

# Experimental Study Of The Formation Of General Pedagogical Culture Of Future Officers In The Process Of Professional Training

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## Abstract

The article presents the results of experimental study of the formation of general pedagogical culture of future officers in the process of professional training. It has been proved that general pedagogical culture of an officer is a set of intellectual skills and abilities, formed and developed on the basis of psychological and pedagogical knowledge, feelings and motives, acquired both in the process of practical activities and through the purposeful self-training and self-education. Having analyzed a complex of literary sources it was proved that knowledge, skills and abilities, motives and feelings operate in the general pedagogical culture of military officers not abstractedly but in the functional relationship as an integral basis of each purposeful action of the officer on training and education of servicemen and personal self-development. The specifics of direct influence methods (persuasion, example, practice, encouragement, compulsion); self-education (self-commitment, self-persuasion, self-report, etc.); individual work (study and analysis of documents, observation, introductory conversation, generalization of independent characteristics, testing, etc.) in the process of future officers training at higher military educational institutions was deepened. The content and methods of gradual development of general pedagogical culture of future officers in the process of their professional training at the military higher educational institutions as commanders (chiefs), educators, teachers, servicemen mentors, humanitarian education organizers were tested experimentally. The efficiency of the proposed model in qualitative changes in the indicators of development levels of the future EG officers, whose increase was + 27,6 %, while in the CG under traditional training conditions, it was only + 5,7 %, was determined. It was established that these changes occurred due to the renewal of information training, ideological training and individual work.

**Keywords:** higher military educational institution, military professional culture, professional training, weapons training technique, preparation for research activities, general pedagogical culture of future officers, technical literacy.

## 1. Introduction

The research is aimed at solving the problems of future officers training who are capable to work effectively with the personnel, to provide high-quality moral and psychological support to the servicemen, are able continuously to build their own capacity and practical experience of teaching and education in the tough conditions of the modern information society and the war in Eastern Ukraine. The problem of development of general pedagogical culture of future officers as educators, teachers, mentors of servicemen currently is considered to be systemic organizational and managerial, psychological and military-pedagogical problem which can be resolved on the basis of methodological tools of cultural, personal, activity-oriented, procedural, systemic, technological scientific approaches.

During the analysis of the normative peculiarities of the future officers professional culture and its general pedagogical component it has been found out that the notion of «professional development» is the most widely used and is combined with the concepts of «success», «progress», «productivity», «efficiency», «professional endurance», «professional mobility», «competence», «adaptability», «quality of performance», «professional success»; the study of the normative documents devoted to the definition of the officers professional activity features and evaluation of its success (efficiency, quality) allowed to single out the criteria (the level of competence in resolving official issues, optimal planning of activities, sociability, responsibility, exemplary for subordinates, proper physical training, objectivity of an estimation of their personal activity and the activity of their subordinates) and the factors of professional success of future officers (objective, substantive and technological; subjective, personal). It has been established that according to its internal structure, the general pedagogical culture of an officer is a set of intellectual skills, formed and developed on the basis of psychological and pedagogical knowledge, feelings and motives, acquired both in the process of practical activities and through the purposeful self-training and self-education. Knowledge, skills and abilities, motives and feelings operate in the general pedagogical culture not abstractedly but in the functional relationship as an integral basis of each purposeful action on training and education of servicemen and personal self-development. The following levels have been singled out: ideological – contains a set of human knowledge about the world, nature, society and people

themselves, their outlook, views, beliefs, personality orientation; socio-psychological – combines such personality features as feelings, experiences, likes, dislikes, antipathies, etc. formed under the influence of the social environment; behavioral – accumulates skills, techniques, methods, organizational norms of each type of pedagogical activity.

## 2. Materials and methods

The aim of the study is to reveal the tasks and the course of experimental work, to represent the data of the final analysis of the results and recommendations for the implementation of the technology of formation of general pedagogical culture of future officers in the process of professional training.

The pedagogical experiment was conducted in the period from March 2016 to May 2020. As an experimental base of the research it was chosen National Academy of the National Guard of Ukraine and Bohdan Khmelnytskyi National Academy of the State Border Guard Service of Ukraine, Specialty 255 Weapons and Military equipment (experimental group – 93 people; control group – 90 people).

During the molding experiment higher education applicants of the 1<sup>st</sup> – 2<sup>nd</sup> year of study were mastering the academic disciplines «Military Psychology and Pedagogy», «Socio-Cultural Bases of Military-Professional Activity»; Bachelors of the 1<sup>st</sup> – 4<sup>th</sup> year of study – «Philosophical and Sociological Foundations of Military-Professional Activity», the optional subject «Fundamentals of General Pedagogical Culture of Future Officers»; higher education applicants for the Master's Degree – academic disciplines «Pedagogy of High School», «Methodology and Organization of Scientific Research», «Methodical Support of Technical Training». The effectiveness of the developed technology was deepened by the means of military practices and internships (at the end of the Bachelors Degree – IV, Master's Degree – V stage), when monitoring the behavior of the future officers, conducting tests to identify the effectiveness of philosophical, educational and psychological and pedagogical knowledge, clarifying the opinion of the servicemen about them as educators, tutors, teachers allowed to draw a conclusion about its expediency (Educational and Professional Training Program for Cadets, 2016).

In the course of the research of formation of general pedagogical culture of future officers in the process of professional training we used:

- theoretical methods – historical and pedagogical, content analysis, synthesis, comparison, modelling, generalization;
- empirical – direct and indirect observation, interview, polls, testing, expert evaluation;
- pedagogical experiment – ascertaining, molding, final;
- methods of mathematical statistics – pairwise comparison, ranking, Student's t-test, average statistical indicators.

To diagnose the achievements of the future officers of the EG the following additional research methods were used: self-analysis and mutual analysis by the higher education applicants their own and their colleagues training sessions and educational activities; modelling of the SCM of the peacetime and wartime and resolving conflict situations that may arise among the serviceman; role plays on preparation of the documentation necessary for carrying out the work with the personnel; creating a portfolio of materials for the measures to maintain military discipline, providing counseling on marital and family relationships, prevention of manifestations of various addictive dependencies, etc.

### 3. Results and Discussion

Synthesizing various elements of consciousness and activity, general pedagogical culture of an officer is a complex personality trait, formed by interpenetration of psychological and pedagogical knowledge and skills, general development and the state of professional and pedagogical qualities, pedagogical ethics and aspiration to self-improvement, the system of multifaceted relations, style of activity and behavior. The officer must have general pedagogical professional skills: adhere to the logical sequence in the presentation of information, submit the material distinctly, clearly, accessibly, explain difficult statements, highlight the main points, arouse and maintain the interest of servicemen in the subjects of weapons and special training.

The indicators of the formation of such a culture in the military sphere have been selected:

1) humanistic and pedagogical position in the relations with the subordinates, the ability to be an educator; psychological and pedagogical competence and developed pedagogical way of thinking; accomplishment in the field of weapons and special training and mastering pedagogical technologies;

2) ability to self-regulate personal activity, culture of interpersonal communication; diagnostics of the personnel professional data, forecasting its professional growth; realization of psychological bases of teaching, understanding the moral and psychological condition of the subordinate servicemen and their own;

3) experience of creative pedagogical activity, ability to justify their own pedagogical activities as a system, ability to develop author's educational projects; culture of professional behavior, ways of self-development; regularities of age and individual peculiarities of the subordinates' perception of the education content; commanding of ways, methods, techniques, forms and means of explaining scientific information and education of servicemen (Vasyshev, 2020).

Moral and psychological support of the servicemen in the Armed Forces of Ukraine is based on Psychology, Pedagogy, Psychophysiology, Sociology, Culturology, Science of Law and other Human Sciences as well as the best examples of foreign experience; it is conditionally divided into: spiritual, psychological and pedagogical, regulatory, organizational and action-oriented, life-supporting components. A future officer must possess his own technology of moral and psychological support of military actions and everyday life of a unit by application of the necessary knowledge, appropriate organizational forms, certain measures, methods, means of humanitarian education and moral and psychological support which are designed to ensure the implementation of the received tasks; realize that the requirements for moral and psychological readiness and humanitarian awareness of the personnel make it necessary for the future officers to have a certain level of general pedagogical culture and technological tools of its development throughout the whole period of professional activity. The effectiveness of pedagogical activity of the military higher educational institution, including development of general pedagogical culture of future officers, depends on the objective nature of information about the course of this process, degree of the goal achievement and specifics of the implementation of the humanitarian and pedagogical technology applied. It can be done practicing constant, systematic diagnostics of future officers achievements on the defined general military, professionally adaptive, professionally forming, professionally improving, final professional stages of general pedagogical culture formation. The leading types of diagnostics are represented by the assessment of the state of general pedagogical culture components mastering at each stage of the

future officers training and control over their activities during military practice in the military units (internship) in the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year of the Bachelor's and Master's degree. Such forms of diagnostic activity as observation of higher education applicants during classes, analysis of the state of the educational process for a certain period, academic performance record (recording the results of control in the form of evaluative judgments), making decisions on improving the content and methodological aspects of training have been defined as essential. The notion of «control» (Fr. *contrôle*) most fully reflects the specifics of the diagnostics of general pedagogical culture of future officers, as in Didactics this term is understood as supervision, observation and verification of success (Bondar, 1996).

The peculiar feature of the diagnostics of criterion indicators of the future officers' achievements during the study of the defined aspects of the disciplines of general vocational training and the optional subject «Fundamentals of General Pedagogical Culture of Future Officers» is that those forms of control and assessment, which are usually applied in traditional systems and criteria, will not be always effective there. It is due to the necessity to make the assessment mainly in the process of applying various interactive techniques: debates, role plays, discussions, discussions in groups, microgroups, etc.; to take into consideration that non-traditional lectures and workshops in the experience of each teacher do not always meet the usual criteria for the organization of the educational process at the military higher education institution that stipulates the responsible attitude of both teachers and higher education applicants. Traditional methods of pedagogical diagnosis usually do not meet the needs of measuring the results of general culture development, therefore, when studying the optional subject the teacher must be fluent in the forms and methods of diagnosing development levels, be able to decide which of them will be the most effective at each stage of professional training that involves application of the appropriate pedagogical methods and tools.

The theoretical analysis of the sources has clarified that scientists put in the concept of «diagnostics» a broader meaning than in the understanding of traditional knowledge, skills and qualities testing; however, control and evaluation are always the main, necessary components of pedagogical diagnostics (Kravchenko, 1996). Pedagogical diagnostics determines and systematizes the preconditions, conditions and results of the educational process in order to

optimize or justify its results for the society (K. Ihnenkamp); without diagnostics, the effective management of the educational process is impossible, because it contains control, verification, assessment, accumulation of statistical data, their analysis, identification of dynamics, trends, forecasting the further development of the phenomena (Bukhun, 2017). Therefore, the diagnostic and effective component of the technology of development of general pedagogical culture of future officers is focused on providing the following functions:

- stimulating – directs the assessment process to create the situations of success, and communication between a lecturer and a student at the lessons – to provide positive psychological atmosphere and comprehensive pedagogical support;

- learning – ensures the correctness of general pedagogical knowledge and skills as a result of detecting errors and inaccuracies, stimulates the completeness and strength of knowledge, cross-cutting links between academic disciplines and their deepening by acquaintance with additional material in the process of independent work;

- monitoring – consists in systematic monitoring by the lecturers and commanders of the students' educational activities in the study of the specified humanitarian content, identifying successes and shortcomings in knowledge, skills and abilities, finding out their causes and prompt appointment of measures to improve the general pedagogical culture of future officers;

- control and accounting – includes systematic work of future officers on the material of each subject; defining the level of the information comprehension, its evaluation according to a certain scale, taking into account some advantages and disadvantages of the learning process that enables the teachers to make necessary adjustments promptly;

- developing – provides improvement of cognitive and gnostic abilities, oral and written speech, logical thinking, independence, creativity, ability to work in a team, to debate, to plan the activities, etc.;

- educational – promotes formation of conscious discipline of the higher education applicants, responsible attitude to the profession, building up of diligence, persistence, sense of responsibility and duty (Kravchenko, 1996).

As a result of the systematization of the signs of the studied quality it has been established that the criteria for the formation of general pedagogical culture of future officers are

represented by the content of theoretically determined universal components of such a culture – worldview, social and professional, behavioral. Thus, the criteria and indicators of general pedagogical culture of future officers within the selected problem were:

– cognitive and gnostic: a set of knowledge in the main disciplines of humanities education, methodology of moral and psychological support and education of the servicemen in Ukraine, basics of pedagogical activity and its role in the formation of a personality in the modern world, theoretical provisions of the general pedagogical culture of future officers and servicemen and the technological factors of its development as well as the ways of their flexible comprehension and application;

– value-motivational: formation of axiological attitudes towards universal moral norms, national and patriotic values and positions; perception of humanism as the basis of the relationship between an officer and a serviceman; democratic, humane communication with the subordinates, comprehensive and constant support for them;

– operational-methodical: possessing by the future officers the ability to teach, to educate individually and support the servicemen, to evaluate their own actions, to interact with the representatives of other levels of military leadership, to put themselves in another person's shoes, to engage in dialogue, to master modern methods and communication technologies, to be tolerant of the subordinates and people with other viewpoints, to resolve conflicts in a civilized way (Vasyshev, 2020).

It involves the application of an appropriate set of diagnostic procedures: ranging, testing, assessment of control works and completed socio-cultural projects, generalization of the system of personal data and expert assessments, rating of academic achievements, etc.

The indicators for each of the selected criteria based on the analysis of the requirements of the specified Educational and Professional Programme for each discipline have been determined:

– cognitive and gnostic: 1) knowledge of the didactic foundations of the educational process for conducting classes on weapons and humanitarian training of the servicemen; 2) knowledge and awareness of the Ukrainian military culture role in the processes of state formation; 3) understanding the requirements of the guiding documents on the organization of the

educational process in the units and their conscious application;

– value-motivational: 1) use of knowledge of the history and theory of the world and domestic psychological and pedagogical science in the formation of scientific worldview; 2) independent analysis of facts, phenomena, processes of professional reality; 3) understanding the importance of the socio-pedagogical processes forecasting in the military teams and their guidance;

– operational-methodical: 1) mastering the methodology of conducting classes of various kinds, methods of defining and assessing the servicemen personal qualities; 2) application of humanitarian education methods and methods of moral and psychological support; 3) achieving the unity of the theory and practice in the preparation and organization of training and education of the personnel.

An important aspect of the implementation of the activity-methodical component has been defined as weapons training – formation among the future officers the knowledge, methods and technologies on the use of military equipment, in particular the study of the material part of the weapon, learning the rules and procedures for its use, security measures when handling weapons and sharpshooting in the establishments (special institutions) and in official activity. The result of weapons training is formation of the components of the professional competence of an officer – general, as an ability to understand the place of firearms in the cultural context of civilization development, to follow the rules of safe handling of firearms and ammunition, safe handling of weapons for themselves and the surrounding people; technical – an ability to use weapons in practice; and legal and regulatory – awareness of modern problems and the main tasks of weapons training in the process of professional development of officers, an ability to be skilled in the main laws and regulations, which are guiding the organization of the officers weapons training, to adhere to the normatively defined procedure for handling firearms and ammunition in various situations of official service activity.

At the present stage of higher military education development, more and more importance is given to the competence approach, that defines as the main thesis the formation of the specialist personality that is able to act rationally and scientifically sound coping with practical tasks in constantly changing conditions, constructively apply the acquired theoretical knowledge and experience of professional activity. At the same time, research competence is an

integrated result of the training of future officers, which involves shifting the emphasis from the accumulation of normatively defined knowledge, skills and abilities on the formation and development of their ability to act, to apply the acquired experience in the professional sphere.

According to the above mentioned facts the degree of expression of each of the proposed components of the general pedagogical culture of future officers, relevant criteria and indicators also involves determination by means of three logical levels of comparison: high (close to ideal indicators of its development); middle (formation of certain indicators is expressed sufficiently or satisfactorily); low (insufficient, reproductive expression of indicators, unsatisfactory, close to mediocre assessment of most of them) (Kravchenko, 1996); it determines the reliability of control within the proposed technology.

The final experimental study made it possible to conduct by a set of methods, which were used during the introductory diagnosing, verification of the effectiveness of the implemented humanitarian and pedagogical technology of development of general pedagogical culture of future officers at the military higher education institution. The purpose of the final comparison was to compare the results of the incoming diagnostics with the data of the formative experiment.

At this stage of the experimental work the dynamics of indicators of general pedagogical culture development of future officers and the efficiency of the elaborated model of the technology according to the selected criteria and levels was revealed. For this purpose, the empirical data obtained at the ascertaining stage of the study were compared with the results of the formative stage in the experimental and control groups; as a result of the observed changes, we have made a conclusion about the effectiveness of the proposed technology, which will be illustrated by the relevant arguments.

Thus, the technological algorithm of the formative experiment on the research problem was as follows:

– the future officers of the EG of the 1<sup>st</sup> year of study undergo an incoming diagnostics; in the 2<sup>nd</sup> and 3<sup>rd</sup> year of study and Master's Degree Programme master the content of the

disciplines of the general professional part of training and optional subjects («Military Psychology and Pedagogy»; «Socio-Humanitarian Bases of Military-Professional Activity»; «Philosophical and Sociological Foundations of Military-Professional Activity»; «Methodical Support of Technical Training»; «Pedagogy of High School»; «Military Training and Education»; «Theory and Practice of Humanitarian Education of Personnel»), at the end of each course perform final tests; the final assessment takes into account the assessments of academic achievement for all specified disciplines as expert assessments of the lecturers (in total – 7 indicators);

– the future third-year EG officers study an elective discipline «Fundamentals of General Pedagogical Culture of Future Officers»; the results of module tests are taken into account (in total – 3 indicators);

– the future fourth-year EG officers and Master's Degree students undergo final internships in the military units; the assessments of practice supervisors as experts are taken into account (in total – 7 indicators).

Thus, 17 expert assessments (in points and levels, according to each of the indicators of the relevant criteria of general pedagogical culture of future officers) are transformed into average final indicators and provide a basis for clarifying the existence of general levels of such a culture of the future officers in order to work with the personnel in the military units.

The final experimental study enabled with the help of a set of methods, used in the incoming diagnosing process, verification of the effectiveness of the implemented humanitarian and pedagogical technology of development at the military higher education institution of the future officers general pedagogical culture. The aim of the final comparison was to contrast the results of the incoming diagnostics with the previously obtained data of the formative experiment.

Summary results of the end-to-end diagnostics of the indicators according to the criteria of efficiency of the technology of the future officers' general pedagogical culture development by groups are represented in tables 1. and 2.

**Table 1. The results of development of the general pedagogical culture of the future officers of the experimental group (93 people)**

Data according to the criteria	Cognitive and gnostic (%)		Value-motivational (%)		Operational-methodical (%)	
Level	Bevore	After	Bevore	After	Bevore	After

	exper.	exper.	exper.	exper.	exper.	exper.
High	12,7	39,5	23,4	37,2	19,2	32,1
Middle	58,3	48,8	51,2	53,4	66,0	60,0
Low	28,6	11,7	25,6	9,6	14,8	7,9

**Table 2. The results of development of the general pedagogical culture of the future officers of the control group (90 people)**

Data according to the criteria	Cognitive and gnostic (%)		Value-motivational (%)		Operational-methodical (%)	
Level	Bevore exper.	After exper.	Bevore exper.	After exper.	Bevore exper.	After exper.
High	11,2	14,4	22,2	21,1	16,7	24,4
Middle	64,4	70,3	54,3	61,2	68,9	56,7
Low	24,3	15,6	23,5	17,6	14,3	18,8

Data processing of the tables 1 and 2 using the method of (Novykov, 2004) enabled us to make the following conclusions: the qualitative indicators of the levels of development of general pedagogical culture in the future officers of the experimental group in comparison with the control group confirm the quantitative indicators in the average scores and indicate the overall

qualitative increase: in the experimental group + 27,6 %; in the control group from + 0,3 to 5,7 %.

The table 3 summarizes the results of the control and experimental groups by the levels of formation.

**Table 3. The results of the final diagnostics of the state of development of the general pedagogical culture of the future officers in the EG and CG (% , 183 people)**

№	Formation criteria	Levels of formation											
		High				Middle				Low			
		Before exper.		After exper.		Before exper.		After exper.		Before exper.		After exper.	
1.	Cognitive and gnostic	-	1,5	23,6	5,3	23,6	30,3	62,8	34,8	76,4	68,2	13,6	59,9
2.	Value-motivational	27,9	30,3	52,9	36,4	70,0	68,2	54,3	62,1	2,1	1,5	1,4	1,5
3.	Activity-methodical	16,4	18,9	29,3	22,7	30,0	32,6	59,3	34,1	53,6	48,5	11,4	43,2
Groups		EG	CG	EG	CG	EG	CG	EG	CG	EG	CG	EG	CG

The reliability of the calculated quantitative and qualitative indicators of the effectiveness of the technology of development of general pedagogical culture of the future officers of the National Guard of Ukraine was determined by the means of the statistical Student's t-test. At first the auxiliary statistical hypothesis  $H_{01}$  was tested: the difference between the results in the experimental and control groups at the final and control stages of the study is significant.

Comparison of the parameter values according to the criteria 1, 2, 3 before and after the experiment using the Student's t-test in the control group allowed to conclude the following: for the criterion 1 –  $t_1 = 2,24$ , for the criterion 2 –  $t_2 = 2,5$ , for the criterion 3 –  $t_3 = 2,02$ ;  $t_{\kappa} = 1,99$ ,

at  $p < 0,05$ . Since  $t_i > t_{\kappa}$ ,  $i = \overline{1,3}$  according to the criteria 1, 2, 3, it is possible to declare the presence of insignificant changes in the control group of the future officers involved in the research.

Comparison of the parameter values according to the criteria 1, 2, 3 before and after the experiment using the Student's t-test in the experimental group allowed to conclude the following: for the criterion 1 –  $t_1 = 5,52$ , for the criterion 2 –  $t_2 = 8,2$ , for the criterion 3 –  $t_3 = 4,26$ ;  $t_{\kappa} = 3,4$ , at  $p < 0,001$ . Since  $t_i > t_{\kappa}$  according to the criteria 1, 2, 3, it is possible to allege the presence of considerable changes in the experimental group. Thus, the difference between the results in the experimental and control groups of the future

officers at the ascertaining and final stages of the study is significant.

As a result of calculations it was established that for the criterion  $1 - = 0,094$ , for the criterion  $2 - = 0,223$ , for the criterion  $3 - = 0,035$ . According to the tables of the Student's critical values  $= 1,99$  at  $p < 0,05$ . Since  $<$ , this means that the difference between the results in the control group at the ascertaining and final stages of the study is insignificant, therefore, we have the grounds to believe that the general average indicators of the two samples are the same and to use these samples as control ones in our research.

In conclusion it was defined that for the criterion  $1 - = 2,29$ , for the criterion  $2 - = 4,53$ , for the criterion  $3 - = 2,03$ . According to the tables of the Student's critical values  $= 1,99$ , at  $p < 0,05$ , as  $>$ , it signifies the substantive difference between the results in the control and experimental groups of the future officers at the final and control stages of the study.

Consequently, the auxiliary statistical hypotheses  $H01$  and  $H02$  are accepted, which confirms the plausibility of the stated aim of the research on the effectiveness of the theoretically substantiated humanitarian and pedagogical technology for the development of general pedagogical culture of the future officers in the process of professional training at the higher military educational institution.

#### 4. Conclusions

Thus, we have studied the theoretical and methodological foundations, defined the structure and modeled the humanitarian and pedagogical technology of the general pedagogical culture of the future officers' development, characterized its operational and methodological component, diagnostic mechanisms and the criterion-level base. Processing of a set of statistical data made it possible to conclude that qualitative indicators of the levels of development of the general pedagogical culture of the future officers of the EG compared to the CG confirm the quantitative indicators and indicate an overall qualitative increase: in the experimental group  $+ 27,6 \%$ , in the control group  $+ 5,7 \%$ . Regarding the components of the general pedagogical culture of the future officers a positive increase was proved: in the experimental group from  $+ 21 \%$  to  $+ 32 \%$  and in the control group from  $+ 0,5 \%$  to  $+ 6,7 \%$ . Thereby, the data obtained during the research indicate the effectiveness of the proposed

technology, as positive changes were observed according to all criteria of the studied quality.

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