

## Composition of personality education of future teachers during the creation of health environment at higher education institution

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### Abstract

The experience of preserving and strengthening the health of the younger generation contains many theoretical positions and practical achievements on the physical, mental, spiritual and mental development of the individual. Analysis of classifications of current health technologies made it possible to create a composition of technology for educating the personality of the future teacher in terms of creating a health environment of higher education, covering four components, which aim to form health knowledge, skills, health promotion and reproduction participants of the educational process, is to create safe conditions for stay, study and work in higher education, solves the problem of rational organization of the educational process, allows to maintain the current state of health of students, forms a higher level of their health competence, healthy lifestyle skills, namely: - the introduction of the Olympic movement in the education of the future teacher in a healthy environment of higher education increases the motivation of future professionals to health, physical culture and sports, and as a consequence, prevents smoking, alcoholism, drug addiction, forms a rational attitude to their health; - the formation of a culture of health in the education of the future teacher in terms of creating a healthy environment of higher education covers pedagogical, psychological, social aspects, the main task of which is to form a positive attitude of the future specialist to their own health and personal lifestyle their understanding of values, giving priority to health care through education;- the use of the principles of rational and balanced nutrition in the education of the future teacher in the creation of a healthy environment of higher education provides a high level of efficiency, and as a result of maintaining health and well-being;- development of health-preserving activity in education of the future teacher's personality in the conditions of creation of health-preserving environment of higher education institution provides development of motor qualities, activity, correction of own behavior, improvement of health-preserving processes of vital activity, support and strengthening of physical, mental, social and spiritual health future specialist. It should be noted that the technology involves an active position of the future specialist, the desire to change and be able to neutralize the negative impact of both internal and external barriers.

**Key words:** pedagogical technology, health-preserving environment, health, personality of the future teacher, institution of higher education.

### Introduction.

Today, a significant number of pedagogical teams are reorienting the organization of the educational process to the formation of a harmoniously developed personality, the formation of its physical, mental, spiritual and social health, the formation of a culture of health and the need for health. For many educational institutions, rehabilitation begins with the introduction of health pedagogy. Various models of health promotion schools are

being created, which provide the necessary conditions for the successful implementation of innovative pedagogical technologies aimed at preserving and strengthening the health of students. Among the innovative pedagogical technologies, a new group has recently emerged - health technologies.

**Analysis of recent research and publications.** The problem of implementing health technologies is widely represented in the works of modern Ukrainian and foreign scientists. Thus, T. Andryushchenko (2012), N. Bashavets (2018), V. Boychenko (2009), I. Bratishchenko (2012), S. Garkusha (2014), S. Garkusha (2015), Yu. Dragnev (2007), Druchik V. (2017), O. Durmanenko (2013), V. Orzhekhovska (2007), V. Tkachenko (2013), V. Trotsenko (2010) and others studied the concept and classification of health technologies.

**Highlighting previously unsolved parts of the problem, which is the subject of this article.** The social and practical significance, as well as the need to educate future teachers in terms of creating a healthy environment for higher education, insufficient scientific development of the problem led to the development of technology for educating the personality of the future specialist.

### **Material & methods.**

Among the theoretical research methods, the main ones were: conceptual and comparative analysis (study of pedagogical, philosophical and psychological literature, textbooks on the research topic); structural-system analysis (theoretical analysis of problems, modeling of the studied systems, comparative, comparative and retrospective analyzes, diagnostics and forecasting of initial approaches and research consequences). Analysis and processing of research results were carried out using the methods of mathematical statistics: comparative, quantitative analysis and statistical calculations by Pearson's criterion - to confirm the reliability of the results of experimental work.

**Goal:** to reveal and experimentally test the technology of education of the future teacher's personality in the conditions of creating a health-preserving environment of a higher education institution

The concept of "technology" in pedagogy came from production and means a set of different elements, including techniques, operations, actions, processes and their sequence; that is, it is a kind of human skill. Technology (translated from Greek *techne* - art, craft; *logos* - teachings, concepts) arose in connection with technical progress and is a set of knowledge about the methods and means of processing materials (Kobernyk, Tereshchuk, 2007).

The technology of education is a strictly substantiated system of pedagogical means, forms, methods, their staging, focus on solving a specific educational task. Each task has an adequate technology of education. Changing the task leads to a change in technology (Moiseyuk, 2007).

In the late 1970s, attention to pedagogical technology increased in Ukraine as well. However, to date, scientists have not developed a unified approach to the concept of "pedagogical technology". In the scientific literature we find more than 300 definitions, based on the author's ideas about the structure and components of the educational technological process. But all the authors are united in determining the purpose of pedagogical technology - to increase the efficiency of the educational process and ensure that students achieve the planned learning outcomes (Kobernyk, Tereshchuk, 2007).

N. Moiseyuk interprets the term "pedagogical technology" as a scientifically well-founded system that guarantees the achievement of a certain educational goal by consistent implementation of consistent interaction between teacher and students (Moiseyuk, 2007).

Any technology must meet the basic criteria of manufacturability: conceptuality, system, controllability, efficiency, reproducibility. However, it is necessary to understand that the new quality of education, which would ensure the development of modern society, can be achieved only by creating certain conditions for the organization of such an educational process that will not harm the health of children and youth and will be aimed at maintaining, strengthening and shaping health. I am a participant in the process. And this requires educators to apply unique approaches to education and upbringing based on health care.

The concept of "health technologies" concentrates all areas of higher education in the formation, preservation and promotion of student health. Scientists suggest that health technologies be understood as:

- favorable conditions for teaching and educating the individual in a higher education institution (Durmanenko, 2013);
- optimal organization of the educational process of higher education institution (Boychenko, 2009);
- full and rationally organized motor regime of student youth (Trotsenko, 2010).

Analysis of classifications of current technologies made it possible to find out that the composition of educational technology – a complex dynamic phenomenon, the interaction of participants in the educational process, a set of tools, forms, methods, their stages, aimed at solving the problem of educating the future teacher in a healthy environment. higher education.

We offer a composition of technology for educating the future teacher's personality in terms of creating a healthy environment for higher education, consists of four components, the purpose of which is to strengthen and reproduce the health of participants in the educational process:

- introduction of the Olympic movement in the education of the future teacher in a healthy environment of higher education increases the motivation of future professionals to health, physical culture and sports, and as a consequence, prevents smoking, alcoholism, drug addiction, forms a rational attitude to their health;
- formation of a culture of health in the education of the future teacher in terms of creating a healthy environment of higher education covers pedagogical, psychological, social aspects, the main task of which is to form a positive attitude of the future specialist to their own health and personal lifestyle their understanding of values, giving priority to health care through education;
- the use of the principles of rational and balanced nutrition in the education of the future teacher in the creation of a healthy environment of higher education provides a high level of efficiency, and as a result of maintaining health and well-being;
- development of health-preserving activity in education of the future teacher's personality in the conditions of creation of health-preserving environment of higher education institution provides development of motor qualities, activity, correction of own behavior, improvement of health-preserving life processes, support and strengthening of physical, mental, social and spiritual health future specialist.

The purpose of the composition of the technology of educating the personality of the future teacher in terms of creating a healthy environment of higher education - to form health knowledge, skills and abilities of the future specialist, their use in all spheres of life.

Tasks of the composition of educational technology:

- 1) creating conditions for a healthy environment in the institution of higher education;
- 2) motivation of future specialists to maintain health;
- 3) formation of the future teacher's conscious attitude to the preservation and promotion of health by means of technology;
- 4) acquisition by future specialists of health-preserving knowledge, skills and abilities as an important and integral component of preservation and strengthening of health;
- 5) interest of individuals in regular health-preserving activity;
- 6) transformation of health care into the most important life value of future teachers.

Structural components as the main characteristics of the composition of the technology of educating the personality of the future teacher in terms of creating a healthy environment of higher education are forms and methods as a means of influencing the student, which are logically interconnected and complementary.

The main forms are classroom and extracurricular activities: lectures, practical and independent classes, consultations, trainings, discussions, Olympic lessons, as well as physical culture and sports activities, Olympic day, methodical seminars, conferences, meetings, sports competitions, classes in sports sections, Olympic quizzes, Olympic weeks, etc.

The methods include verbal, visual and practical teaching methods that perform educational, upbringing and developmental function.

The effectiveness of the composition of the technology of educating the personality of the future teacher in creating a healthy environment of higher education depends directly on the pedagogical interaction of researcher and future teacher, creating a situation of mutual trust, high activity of students in the educational process.

The process of introducing the composition of the technology of educating the personality of the future teacher in the educational process of higher education institution goes through the following stages:

1. Motivational stage - is based on the development of interest of future teachers in the content and process of education in a healthy environment of higher education by means of health, physical culture, sports, Olympic activities.
2. The stage of assimilation of health-preserving material - involves the acquisition by future teachers of theoretical and practical material and the ability to operate on it in different conditions.
3. The stage of developing health-preserving skills in the behavior of the future specialist - is to form behavior in all spheres of life.

To conduct a formative experiment, a working hypothesis was put forward, which is that the levels of criteria for the education of future teachers of experimental groups in terms of creating a health-preserving environment of higher education will increase if the composition of the technology of educating the future teacher of higher education by creating health-preserving environment in high school. In order to ensure the reliability of the pedagogical experiment and to avoid the influence of uncontrolled subjective and objective factors on its course, the separation of control and experimental groups between the contingent of individuals is carefully chosen.

The experimental group included 225 students, the control group - 225 students. The formation of control and experimental groups takes into account the basic requirements for representativeness. The sample size of the study, ensuring its representativeness are justified on the basis of the algorithm for selecting the sample size according to D. Novikov (2004).

Assessment of education on the basis of motivational and value criteria was determined by the level of formation of motivation and value orientations: the attitude of the future teacher's personality to health; satisfaction with the implementation of activities for the formation of physical health; a sense of self-importance and effectiveness of their actions; participation of the individual in health activities.

Determination of education by cognitive criteria was based on the level of health knowledge of the future teacher, skills and abilities in the process of education in a health environment of higher education: the acquisition of future knowledge of theoretical knowledge in the field of health, skills and abilities to apply them in practice, analyze theoretical information, draw correct and sound conclusions.

Assessment of education according to the procedural criteria was based on determining the level of mastery by future teachers of technology, methods and means of health care: compliance with future health advice and recommendations; responsible health behavior in all spheres of life.

Determination of education by practical criteria was carried out on the basis of clarifying the level of development of motor skills of the future teacher in the process of education in a healthy environment of higher education, activity in social activities, correction of their own behavior: motor skills; activity; self-esteem.

Based on certain criteria and indicators, the levels of upbringing are characterized: low, medium, sufficient, high. The low level of education of the future teacher's personality in the conditions of creating a health-preserving environment of a higher education institution is characterized by weakly expressed motivation and value orientations to health care; lack of initiative, inadequate assessment of their capabilities; low quality of health-preserving knowledge, skills and abilities; irresponsibility for healthy behavior in all spheres of life, impatience, inability to control their behavior; unsatisfactory level of development of motor skills, self-esteem and correction of one's own behavior, inactivity.

The average level of education of the future teacher's personality in the conditions of creating a health-preserving environment of a higher education institution is characterized by partial motivation and value orientations to health care; limited or partial health knowledge, skills and abilities, indirect analysis, synthesis and generalization of theoretical knowledge; formed, but indirectly expressed level of responsibility for healthy behavior in all spheres of life, endurance, patience; insufficient level of development of motor skills, self-esteem and correction of one's own behavior, mediocre confidence and activity.

A sufficient level of education of the future teacher's personality in the conditions of creating a health-preserving environment of the higher education institution is characterized by stable motivation and value orientations to health care, showing interest in improving the state of health; the available level of health-preserving knowledge, skills and abilities, possession of theoretical material; the formed level of responsibility for health-preserving behavior in all spheres of life, endurance, patience; sufficient level of development of motor skills, self-esteem and correction of one's own behavior, self-confidence, demanding and persistence.

The high level of education of the future teacher's personality in the conditions of creating a health-preserving environment of the higher education institution is characterized by a pronounced motivation and value orientations to health care, initiative, responsibility, persistence; high level of health-preserving knowledge, skills and abilities, rational analysis of the phenomena of the surrounding reality; responsibility for healthy behavior in all spheres of life; high level of development of motor skills, self-esteem and correction of one's own behavior, ingenuity and activity.

At the beginning of the formative stage, experimental groups of future specialists were offered the technology of educating the future teacher's personality in the health-preserving environment of higher education, which provided for the introduction of effective forms and methods of forming Olympic knowledge in future specialists and teaching methods:

- "Technologies for creating a healthy environment in higher education";
- "Sports and pedagogical improvement".

Particular attention was paid to the program and methods of health activities as a way to organize the practical activities of future teachers in the process of studying the discipline "Sports and pedagogical improvement". The course consisted of 144 hours of practical training. The proposed Health Card was designed to record the annual examination of the future specialist: changes in attitudes to their physical and mental health, to physical development, to the rules of nutrition, to negative habits and phenomena.

## **Results.**

To reduce the amount of significant digital data, we show a generalization of the results of experimental technology on the level of education of the future teacher in creating a healthy environment of higher education, which was carried out by statistical processing of data obtained during the experimental study shown in Table 1.

**Table 1. Levels of upbringing of the future teacher's personality in the conditions of creating a healthy environment of a higher education institution before and after a formative experiment**

number of respondents, %	Control group (CG)								Experimental group (EG)							
	levels								levels							
	low		average		sufficient		high		low		average		sufficient		high	
	Before .exp	After .exp	Before .exp	After .exp	Before .exp	After .exp	Before .exp	After .exp	Before .exp	After .exp	Before .exp	After .exp	Before .exp	After .exp	Before .exp	After .exp
<b>Motivational and value criterion</b>																
Qty	32	19	67	56	96	96	30	54	40	0	72	24	89	75	24	126
%	14,2	8,4	29,8	24,9	42,7	42,7	13,3	24,0	17,8	0	32,0	10,6	39,6	33,3	10,6	56,1
<b>Cognitive criterion</b>																
Qty	113	78	67	81	37	51	8	15	118	3	56	34	37	129	14	59
%	50,2	34,6	29,8	36,0	16,4	22,7	3,6	6,7	52,5	1,3	24,9	15,1	16,4	57,4	6,2	26,2
<b>Procedural-activity criterion</b>																
Qty	95	30	89	94	33	83	8	18	86	7	97	48	40	115	2	55
%	42,2	13,3	39,6	41,8	14,6	36,9	3,6	8,0	38,2	3,1	43,1	21,3	17,8	51,1	0,9	24,5
<b>Practical criterion</b>																
Qty	65	60	108	76	31	66	21	23	54	14	92	43	63	121	16	47
%	28,9	26,7	48,0	33,8	13,8	29,3	9,3	10,2	24,0	6,2	40,88	19,1	28,0	53,8	7,2	20,9

The analysis of the generalized results after the end of the experiment showed that there were significant changes in the quantitative distribution of students by levels.

To confirm the effectiveness of the proposed technology of educating the personality of the future teacher in the health-preserving environment of the institution of higher education, an analysis of the dynamics of levels of education by motivational and value criteria.

At the beginning of the experiment in determining the motivation and value orientations in the personality of the future teacher in the health environment of higher education, gaining a positive experience of education and passing it on to their future students, analysis of diagnostic results confirmed the general trend of low performance.

Prior to the formative experiment, it was found that 17.8% of students in the experimental and 14.2% of the control groups showed a low level of motivational and value criteria. The average level was recorded in 32% of students in the experimental group and 29.8% in the control group. 39.6% of students of the control group and 42.7% of the experimental groups were identified with a sufficient level according to the motivational and value criterion, with a high level in the experimental group of 10.6%, and 13.3% in the control group.

During the formative experiment in the experimental group significantly decreased the number of students who have a low and sufficient level; the number of students who are intermediate and high has increased. After the experiment, the following data were obtained: 24% of control students and 56.1% of experimental groups received a high level, 42.7% and 33.3% of students received a sufficient level, respectively, 24.9% of control students and 10.6% have an average level. experimental groups, 8.4% of students in the control group have a low level.

Data on determining the level of effectiveness of the future teacher's education in terms of creating a healthy environment of higher education, which were obtained before and after the pedagogical experiment, were subjected to statistical processing, which aimed to establish a reliable difference between control and experimental data. To solve this problem, we used the  $\chi^2$ -criterion calculated by formula (1):

$$\chi^2_{\text{SMI}} = N \cdot M \sum_{i=1}^L \frac{\left( \frac{n_i}{N} - \frac{m_i}{M} \right)^2}{\frac{n_i + m_i}{N + M}}, \quad (1)$$

$L$  – the number of gradations,

$n_i = (n_1, n_2, \dots, n_L)$ ,  $\text{den}_i$  – the number of members of the experimental group who received the  $i$ -th point,  $i = 1, 2, \dots, L$ ,

$m_i = (m_1, m_2, \dots, m_L)$ ,  $\text{dem}_i$  – the number of members of the control group who received the  $k$ -th point,  $i = 1, 2, \dots, L$ ,

$N, M$  – sample size of the experimental and control groups.

Algorithm for calculating the reliability of homogeneity or differences of experimental data measured on an ordinal scale:

– calculation for the compared samples of the  $\chi^2$ -criterion ( $\chi^2_{emp.}$ ) Of the empirical value by the formula; comparison of this value with the critical value of the  $\chi^2$ -criterion ( $\chi^2_{crit.}$ ) Specified in the table for degrees of freedom ( $L - 1$ ) when choosing the probability of permissible error of 0.05:

if  $\chi^2_{emp.} \leq \chi^2_{crit.0,05}$  - the characteristics of the compared samples are the same;  $\chi^2_{emp.} > \chi^2_{crit.0,05}$  - the probability of differences in the characteristics of the compared samples is 95%.

The empirical value of the  $\chi^2$ -criterion was calculated using Microsoft Excel spreadsheets. Therefore, the hypothesis about the homogeneity of the samples (CG and EG) before the experiment is tested using the  $\chi^2$ -criterion for large sample sizes. We calculate the empirical value of the  $\chi^2$ -criterion by the formula, the level of significance.

$L = 4$ , respectively  $L - 1 = 3$ . From the table of critical values of the  $\chi^2$ -criterion for the level of significance we obtain  $\chi^2_{kr. 0.05} = 7.815$ .

$$\chi^2_{emp.} = 225 \cdot 225 \left( \frac{\left( \frac{32}{225} - \frac{40}{225} \right)^2}{225 + 225} + \frac{\left( \frac{67}{225} - \frac{72}{225} \right)^2}{225 + 225} + \frac{\left( \frac{96}{225} - \frac{89}{225} \right)^2}{225 + 225} + \frac{\left( \frac{30}{225} - \frac{24}{225} \right)^2}{225 + 225} \right) = 0,35$$

Since  $\chi^2_{emp.} = 0.35 < \chi^2_{kr.0,05} = 7,815$ , to make the damage of the experiment with a reliable probability of 0.95 to accept the null hypothesis ( $H_0$ ) about the homogeneity of the samples, you at the beginning of the organization organizational production did not differ statistically. It was confirmed with a reliable probability of 0.95 that the lucky ones of the experimental group achieved higher results for the indicators of the motivational-value criterion than the student control group. Calculated  $\chi^2_{emp.}$  writing an experiment, the resulting value of  $\chi^2_{emp.} = 15379$ ,  $\chi^2_{kr.0,05} = 7815$  for  $L - 1 = 3 \Rightarrow \chi^2_{emp.} > \chi^2_{kr.0,05}$ , whence follows the significance of the difference in the levels of education of future teachers in K • H and EH after the formula experiment.

The second criterion of education of features of the future teacher - conic - providing definition of a level of equal health-preserving knowledge, abilities and skills of the future specialty. It is proved that the controlling and experimental group of statistical homogeneity with a reliable probability of 0.95 by a certain criterion before the start of the experiment. Thus, for the conic criterion  $\chi^2_{emp.} = 0.34 < \chi^2_{kr.0,05} = 7,815$ , where it follows that the hypothesis of the coincidence of the levels of efficiency of the output features of the future teacher in K • H to EH makes the handwriting of the experiment accepted at the level of significance. Slide to indicate that to do the experiment low equal Small 50.2% of students in the control and 52.5% of the experimental group, the average equal 29.8% of students in the control and 24.9% experimental colorful bread, a significant owner of a small 4% of the control and experimental group, a high level of manifestation of 3.6% and 6.2% of students in the control and experimental groups, respectively.

### **Expand**

1750/5000

Since  $\chi^2_{emp.} = 0.35 < \chi^2_{kr.0,05} = 7,815$ , then before the start of the experiment with a reliable probability of 0.95 the null hypothesis ( $H_0$ ) about the homogeneity of the samples is accepted, ie at the beginning of the experimental study the distribution of students of the experimental and control groups by motivational-value criterion did not differ statistically.

It was confirmed with a reliable probability of 0.95 that the participants of the experimental group achieved higher results in terms of motivational and value criteria than the students of the control group.

Calculating  $\chi^2_{emp.}$  after the experiment, obtained the value of  $\chi^2_{emp.} = 15,379$ ,  $\chi^2_{cr.0,05} = 7,815$  for  $L - 1 = 3 \Rightarrow \chi^2_{emp.}$

The second criterion for educating the future teacher's personality - cognitive - was to determine the level of health knowledge, skills and abilities of the future specialist.

It is proved that the control and experimental groups are statistically homogeneous with a significant probability of 0.95 by a certain criterion before the start of the experiment. Thus, for the cognitive criterion  $\chi^2_{emp.} = 0.34 < \chi^2_{cr.0,05} = 7,815$ , which follows that the hypothesis of the coincidence of the levels of effectiveness of the education of the future teacher in the CG and EG before the experiment is taken at the level of significance of 0.05.

It should be noted that before the experiment, 50.2% of control students and 52.5% of experimental groups had a low level, 29.8% of control students and 24.9% of experimental groups corresponded to the average level, 16 had a sufficient level of knowledge, skills and abilities, 4% of control and experimental groups, a high level was found by 3.6% and 6.2% of students of control and experimental groups, respectively.

The ascertaining data of the control of indicators according to the cognitive criterion, carried out after the introduction of the technology of education of future teachers in the experimental group, to some extent give us

an idea of its effectiveness in comparison with the control. The results showed that a high level in the control group was demonstrated by 6.7% of students, in the experimental group – 26.2%, sufficient – 22.7% in the control group and 57.4% in the experimental groups. The average and low level is observed in the following number of students: in the control group the average – 36%, low – 34.6%; in the experimental group, the average was 15.1%, and the low was 1.3%.

The analysis of the final diagnostic data shows that as a result of purposeful experimental work there was a positive dynamics of results, especially in the experimental group. If at the beginning of the experiment future teachers had a low level of health knowledge, skills and abilities, were not able to build a clear system of information, poorly analyzed, synthesized and generalized theoretical knowledge, then at the end of the study state a high level of health theoretical training, independent search information on the use of additional literature, the Internet.

Yes, we have estimates:  $2emp. = 11.8$ ,  $2cr.0.05 = 7.815$  for  $L - 1 = 3 \Rightarrow 2emp. > 2cr.0.05$ . Thus, it was confirmed with a probable probability of 0.95 that the level of health-preserving knowledge, skills and abilities of the students of the experimental group is higher than that of the students of the control group.

The third criterion for the education of future teachers – procedural and activity – provided for determining the level of mastery of future teachers of technologies, methods and means of health care.

Prior to the experiment, students with a high level of procedural criteria in the control group 3.6% and 0.9% in the experimental group, with sufficient – 14.6% and 17.8%, respectively, the vast majority of students have an average (CG – 39.6%, EG – 43.1%) and low levels (CG – 42.2%, EG – 38.2%).

We compare the obtained indicators of the levels of education of future teachers in the control and experimental groups before the beginning of the formative experiment according to the procedural-activity criterion. Calculate for the health criterion  $2emp. = 0.5 < 2cr.0.05 = 7.815$ . It follows that the hypothesis of coincidence of the level of students in CG and EG is accepted at the level of significance of 0.05.

Analysis of the dynamics of the levels of education of students according to the procedural criteria of the control groups shows a slight positive increase in high and sufficient levels and a decrease in the number of students with medium and low levels. In the process of research in the experimental group significantly increased the percentage of students with high (24.5%) and medium (51.1%), and the percentage of students with medium and low level decreased significantly and is 21.3% and 3.1%, respectively.

If at the beginning of the experiment future teachers had mostly an average level of mastery of technologies, methods and means of health care, formed, but mediocre level of responsibility for health behavior in all spheres of life, then at the end of the study the actions of most future teachers were unconventional. novelty in the organization of the interaction process, endurance, patience, self-criticism.

It was confirmed with a reliable probability of 0.95 that the future teachers of the experimental group achieved higher results in terms of procedural criteria than the students of the control group. Thus, it is estimated that  $2emp. = 11,19$ ,  $2cr.0,05 = 7,815$  for  $L - 1 = 3 \Rightarrow 2emp. > 2cr.0,05$ , respectively, the significance of the difference between the levels of education of future teachers of the control and experimental groups after the formative experiment was confirmed at the level of significance 0,05.

The fourth criterion of education of future teachers – practical – provided for determining the level of development of motor skills, activity, self-esteem, the importance of their participation in teamwork, the ability to correct their own behavior.

Prior to the formative experiment, it was found that 24% of students in the experimental and 28.9% of control groups showed a low level. An average level was recorded in 40.88% of students in the experimental group and 48% in the control group. 28% of students of the experimental group and 13.8% of the control groups were identified with a sufficient level, 7.2% with a high level in the experimental group and 9.3% in the control group. After the study, the following data were obtained: students have a high level of 10.2% of the control and 20.9% of the experimental groups, a sufficient level of 29.3% and 53.8% of students, respectively, the average level – 33.8% of control students and 19, 1% of the experimental groups, 26.7% of the control group and 6.2% of the experimental group have a low level.

For the practical criterion, the statistical homogeneity of the results of students of the control and experimental groups before the beginning of the experiment at the level of significance of 0.05:  $\chi^2_{emp}$  was confirmed.  $= 0.3 < \chi^2_{cr.0.05} = 7.815$ .

The analysis of the presented results of the levels of education of students according to the practical criterion shows a significant increase in the experimental group of people with a high and sufficient level and a significant decrease in the number of future professionals with a low level.

It was confirmed with a reliable probability of 0.95 that future teachers from the experimental group achieved higher results in terms of practical criteria than students in the control group. Calculated:  $\chi^2_{emp.} = 15.06$ ,  $\chi^2_{2kr.0,05} = 7,815$  for  $L - 1 = 3 \Rightarrow \chi^2_{emp.} > X^2_{2kr.0,05}$ ., Which indicates that the difference between the data of the experimental and control samples is not random, but arose due to conducting a molding experiment.

Thus, in our study, the initial (before the experiment) data obtained during the ascertainment experiment coincide, and after the formative experiment – differ.

It can be concluded that the effect of change is due to the use of experimental composition of technology (introduction of the Olympic movement in the education of the future teacher in a healthy environment of higher education; formation of a culture of health in educating the future teacher in a healthy environment institution of higher education, the use of the principles of rational and balanced nutrition in the education of the future teacher in terms of art creation of a health-preserving environment of a higher education institution; development of health-preserving activity in the upbringing of the future teacher's personality in the conditions of creating a health-preserving environment of a higher education institution) upbringing of a future teacher's personality.

Experimental verification of the introduction of the composition of the technology of education of future teachers in the context of the effectiveness of creating a healthy environment in higher education has shown positive results: the level of education of students by all criteria has improved.

Summarizing the data, we can state that the high level of education of the future teacher's personality increased in CG by 4.7%, in EG – by 25.6%; sufficient level: in CG – by 10.9%, in EG – by 23.5%. The average level in CG decreased by 2.3%, low – by 13.2%. In EG the average level decreased by 18.7%, the low level in EG – by 30.4%.

It should be noted that changes took place in both the control and experimental groups, as students in the control group also received appropriate training, although teachers did not organize targeted interaction with students in the control group in creating a healthy environment for higher education.

After the experiment, a high level in 12.2% of students in the control and 31.9% of the experimental groups, a sufficient level in 32.9% and 48.9% of students, respectively, the average level is 34.1% of students in the control and 16.5% of the experimental groups, 20.8% of students in the control group have a low level and 2.7% of students in the experimental group.

### **Discussion.**

In the context of our study is important a large number of modern scientific and methodological works, the authors of which consider health and health environment in some aspects: the formation of health competence of future biology teachers by means of innovative technologies in the educational environment of higher education (T. Mironyuk; Gozhenko et al., 2018a; Gozhenko et al., 2018b); theoretical and methodological principles of training future teachers of natural sciences to use health technologies in professional activities (V. Yefimova); preparation of future educators to create a healthy environment in the preschool educational institution (A. Tsypliyuk); didactic conditions of health-preserving educational environment (V. Ilchenko); health-preserving environment and physical education in higher education as components in the structure of strengthening the health of students (O. Mytchuk, O. Ishchuk, etc.); theoretical and methodological principles of involving student youth in the values of physical culture (S. Sychov); preparation of the future teacher for creation of the health-preserving environment of elementary school (T. Osadchenko); creative educational environment: theoretical and practical concepts (K. Prykhodchenko); health-preserving environment as a means of personality formation (Yu. Boychuk, O. Svyridyuk, etc.); main aspects of health work in the educational institution (O. Cheshenko); health education of primary school adolescents in the educational process (N. Kozak); theoretical bases of formation of culture of health preservation as world outlook of future experts-economists (N. Bashavets); formation of health culture of different segments of the population (V. Babych); health technologies in physical education (O. Voedilova, S. Garkusha, V. Miroshnichenko, M. Nosko, etc.); formation of a healthy lifestyle of young people: problems, prospects (O. Balakireva, O. Vakulenko, O. Yaremenko, etc.).

### **Conclusions.**

Thus, the application of experimental innovations has resulted in a significant improvement in results. The experiment confirmed the hypothesis of the study, which was based on the assumption that the effectiveness of the educational process will increase if you implement the composition of the technology of educating the future teacher in terms of creating a healthy environment of higher education.

We see the prospects for further research in expanding and improving ways to create a healthy environment and educate future professionals in it.

### **Conflict of Interest**

The authors declare that they have no conflict of interest.

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