Health-saving competence of future primary school teachers: indicators of development

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February 10, 2020
Abstract The research revealed an increasing interest of scientists to the problem of formation of health-saving competence of future primary school teachers. This tendency is due to the need for a social inquiry to modernize the training of future educators, to improve the individual areas.

Authors of research developed an experimental test of the formation of health-saving competency of future primary school teachers. Achieving this goal involves the analysis of the state of development of a particular problem in pedagogical theory and practice. The study systematized the physical, social and mental health life skills that contribute to the formation of a person's health-saving competence.

As a result of the study, a diagnostic system was developed to determine the health-saving competency of future primary school teachers. The analysis of scientific and pedagogical sources made it possible to identify such structural components of students' preparation for the organization of health-saving activities of younger students as motivational, content, and technological. The motivational component was assessed according to the criterion of students' positive attitude towards the organization of health-saving of younger students and the formation of a system of internal motives (interests, values, beliefs). Knowledge of the theoretical block was diagnosed with the help of tests that included the task of identifying the level of mastery of information about the essence of health-saving of children. The ability to develop their own variants of pedagogical health technologies for preserving younger students was assessed with the help of the creative tasks.

Key words: health-saving competence of future primary school teachers; physical, social and mental health life skills; diagnostic system.

1 Introduction

One of the leading directions of the national state policy of the educational sector is to ensure the maintenance of health and the promotion of healthy lifestyles of students by modernizing the structure, content and organization of education on the basis of a competent approach. This is confirmed by the “National Strategy for the Development of Education in Ukraine for 2012–2021”, the Laws of Ukraine “About Education”, “About Higher Education” and the Concept of the New
The problem of maintaining the health of children becomes more acute. This is due primarily to the rapid development of ICTs, the students’ obsession of the virtual world. Excessive use of a variety of gadgets by elementary school students contributes to a sedentary lifestyle, with negative health effects. The problem of preserving the health of children is of concern to physicians, psychologists, and educators, as there is a decrease in quality of life, deterioration of nutrition and ecology, lack of a positive attitude to physical culture, information about the crucial role of person’s lifestyle in preserving and promoting health. With the changes in the information world, the intensity of the learning process has increased the student workload. The above factors along with the overload of the nervous system causes the development of functional disorders and diseases: musculoskeletal system; impaired vision; digestive diseases, pathology of the cardiovascular system, diseases of the respiratory system, ENT diseases. Therefore, the formation of the health-saving competence of future primary school teachers conditioned by the necessity of reduction of these risks for children.

The research revealed an increasing interest of scientists to the problem of formation of health-saving competence of future primary school teachers. This tendency is due to the need for a social inquiry to modernize the training of future educators, to improve the individual areas. Among them: formation of health-saving competence in the educational environment of a pedagogical college, basics of health-saving pedagogy within the theory and methodology of physical education (Malysheva, 2018) and methods of vocational education on health-saving activities (Dolynskyi, 2010; Slyvka, 2014), preparation of future teachers for the formation of healthy lifestyle for students (Markiv, 2012), organization of health-safety and health promotion in the education of students (Bibik, 2010), creation of health-saving environment of primary school (Osadchenko, 2016). The expediency of using of health-saving technologies has been confirmed by studies by foreign scientists (Armstrong, 2003; Rostan et al., 2012; Perez et al., 2006).

The purpose of the study is to develop an experimental test of the formation of health-saving competency of future primary school teachers. Achieving this goal involves the following tasks: analysis of the state of development of a particular problem in pedagogical theory and practice; systematization of indicators of healthy lifestyle of the individual; development of a diagnostic system to determine the health-saving competency of future primary school teachers.

2 Results and Discussions

Despite the variety of approaches in the selection of health criteria, the main one is the absence of disease. The state of resistance of the organism to the external environment and the mode of vital activity is influenced by a whole complex of factors: the level of physical activity; the level of mental stress; seasonal epidemiological factors. The latter factor is periodically valid. Mental stress is particularly noticeable in assessing the performance of students' educational load. Its level in recent years far exceeds the adaptive capacity of students’ body and is accompanied by an increase in the incidence of different etiology. According to statistics: about 90% of children have physical and mental health disorders; 30-35% of children who enter school acquire visual impairment, the number of mental health disorders increases in 4 times, the number of children with digestive diseases increases in 3 times (Bibik, 2010).

Therefore, new educational goals imply an individualistic humanistic approach to the child's personality. One of the tasks is to emphasize in the educational process the need to save and maintain health at any age, to form a value attitude to health, individual endurance. Therefore, the organization of the work of students in the formation of healthy lifestyles is conducted in several directions, in particular: rational nutrition, exercise, physical activity, safety in behavior, adjusting to the positive way of thinking, adherence to the daily and personal hygiene, awareness of the consequences of bad habits, etc.

The strategic goal, which is realized in the school educational environment on the basis of synergy of efforts of teachers, psychologists, health care workers, social services, is the decisive
attitude of pupils towards health as a vital value, the development of adaptation mechanisms that ensure optimal interaction with the surrounding world. The strategy of action is aimed at creating the most favorable conditions for the rehabilitation of students, their maximum involvement in active classes, participation in sports and mass events.

The strategy envisages the formation of psychological and pedagogical resources for the family to help foster healthy lifestyles in children and adolescents; introduction of modern pedagogical and psychological technologies that provide value formation into the educational environment; development of a single socio-cultural environment as a guarantor of a safe space for the life of the child and its family.

The problem of shaping human health goes beyond medical science and practice and moves into the educational plane. Pedagogical valeology, inheriting the powerful traditions of therapeutic pedagogy, hygiene education, put the problem of health and healthy lifestyles in a number of existential, actualized the creative beginning in health promotion activities and began to determine the main direction of this search.

In today's pedagogical theory and practice, the issue of health and healthy lifestyles is one of the priorities. The school acts as a universal medium for the formation of a new quality of life, where spiritual, moral and physical health are natural forms of being an individual. With the support of family, social institutions, the public, the school conducts the development and implementation of comprehensive health education. Goals of educational work with students: preserving and promoting the health of students; improving the process of physical education; children's health education; building health-saving skills and developing students’ motivation.

The study systematized the physical, social and mental health life skills that contribute to the formation of a person's health-saving competence (Table 1).

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<tr>
<th>Life skills of the physical, mental and social health of a future elementary school teacher</th>
<th>Skills type</th>
<th>Skills components (skills, habits, etc.)</th>
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| Life skills that promote physical health    | Nutrition skills | • adherence to the diet;  
• ability to make a diet with real opportunities, needs and benefits;  
• the ability to identify and preserve high quality of food. |
|                              | Motor skills | • morning exercise;  
• regular physical education, active games, physical labor. |
|                              | Sanitary and hygienic skills | • personal hygiene skills;  
• ability to perform hygienic procedures (to look after the skin, teeth, hair, etc.). |
|                              | Work-rest balance | • ability to alternate mental and physical activity;  
• ability to find time for regular meals and a good rest. |
| Life skills that promote social health      | Effective communication skills | • listening skills;  
• ability to express opinions clearly;  
• ability to express feelings;  
• ability to ask for a service or for help;  
• possession of non-verbal means of communication (gestures, facial expressions, intonation, etc.);  
• ability to respond adequately to criticism. |
|                              | Compassion skills | • ability to understand other people's feelings, needs and problems;  
• ability to express this understanding;  
• ability to take into account other people's feelings;  
• ability to help and support. |
|                              | Conflict resolution skills | • ability to distinguish between conflicts of opinion and conflicts of interest;  
• ability to tolerate conflict of opinions;  
• ability to resolve conflicts of interest through constructive |
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<th>Life skills that promote spiritual and mental health</th>
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<tr>
<td><strong>Skills of behavior in the face of pressure, threats, discrimination</strong></td>
<td>• ability to avoid dangerous situations and act in the face of violence; to defend the position and to refuse unwanted offers, including those related to smoking, alcohol and drug use; • ability to distinguish between discrimination, in particular people with disabilities, people living with HIV and AIDS; • confident behaviors, including HIV/AIDS precautionary measures.</td>
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<td><strong>Skills of joint activities and cooperation</strong></td>
<td>• ability to work in a team; • ability to adequately assess their abilities, their contribution to joint activities; • ability to recognize the contribution of others to teamwork.</td>
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<td><strong>Self-awareness and self-esteem</strong></td>
<td>• positive attitude towards oneself, other people, towards life prospects; • ability to really assess own abilities and capabilities; • adequate self-esteem; • ability to adequately perceive other people's assessments.</td>
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<td><strong>Self-control skills</strong></td>
<td>• ability to express own feelings correctly; • ability to control anger, to overcome anxiety; • ability to experience failure; • ability to plan time rationally.</td>
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<td><strong>Motivation for success and will training</strong></td>
<td>• ability to focus on achieving the goal; • development of perseverance and hard work; • striving for success and belief in oneself.</td>
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<tr>
<td><strong>Problem analysis and decision making</strong></td>
<td>• ability to identify the essence of the problem and the causes of its occurrence; • ability to formulate several options for solving a problem; • ability to anticipate the consequences of each option for oneself and others; • ability to evaluate the reality of each of the options, taking into account own capabilities and life circumstances; • ability to choose the best solutions.</td>
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<tr>
<td><strong>Defining life goals and programs</strong></td>
<td>• ability to determine life goals, based on own needs, inclinations, abilities; • ability to prioritize and use time; • ability to plan activities, taking into account the analysis of opportunities and circumstances.</td>
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Thus, health-saving competence is a personal entity based on knowledge, skills, values, and attitudes toward personal health and a healthy and safe lifestyle (Koval, 2012).

The modernization of education through the implementation of a competency approach allows to integrate European standards into the national education system, enhances its practical orientation, provides the graduate with the ability to respond to new demands of the labor market, have the appropriate potential for practical solving of life problems, guarantees high level and efficiency of training.

A competency approach involves focusing on the outcome of education, which is viewed from the standpoint of a person's ability to act independently on the basis of knowledge that has been formed; assessing the quality of educational outcomes in terms of relevance beyond the education system; realization of the activity nature of education and orientation of the educational process to the practical orientation of its results. This approach in the preparation of the future specialist involves a high level of organization of the educational process in the institution of higher education in order to form a theoretical and practical readiness for the student to undertake pedagogical activities, which is the main qualitative indicator of the educational process within the
higher education system. Therefore, the expected result of the future teacher's preparation is the level of development of subject competences as a component of his or her professional competence, which is the willingness and ability to apply fundamental subject knowledge as the basis of productive educational, research and professional activity.

The development of the methodological foundations of the competency approach is reflected in the change of emphasis in the definition of competencies, which has been interpreted as general skills, fundamental ways of learning and basic knowledge; a set of attitudes, practical skills, values, emotions, behavioral components, knowledge and skills required for active action; not only knowledge, professional and high moral qualities, but also the ability to act adequately in appropriate situations, applying that knowledge and taking responsibility for certain activities; how the abilities (knowledge, skills, values, attitudes and behaviors) are needed to deal with personal, professional and social problems on a daily basis and to anticipate a better future; as skills and attitudes aimed at achieving certain standards in professional activity.

Educators interpret competence as "a dynamic combination of knowledge, skills, ways of thinking, views, values, and other personal qualities that determines the ability of a person to successfully socialize, pursue professional and / or further learning activities" (Malysheva, 2018). The definition focuses on understanding the essence of competence as a complex personal entity that enables the performance of activities, is formed and improved during training. Taking into account the definition of competence, the European space outlines a list of key competences for each European citizen, characterized by the words: to study - to seek - to think - to cooperate - to act - to adapt (Palshkova, 2009).

The formation of competences is primarily envisaged by the “State Standard of Elementary Education” (2018), where the requirements for compulsory learning outcomes are determined taking into account the competency-based approach to learning, which, among other things, is “civic and social competences related to the ideas of democracy, justice, equality, human rights, well-being, awareness of equal rights and opportunities that involve working with others to achieve a common goal, being active in class and school, respect for the rights of others, ability to act in conflict situations related to different forms of discrimination, appreciation of the cultural diversity of different peoples and identification of oneself as a citizen of Ukraine, caring attitude to one's own health and preserving the health of other people, maintaining a healthy lifestyle, etc.”. At the same time, among the key professional competences of elementary school teachers, it is appropriate to distinguish health-saving one.

Researchers understand a competency approach as:
- priority orientation on the goals-vectors of education: learning, self-determination, self-actualization, socialization and development of individuality;
- improvement of content of education, which is not limited to a knowledge-oriented component, and includes a comprehensive experience of solving life problems, performing key (i.e., those belonging to many social spheres) functions, social roles, competences (Verbytskyi, 2011);
- constant reorientation of the dominant educational paradigm with the predominant translation of knowledge and formation of skills to create the conditions for mastering a complex of competencies that determine the potential of a graduate's ability to survive and maintain a sustainable life in a multifactorial, socio-political, market-economic, informational and informative space (Global Action Programme on Education for Sustainable Development).

Thus, the competence approach in the preparation of elementary school teachers is understood as a systematic and holistic formation, which provides for an effective component of the teacher's professional training, the focus of the educational process on the formation of key (basic, main) and subject competences of the individual, the result of which is the formation of the general competence of a person as an integ personality. Studying the system of preparing students for the organization of health-saving of younger students requires the identification of its structural components, the nature of the relationship between them, the regularities of system management, its new characteristics arising from the integration of components.
Preparing students for the introduction of effective health-saving for students is an important component of educational and cognitive activity at the stage of professional education of future professionals. The analysis of scientific and pedagogical sources made it possible to identify such structural components of students' preparation for the organization of health-saving activities of younger students as motivational, content, and technological.

**The motivational component** involves the formation of students' positive attitude to the organization of health-saving of younger students, interest in this activity, humanistic ideals, according to which the child is recognized as the most valuable in all its versatility. Belief in the priority of the health of the students' preservation as a means of their comprehensive development, showing kindness, reasonable demanding, hope for the long-term success of the students. All this help to optimize the formation of the child's personality, provides it with the opportunity to constructively, mobile, productively act and create during adulthood.

Future teachers need to take an interest in cognitive-creative activities to improve the health efficiency of younger students. This is reflected in the study of the content of this activity, the tools and procedures for implementation in the educational process of the school.

It is of fundamental importance for students to realize the necessity of optimizing the health-saving of younger students as a means of professionally-creative self-realization of future professionals. Students should be internalized with the values of enhancing the moral and physical health of the child as a factor in the implementation of their own life program, which contributes to the evaluation of themselves as a successful, effective, happy teacher.

Because the performance of an organization as a teacher of health-saving activity depends on having modern information about patterns, strategies and methods of its implementation, it is of great importance for students to develop values of knowledge. The desire to penetrate into the essence of health-saving, to understand the importance and specifics of its use in the modern school environment, to master its functions in the educational institution as a socio-cultural microenvironment, allows to provide high intensity and productivity of the teacher's activity for preserving the health of students.

**The content component** of health-saving competence consists of a knowledge system that reflects the theoretical and practical aspects of student health:
- theoretical, containing material on the laws, specifics, conditions of organization of health saving taking into account the peculiarities of the individual development of the child in accordance with its age;
- practical, which contains information about the nature and requirements of the implementation of strategies, technologies, methods of organizing work with students of health-saving nature.

The identified pedagogical aspect of the content component is closely related to the **technological component** of preparing students for the organization of health-saving for younger students. This component involves students mastering the technology of designing and implementing educational activities.

Observing the educational process in higher education institutions aiming to prepare students for the effective health of younger students shows that it is advisable to set aside a system of evaluation criteria for the components outlined above.

**The motivational component** was assessed according to the criterion of students' positive attitude towards the organization of health-saving of younger students and the formation of a system of internal motives (interests, values, beliefs). Indicators of this criterion are formed by:
- Value orientation system, diagnosed with a modified version of the questionnaire. The questionnaire included self-assessment by students and expert evaluation of the role of values of knowledge, creativity, happiness of others, active productive life, self-development in preparation for the organization of health care of younger students. Students chose to answer "yes", "rather than no", "both yes and no", "no more than yes", "no", to the statement "such humanistic values as cognition, creativity, happiness of others, productive life, self-development, activate the process of my preparation for the organization of health-saving of younger students."
- Interest in the subject and process of this activity, the desire for self-realization by some means. The motive, which gives personal meaning to the preparation for the organization of health preservation of younger students, was diagnosed with the help of expert evaluation and self-assessment. A list of internal and external motives was offered to the experts and students:
  a) strong interest in the subject of activity;
  b) strong interest in the process of activity;
  c) desire for creative self-realization;
  d) motives for self-improvement, self-development;
  e) understanding of the importance of preparing for the organization of health-saving of younger students in their professional activities;
  f) motives for duty and responsibility;
  g) striving to be the best in the team;
  h) measures for the prevention of troubles, among which the one was chosen that is most intensively manifested in each student in the process of this activity.
- Students' beliefs that were diagnosed by questioning with a series of questions:
  Can you state that:
  1) You are characterized by a strong conviction in the importance of organizing the health-saving of younger students: yes, no;
  2) organizing the health-saving of younger students is one of your life goals: yes, no;
  3) the image of a teacher who aims to bring up a psychologically, mentally and physically healthy child is your ideal: yes, no.
  The questions suggested highlight the importance of preparing for the organization of health care for younger students as a life-long goal, a degree of conviction in its importance as a factor of professional and personal self-creation, and a focus on a particular ideal of the teacher.

The content component was evaluated in accordance with the synthesis and constructiveness of the information acquired by the student in the course of educational activity, independent work, in-school practice. Indicators of the criterion are completeness and systematic scientific and pedagogical knowledge of theoretical and practical blocks.

Knowledge of the theoretical block was diagnosed with the help of tests that included the task of identifying the level of mastery of information about the essence of health-saving of children. Here are some of the test assignments for undergraduate students:

1. Throughout all levels of school education, the main competencies are:
   a) learning ability, cultural literacy, information and communication competence, social competence, civic competence, entrepreneurial competence, health-saving competence;
   b) educational, cognitive, communicative, social competence;
   c) multicultural, socio-professional, information and technological competences.

2. The psychological characteristics of younger students are as follows:
   a) children of this age are guided by norms of behavior and values of the teacher more than the opinions of peers;
   b) students are guided by the norms of behavior and values of peers more than of teacher;
   c) younger students are more aware of the actions and motives of others than of their own;
   d) younger students are more aware of their own actions and motives than those of other people;
   e) the younger student has a gap between knowledge of moral norms and appropriate behavior;
   f) the junior student does not have a gap between knowledge of moral norms and appropriate behavior;
   g) younger students strive to do more than they can;
   h) younger students want to do only what they can do;
i) misunderstanding - a typical picture of the relationship between adult and young students;
j) if a child has two competing motives that are currently in a potential state, then the motive that has been actualized earlier wins;
k) if the child has two competing motives that are currently in a potential state, then the motive, which has been updated later;
l) personal communication and educational and professional activity of the younger student are leading.

3. The health indicators are:
   a) "musculoskeletal benefits";
   b) "physical characteristics";
   c) "the state and degree of development of the human body, the nature of its functioning, the dynamics of change, coherence or imbalance with the social life of the subject";
   d) the connection of the "physical human and spiritual human";

4. The value of health becomes effective if student realizes and affirms its physical and moral "I":
   a) in sports;
   b) in relations with comrades;
   c) in matters of social importance and behavior.

5. The humanistically directed activity of the subject directs:
   a) health;
   b) the value of health.

Indicators of the practical unit's knowledge formation were mastering information about the principles of organization of health-saving of younger students. The outlined content component block was evaluated using the following questions:

1. According to V. Kremin's words, a person who is intelligent in the 21st century is one who:
   a) works a lot;
   b) takes care of its own health and that of others;
   c) constantly learns, builds all its life and activity on the basis of knowledge.

2. From the scientific point of view of O. Savchenko, modern dimensions of education are:
   a) activation, optimization of the educational process, interaction of the student and the teacher;
   b) openness, variability, dialogism, competence, state-public assessment of compliance with regulatory requirements, social and personal expectations;
   c) financing, teacher certification, examination of content, textbook and technology support, implementation of quality monitoring.

3. What serves hygienic, therapeutic effect on the child, development of its agility, coordination of movements?
   a) eurythmy (R. Steiner);
   b) space education (M. Montessori);
   c) strain group (P. Petersen);
   d) self-study of the child (J.-O. Decroly).

4. Among the factors of physical education are the following:
   a) natural;
   b) hygienic;
   c) democratic;
   d) social;
   e) educational.

5. Leisure is:
   a) resting activities the child spends with its parents;
b) purposeful process of transfer and assimilation of knowledge, skills and methods of
cognitive activity of a person;
c) free time from obligatory activity, which is used for games, reading, work, sports,
arts, technology, whereby the child develops morally, mentally and physically.

**The technological component** involved mastering the knowledge, skills and knowledge of
the methods, technologies, means of organizing health-saving for younger students. Knowledge
level was assessed using tests:

1. What are the forms of extracurricular sports activities:
   a) gymnastics before lessons;
   b) sports minutes and pauses;
   c) extracurricular classes (clubs and sections);
   d) health hour;
   e) mass competitions, sports holidays;
   f) conferences;
   g) conversations;
   h) meetings of generations.

2. Exercise is:
   a) motor actions that are specially organized and deliberately performed in accordance
      with the laws and tasks of physical education;
   b) the means that stimulate collective experience, give joy from joint efforts, promote
      friendship and friendship;
   c) walks, excursions, hikes, trips that organize to acquaint students with their native
      land, nature, historical and cultural monuments.

3. "Theater of physical development and health improvement of children" is:
   a) M. Montessori technology;
   b) technology of physical education of children according to M. Efimenko;
   c) technology of developmental training;
   d) technology of the Waldorf school.

The ability to develop their own variants of pedagogical health technologies for preserving
younger students was assessed with the help of the following creative tasks:

1. Offer your own methodical means of activating the health-saving leisure time of pupils,
taking into account the specifics of the summer camp (health-improving institution).
2. Develop a project for a wellness event to familiarize children with the norms of a healthy
lifestyle.
3. Create a program for elementary school students to organize their health-saving in the
afternoons.

The analysis of scientific sources showed that the structure of preparation of students for the
organization of health-saving of younger students is motivational (positive attitude to the
organization of health care of students, interest in this activity, humanistic ideals), content
(theoretical: valeologically, psychologically and pedagogically oriented knowledge, as well as
knowledge of child health organization strategies), technological (students’ knowledge of
technology of designing educational measures on health-saving of younger students)
components, the assessment of which was formed through questionnaires, interviews, tests, and creative tasks.

Tasks for the development of mini-projects, which resulted in the presentation of mastered
health-saving materials, were proposed to develop search activity skills. Students learned to present
the processed materials in abstract form; to emphasize the main points; to explain the essence of
theoretical generalizations; to answer direct and indirect questions; to illustrate and present the
learned theoretical provisions with examples and facts; to keep in touch with previously learned; to
project the acquired knowledge on explanations of phenomena and facts, etc.

3 Conclusions
Particularly important in the changes of the modern educational space is given to elementary school teachers, because fundamental life competencies - the ability to learn, communicate, care and promote health - are best formed in younger students. As a consequence, in modern conditions the appropriate competent training of elementary school teachers acquires a characteristic essence and is constantly updated, which actualizes the careful research and development of new models of systems of teaching students in higher pedagogical education institutions. The issue of health-saving activity of the future elementary school teacher was considered in view of providing a healthy life style of younger students, valeological education of students, axiological component of the structure of self-regulation of pedagogical activity in the system of future teacher education and formation of axiological component of pedagogical culture. Scientists consider health-saving activity to be an important component of a teacher's professional activity, and health-saving training of a future elementary school teacher is the most important element of vocational training in today's context. One of the objectives of vocational education is to develop students' health-saving and health promotion skills.

The activity of elementary school teacher directly influences the development and socialization of a child, forming a lifestyle that is conducive to saving and promoting his or her health. The aspect of health-saving and hygiene education of children has been particularly sharpened in recent years, when technical advances, information technologies and their overuse are being continually resulted into their low-activity lifestyle. These factors encourage the preparation of future elementary school teachers, particularly during the health-saving of younger students in terms of competency formation.

References


