

such as formative and summative. The continuity of formative evaluation, on the one hand, provides the teacher with a timely adjustment of learning strategies; on the other hand, without special training, it is difficult for the teacher to adequately carry out the evaluation. For students who are used to getting specific marks for the work done or the task, it becomes psychologically difficult to build a process of mutual and self-assessment in such a system. Students begin to feel dissatisfaction, which is directly related to the self-esteem of the child's personality, which can be deflated, inflated and reasonable. (9)

Summative evaluation is a way to identify students' intellectual and cognitive growth. The problems of not understanding the process of summative evaluation are to determine the quality of the material studied by students and the willingness to apply this qualitative knowledge in practice.

Health saving technologies used in school should be focused on high consciousness, developed thinking, greater inner and moral strength, encouraging creative activities and the creation of peace of mind and adequate behavioral responses.

3 Results and Discussion

The student's educational environment is all that encompasses it in the learning process, all that it interacts within this process. Characteristics of the health of the student's educational environment can be viewed as an organization of the educational space at all levels, at which high-quality education, development, education of students is not accompanied by damage to their health. (10) As a result, for the formation, preservation, and strengthening of these components of single human health, health saving technologies are introduced into the activities of an educational organization, which help to solve the most important tasks such as saving the child's health, accustoming him to an active healthy life. Health-forming educational technologies are all those psychological and pedagogical technologies, programs, methods that are aimed at educating students of a culture of health, personal qualities that contribute to its preservation and strengthening, forming an idea of health as a value, motivating a healthy lifestyle. (11) When introducing health saving technologies into the educational process, which involve a set of pedagogical, psychological and medical actions aimed at protecting and ensuring the health of students, the formation of their value-related attitude to their health, the health of the student's educational environment is organized. (12, 13) Health saving technologies include the conditions for a child's schooling (lack of stress, adequacy):

- rational organization of the educational process (in accordance with age, sex, individual characteristics, and hygienic requirements);
- compliance of educational and physical activity with the age possibilities of the child;
- necessary, sufficient and rationally organized motion state.

The educational environment of introducing health saving educational technologies creates the maximum possible conditions for preserving, strengthening and developing the spiritual, emotional, intellectual, personal and physical health of all subjects of education (students, teachers, etc.). (14) Organizing a healthy lifestyle requires the creation of a health saving educational environment in a general educational institution. The educational environment is an environment that consists of elements that have vital effects on students in the process of receiving an education. (15, 16) And it shows integrity, which contains the whole range of impacts on students such as relationships with other participants in the educational process, features of the organization of the educational process, environmental characteristics, etc. Vital needs for a schoolchild are the needs for physical activity, in the mode of the day and change of activity, in proper nutrition, the optimal parameters of physical environmental factors in the needs pyramid, according to Maslow, occupy the lowest level. (17) These are biological (physiological) needs, which must first of all be satisfied. Higher in this pyramid are the needs for security, love, and recognition,

which are always important and for everyone and must also be satisfied in the course of educational activities. In a general education institution, it is necessary to create conditions to meet the specific age-related basic needs of schoolchildren. (18) Based on the needs of students, it is possible to identify the characteristics of the educational environment, important for the preservation of their health. (19):

- the general organization of the educational process (curriculum, class schedule, duration of lessons and changes, etc.);
- learning technologies;
- style of interaction of participants in the educational process;
- the motion state of students;
- sanitary and hygienic conditions of training and education;
- medical care and health procedures during the school day;
- healthy eating.

The algorithm for introducing health saving pedagogy can be represented by the following provisions. (20, 21):

- awareness of the problem with the negative impact of the educational organization on students' health and the need for its urgent solution;
- recognition by teachers of an educational institution of their joint and several obligations for the ill health of students;
- mastering the necessary health saving technologies (gaining competence);
- the implementation of the acquired knowledge and skills in practice, in close cooperation with each other, with the doctors, with the students themselves and their parents. Health saving technologies perform the following functions:

- 1) formative: carried out on the basis of biological and social patterns of personality formation. At the heart of the formation of personality are hereditary qualities that predetermine individual physical and mental properties. Social factors, the situation in the family, the classroom, the orientation towards saving and increasing health as the basis for the functioning of the individual in society, learning activities, and the natural environment complement the formative impact on the individual;
- 2) informative and communicative:

- provides transmission of the experience of maintaining a healthy lifestyle, the continuity of traditions, value orientations, forming a careful attitude to individual health;

- health saving (preventive vaccinations, the provision of physical activity, vitaminization, an organization of healthy eating);
- health-giving (physical training, physiotherapy, aromatherapy, gymnastics, massage, herbal medicine, art therapy);
- fostering a culture of health (optional classes on the development of the students' personality, extra-curricular and extra-curricular activities, festivals, competitions, etc.). (22, 23)

Health saving pedagogical technologies should ensure the development of the child's natural abilities such as his mind, moral and aesthetic feelings, the need for activities, mastering the initial experience of communicating with people, nature, and art. The use of health saving technologies in the educational process allows students to more successfully adapt in the educational and social space, to reveal their creative abilities, and allows the teacher to carry out prevention of asocial behavior effectively through the formation of the health saving educational environment. Thus, the modern concept of a healthy lifestyle defines it as conscious in its need for the constant implementation of the rules to strengthen and preserve individual and public health. The elements of a healthy lifestyle are such as education from early childhood, healthy habits, and skills; safe and habitat-friendly environment, knowledge of the effects of environmental objects on health; smoking cessation, withdrawal from drugs and alcohol; moderate nutrition corresponding to the

physiological characteristics of a particular person, awareness of the quality of the products used; physically active life taking into account age and physiological features; observance of the rules of personal and public hygiene, possession of first aid skills. Formation of a healthy lifestyle in schoolchildren requires the creation of a health saving educational environment in a general educational institution with the help of health saving technologies. (24, 25)

4 Conclusion

The concept of "health saving" refers to the qualitative characteristics of any educational technology, which shows how the implementation of this technology solves the problem of maintaining the health of students. (26)

A systems approach to applying health saving technologies is an awareness of the negative impact of the school on students' health and the need to solve them with the help of health saving technologies from the point of view of determining the value of the learner as a developing personality; mastering the competencies for continuous improvement of educational activities on the basis of gaining experience in using health saving technologies in the class.

A holistic approach means the use of health saving technologies to ensure a healthy lifestyle by creating an environment conducive to improving the health of students, the development of tactics of health and preventive measures, compliance with hygiene standards and training activities.

Health saving educational technologies can be considered as a qualitative characteristic of any educational technology, as a combination of the principles, techniques, methods of pedagogical work that complement traditional technologies of training and education, endow them with signs of health saving.

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