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HEALTH-SUSTAINING ENVIRONMENT OF AN EDUCATIONAL INSTITUTION

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Abstract

The scientific community regards the health-sustaining environment as a cornerstone of modern and future school education. Health is the basic criterion, a sort of "social barometer", demonstrating the value of a human's life for the society. Health-sustaining educational technologies, aimed at formation of positive attitude to the education, help to facilitate the learning process. The proposed article examines organisational, methodological and technological foundations underlying the formation of the health-sustaining environment of an educational institution. The key elements are the following: provision of educational process participants with health-sustaining value orientations; health-sustaining activity and health-sustaining educational technologies aimed at study facilitation and academic overloads removal, which will help to preserve schoolchildren's health, their physical, mental, moral and social well-being. In a modern educational institution, children's health should be preserved and improved by a special service; the experimental work of one of this is represented by the researchers. In the conclusion, the authors propose an operational definition of health-sustaining environment and a possible variant of its formation.

1. Introduction

Urgency/importance of the issue. The prospects of modern civilisation, of its preservation and development, are inseparably linked to the psychophysiological condition of our organisms. Health is the basic criterion, a sort of "social barometer", which demonstrates how viable our community is. It is perfectly clear that health does not only make a person effective and socially integrated – it develops the society itself. The authors cannot help quoting Arthur Schopenhauer, who once noted: "Health so far outweighs all external goods that a healthy beggar is truly more fortunate than a king in poor health".

One of the key negative factors affecting children's health is education. No wonder that it worries people, which makes the problem scientifically challenging.

One of the goals of the national education consists in "finding such ways of educational process organization that would correspond with the age stages of students' psychological and social development", would aim to remove academic overloads and to reveal mechanisms which help to "sustain children's health" (Bazarnyj, 2015).

Until recently, the health-sustaining activity came to nothing more than such measures as the following: sanitation rules, developing physical education, organising school catering and leisure-time activities for boys and girls, etc. At the same time, the most active part of the pedagogical community understands that it is far from enough. The efficiency of the specified aspects is very low.

Educational theorists and pioneering teachers (Bazarnyj, Mukhin, Naer, Smirnov, Sukhomlinsky, and others) have proved that students' health can be sustained much more effectively through the implementation of new technologies. This conclusion gave birth to a robust idea: that of development and widespread adoption of health-sustaining educational technologies (Bashmakova, 2007; Belonovich, 2015; Kolyada, Korovina, Savinova, 2014; Mukhin, 2003; Protopopova, 2014). However, it did not prove to be enough. Teachers were expected to regard health as a value after certain andragogic measures.

The Institute of Aging Physiology of Russian Academy of Education (RAE) has examined the problem. The experts' data show that problems with eyesight and posture, psychoneurological aberrations and pathologies of digestive system become 5, 4 and 3 times more widespread (correspondingly) during school years.

It is well-known that Russian school system has always concentrated on memory development. Such approach caused overloads and hence influenced children's health in a negative way. One may object that their health is also affected by other factors, and this is true.

The unfavourable factors are commonly divided into two groups: those indirectly connected with education and other ones, which are potentially harmful to students' health (genetic predisposition, untoward social conditions, air pollution, and so long and so forth). However, we should note that according to RAE's experts, school educational environment is responsible for 40 % of influences which do harm to young organisms.

The studies conducted by the Institute of Aging Physiology also revealed risk factors that are injurious to children's development and health in schools. They are the following: intensification of educational process, disagreement between methods and technologies, on the one hand, and age-related or functional abilities of children, on the other hand; poor diets of young children and adolescents (particularly in schools); students' immobility at lessons and their low motor activity; breach of sanitation standards within educational process,

the absence of a scientifically grounded system of measures that would promote the value of health and healthy lifestyle. The research questions are aimed at reducing these negative factors by creating a healthier pedagogical environment.

2. Research Questions

The problem in question could be formulated as follows: what is the theoretical substantiation for the creation of health-sustaining environment at modern school in regard with the challenges and risks of informationage?

3. Purpose of the Study

The study aims to explain the organisational, methodological and technological factors underlying the creation of an educational institution's health-sustaining environment and to propose a possible variant of its model.

4. Research Methods

The following methods of research were used: bibliometric method, comparative-correlative analysis, observation, content analysis, extrapolation and modelling, systematisation and generalisation, assessment of discovered tendencies in retrospective and prospective aspects.

5. Findings

In 2001 the federal government initiated an experiment aimed at the development of structure and content of the general education. Since then – during the experiment and after it was finished – health-sustaining technologies have been put into practice in many schools.

In particular, the experience of schoolteacher-innovators was analysed comprehensively, forms, methods, devices, means used by them were distinguished and directed on facilitation of studying the material, elimination of overwork in education and thereafter the health sustainment of students. We searched for the definition for the health-sustaining educational technologies. We give it out below:

Health-sustaining educational technologies are meaningful - technological unit of educational process (complex of forms, methods, devices, means of learning activities) which directed on elimination of overwork in learning, aimed at formation of positive attitude to the education, help to facilitate the learning, allow to study with interest and achieve optimal results without damage to health (Belonovich, 2015).

At the same time, results of this research turned out to be less effective than expected. The researchers came to the conclusion that health-sustaining activity and health-sustaining technologies can't always find the way to the wide pedagogic practice. The reason is unpreparedness of the certain part of pedagogical society to work purposefully and systematically aimed at the health sustainment of students.

It would be difficult to argue with the opinion that "health is an ingrained social value which is accepted at a personal level but does not become a practical value for most people" (Smirnov, 2003, p. 65). To determine a person's behaviour, health-sustaining value orientations should be formed.

The formation of health-sustaining value orientations is not a unilinear process. A comprehensive whole with numerous stages is needed.

Now we would like to describe some elements of such a system developed at the Department of Human Nature Studies Technologies of Pedagogical Academy of Post-graduate Education (today – the Academy of Social Management, the Moscow Region).

- At the first stage, teachers learn about the triple value of health, perceiving it as a trinity of physical, psychological and spiritual components. At the same time, some other positive moments occur: the motivation for health sustention "freshens up", new motives appear, the indicated problem attracts attention and provokes interest;

- At the second stage, the skills of reflection and self-reflection are developed, along with responsibility for one's health and lifestyle;

- At the final stage, the participants start learning to put some elements of health-sustaining principles into practice (Smirnov, 2003, p. 121).

In other words, the formation of health-sustaining value orientations should include two factors: knowledge actualization in the health-sustaining field and promotion of healthy lifestyle.

Therefore, it is possible to state that the problem of sustaining students' health should be solved in three aspects:

The first – the formation of health-sustaining value orientations;

The second – Health-sustaining activity;

The third – the implementation of health-sustaining educational technologies.

All the mentioned factors are interconnected. The practice shows that their essential optimality and practical balance underlie the health-sustaining environment of an educational institution. Such conditions do not only sustain children's health – they make it better.

When creating educational environment, it is necessary to remember that a child's adaptation to the learning process is not the primary aim. It is much more important to consider his / her individual peculiarities in order to make his / her school years emotionally comfortable, interesting and effective (academically fruitful and not harmful for health) (Blair, 1994; Eksperiment po sovershenstvovaniju.., 2002; Steiner, Erickson, Hernandeez, 2002; Sukhomlinskiy, 1979-1980; Tikhomirova, 2013; Ulanova, 2015).

Health-sustaining environment of an educational institution is regarded as the system of organizational, didactic, medico-valeological, socio-cultural, administrative, material and technological factors which are aimed at the preservation and improvement of school children's physical, mental, social and spiritual health; as the complex of health-improving, prophylactic and correctional measures harmonizing adaptive abilities of a child with the current social reality (Bazarnyj, Mukhin, Smirnov and others).

So we single out three relevant aspects: the formation of health-sustaining value orientations, the implementation of health-sustaining educational technologies and health-sustaining activity. To make them work for preservation and improvement of students' health, educationalists should elaborate an action programme including the following structural issues: medical and psychological support; a complex of health-sustaining educational technologies; teacher-training methods of using health-sustaining technologies; organization of events promoting healthy lifestyle among school children; correction and rehabilitation work with medically challenged boys and girls; a range of skills and abilities concerning self-regulation of emotional state, self-control in stressful situations; regular and systematic health monitoring, etc. Each of the issues

implies multipurpose work allowing the subjects of the educational process to learn certain methods, technologies, skills or abilities which help to sustain students' health (Hart, 2001; Nader, 1990; Parsons, Stears, Thomas, 1995).

In a modern educational institution, children's health should be preserved and improved by a special service. It can have different names in different schoolhouses: "School Health-Assisting Council", "School Health Service", "Medico-psycho-pedagogical Service", etc.

This service involves teachers (including a tutor), psychologists, speech therapists and pathologists, a school doctor, a nurse, consulting specialists from medical, sports-and-fitness and other institutions and organisations. As a rule, this service is responsible for the development of the above-mentioned complex programme which aims to preserve and improve students' health.

Now we will review the stages of health-sustaining environment formation in the educational institution.

Lyceum "Intellect" situated in Balashiha (a town in Moscow Region) has been experimenting with health-sustaining environment for several years. During this period, the school has worked out, perfected and tested a methodological system which allows rationalising the pedagogical process, optimising the volume of educational content and introducing the most productive learning and upbringing technologies.

In this paper, we are examining a segment of this model designed by Tatiana Davidkina, a highly qualified teacher. She bases her methods and approaches on the English language learning experience, which has been accumulated within health-sustaining environment (The other subjects are taught analogically).

The first stage of the research implied organisational moments, methodological and technical support of the educational process for each grade in each classroom.

The designed matrix provides a teacher with urgent comprehensive information about the formal components of education. It saves his / her time and contributes to higher professional results.
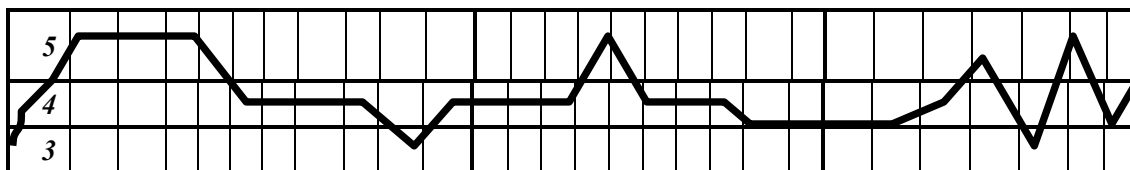
At the second stage, we compared three kinds of educational programmes. Our comparative analysis conforms to the following:

- The educational standard of the main educational programme.
- The programmes providing for the enhanced learning of the English language.
- The programmes providing for the advanced study of the English language.

So three analysis parameters were chosen: topics, grammar, ZUNs.

The third stage was aimed at the perfection of data analysis methodology which detects the level and the quality of education. The vertical structure of the results' table includes the core components of the second stage, while the horizontal one represents three levels of education quality which correspond with the marks "5", "4" and "3". A teacher indicates a student's current level by putting a point in the results' table. At the end of the academic year, all these points form a diagram that shows a student's success in a subject (and, specifically, in each module / unit / theme), gives more freedom in correctional work, as well as in the planning of pedagogical tactics and strategy. Thus, the level and the quality of his / her education is demonstrated (See: Figure 01).

Figure 01. The level of the student's education quality.

The results of the diagnostics help to reveal individual potential of a child and his / her optimal working conditions (the programme and the level). The histogram based on this diagnostics allows increasing the quality of education in a more efficient and differentiated way.

The thematic systematisation becomes the basis for optimised thematic planning, which includes the following structure units: thematic scale; types of work; quantity of academic hours planned for a topic in accordance with the programme and the teacher's opinion.

By optimising all types of work and introducing new technologies, including IT, on a large scale, the teachers working in the Lyceum are able to save some academic hours for overload elimination; correctional work; a preliminary study; minimization of homework, etc.

An optimised thematic planning realised in the Lyceum is the basis of continuous educational programmes describing the required pedagogical process from the first to the last (11th) grade. The peculiarities of such programmes are characterised by succession, integration, optimisation and differentiation of the educational content, which makes effective teaching possible on all the three levels which were mentioned above.

The formation of a health-sustaining environment of an educational institution is largely dependent on such constituent as complex self-analysis of educational activity by the teacher.

A teacher can implement complex self-analysis of various topics and lessons by himself, before studying on this options:

- The name of the topic. Grade. Date.
- A number of lessons on this topic in a program.
- The place of the lesson in a general system of lessons on this topic.
- The topic of the lesson.
- The type of the lesson.
- Tasks of the lesson.
- The structure of the lesson.(its steps).

- Prognostication of the levels (knowledge, abilities, skills) according to the individual characteristics of students.

- Selection of the optimal methods, devices, means of education on the each step of the lesson.

- The organisation of control and self-control at each step of the lesson.

- The determination of the level of KAS and its accordance with the each step of the lesson.

- Correction of KAS based on the analysis.

Thus the analysis, prediction, and coordination and correction of learning activity before work are embodied, which allows a teacher to be the basic subject of control of his own activity. Such approach to the analysis of work completely excludes stressful situations, the role of self-education and openness in teaching and educational process of the teacher increases.

The main advantage of complex analysis is an analysis of educational activities from the position of health-sustainment on the following directions:

- the atmosphere and sanitary conditions in a classroom;

- the number of types of learning activities;

- the average duration and the frequency of alternation different types of learning activities;

- use of methods intensification of initiative and creative self-expression of students, the role of these methods in the structure of a lesson;

- the place and duration of using of technical means of education (in accordance with hygienic norms);

- minutes of physical activity and other healthy moments at lessons, their place, content and duration;

- the presence of questions on health and healthy lifestyle in the substantial part of a lesson;

- the presence of motivation to the learning at a lesson;

- the presence of emotional releases at a lesson;

- the consistency of a lesson, time students spend at educational work.

The analysis of appropriate topic is worked out by the same scheme.

Education in the conditions of formation of a health-sustaining environment in educational institution suggests abidance of following conditions:

- Consistent work on formation of pragmatic attitude towards health as a value;

- Systematic analysis of learning material aimed at detection of its optimal volume, determination of the rational methods and ways of its mastering;

- The realisation of requirements of health-sustaining technologies, used during each lesson.

- For many years in the Lyceum, the monitoring of the health of the students has been realising. It is not reduced, and for some indexes even improves. And it cannot but inspire optimism.
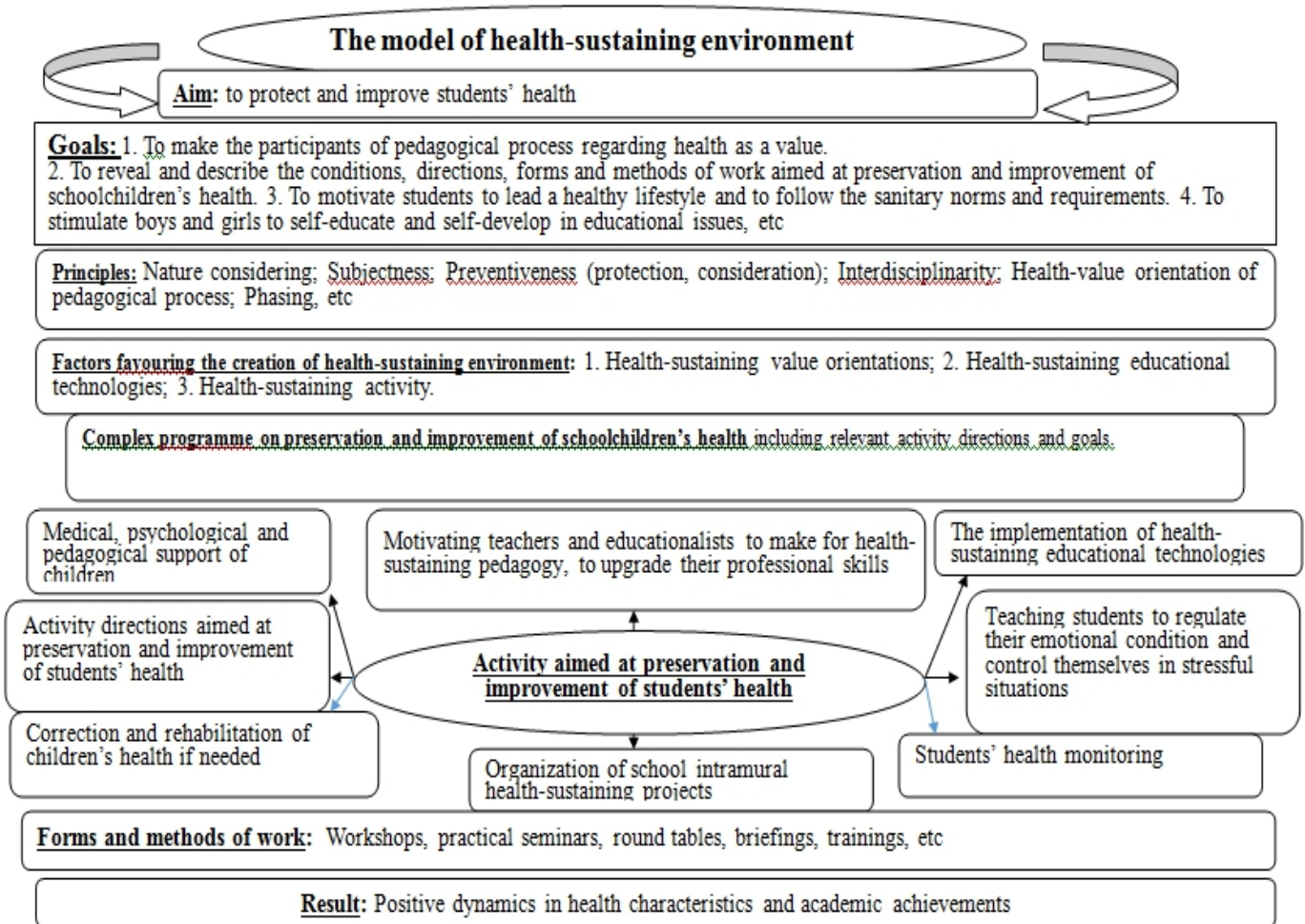
The model of health-sustaining environment

Aim: to protect and improve students' health

Goals: 1. To make the participants of pedagogical process regarding health as a value.
2. To reveal and describe the conditions, directions, forms and methods of work aimed at preservation and improvement of schoolchildren's health. 3. To motivate students to lead a healthy lifestyle and to follow the sanitary norms and requirements. 4. To stimulate boys and girls to self-educate and self-develop in educational issues, etc

Principles: Nature considering; Subjectness; Preventiveness (protection, consideration); Interdisciplinarity; Health-value orientation of pedagogical process; Phasing, etc

Factors favouring the creation of health-sustaining environment: 1. Health-sustaining value orientations; 2. Health-sustaining educational technologies; 3. Health-sustaining activity.

Complex programme on preservation and improvement of schoolchildren's health including relevant activity directions and goals.

Medical, psychological and pedagogical support of children

Motivating teachers and educationalists to make for health-sustaining pedagogy, to upgrade their professional skills

The implementation of health-sustaining educational technologies

Activity directions aimed at preservation and improvement of students' health

Activity aimed at preservation and improvement of students' health

Teaching students to regulate their emotional condition and control themselves in stressful situations

Correction and rehabilitation of children's health if needed

Organization of school intramural health-sustaining projects

Students' health monitoring

Forms and methods of work: Workshops, practical seminars, round tables, briefings, trainings, etc

Result: Positive dynamics in health characteristics and academic achievements

Figure 02. The model of health-sustaining environment.

6. Discussion

The formation of the educational process in accordance with the proposed Model, with its paradigm, exerts a positive influence on schoolchildren's health and studying. In particular, the following results were achieved:

- All subjects of educational process developed a more pragmatic attitude to health;
- The understanding of a healthy lifestyle by students and teachers became more profound;
- All subjects of educational process demonstrated better health characteristics;
- Students showed higher academic achievements;
- Behavioural risks threatening health reduced;
- Parents began to give more support to the development of schools' health-sustaining environment.

Though certain success was achieved, preservation and strengthening of school children's health are still urgent topics, which may subside for a while but are always sure to "inflame" with renewed vigour. In particular, such discussions are focused on the following aspects:

- Interpretation of health-sustaining environment.
- Preferable characteristics of a health-sustaining environment of the educational institution.
- The educational system and students' health.

- The role of the state, society, mass-media and business in the preservation of young people's health, etc. (Bazarnyj, 2015; Hart, 2001; Parsons, Stears, Thomas, 1995) Smirnov, 2003; Stears, 1998).

7. Conclusion

It is possible to state that the creation of health-sustaining environment brought the Lyceum closer to the federal goal – the preservation and improvement of young people's health. Hence, boys and girls changed their attitude to the school-leaving certificate. Now they regard it not only as a document confirming their secondary-level education but also as a "material evidence" proving that they can take care of health – their own and that of the others. As Socrates said, "Health is not everything, but everything is nothing without it".

In conclusion, we would like to propose a variable model of a health-sustaining environment of the educational institution.

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