

Properties of the Research Teaching Organization of Military Masters

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Abstract—In the article there have been revealed the properties of designing the research teaching the military masters and in the context it has been offered the program of mastering by the masters military men the methodology of research work, in the course of practical teaching activity there has been considered the developed and approbated model of organization of the process of mastering by the masters the methodology of research work.

As a whole, the research direction of master preparation leaves its sign to the content of education, forms of organization of educational process, scientific work of masters. In this connection the offered in the article properties of organization of research teaching and a model of organization of mastering by the masters military men the methodology of research work can be taken into account when designing the content of master preparation.

Keywords—Masters militaries, Methodology of research work, Military knowledge, Research teaching.

I. INTRODUCTION

THE military doctrine of the Republic of Kazakhstan (RK) of one of the main objectives of ensuring national security in modern conditions puts forward – training improvement for Armed forces, other armies and military formations in the conditions of development of contract system of acquisition of armies and taking into account world experience [1]. In the Law RK ‘About national security of the Republic of Kazakhstan’ as real threat of national security in modern conditions deterioration of education and intellectual potential of the country [2] is specified. Search of the solution of this problem is connected with development of ways of the effective organization of military professional education. These questions are today in the center of attention of the Kazakhstan scientists-teachers investigating and developing conceptual approaches to effective preparation of military experts of different level.

It should be noted that military education of the Republic of Kazakhstan is a component of uniform educational system therefore an orientation of transformations, development principles; training methods as a whole are identical.

The domestic system of military education is presented by 4 organizations of the secondary general education with deepened studying of initial military preparation, 13

organizations of the primary military education, 3 specialized educational institutions of secondary military education, 9 educational institutions of the higher military education. Preparation in higher educational institutions is carried out according to a profile, proceeding from features of mission of armies, for example, Boundary academy - staffing on Frontier protection, etc. Preparation of the international military experts is provided also. So, according to the Ministry of Defence at the moment within the IMET program «The international military training and preparation» our military experts are trained in military educational institutions of the USA, the Turkish Republic. Successful military cooperation with the Federal Republic Germany in the field of preparation of military shots proceeds. The priority directions of training remain training of specialists on standards of NATO, especially technical profile, in the field of logistics and military medicine. Extend a cooperation range in the field of preparation and retraining of military experts with the Chinese National Republic, France, Pakistan, the Republic of Korea.

In this regard, updating of a problem of the organization of research training in system of preparation of military masters it is caused by the concept of formation of the society constructed on knowledge where the great attention is given to questions of development of ability to study quicker than competitors. The main place in development of this ability is allocated for independent research, an eksperimentirovaniye, the doctrine through search and opening.

II. ORGANIZATION OF RESEARCH TRAINING

The situation of teaching masters militaries begins from that all audience virtually are before solving the problem – how to learn to adapt their knowledge to new conditions. And it is not simple task which each master has to solve.

When questioning the first year students of master programs such a question: “What kind of difficulties did you come across with when doing research tasks?”, the follow replies were obtained – 25% of respondents mention the difficulties with a lack of time; 34% mention the lack of skills, systematization and distribution of efforts when arranging personal research activity; 41% - difficulties in finding materials on their topics, in arrangement or building scientific instrument.

For question: “On which of cycles of organizing the process of master investigation you had difficulties and what kind of them?”, virtually 58% of respondents answered: organizing experimental work and bad knowledge of experimental methods and instruments. 42% of respondents said: the difficulties on the beginning stage and before all these

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difficulties were connected with personal motivation and making the structure of dissertation, with searching theoretical material and structuring it.

In our representation efficiency of research training is connected with the designing personal-oriented educational space in the military school. In such educational space there will be created such educational situations when not only knowledge is stated but there will be discovered, formed and realized personal properties of learner masters. In a such medium prevails emotional positive mood to work, and the classes are attractive and effective. The teacher not only creates a kindly creative atmosphere but always turns to subjective experience of the masters, i.e. to the experience of own vital activity. At last, the very important – he admits originality and uniqueness of each learner.

At the same time *the properties of personal-oriented educational class* are the follows:

- 1 Designing of various didactic materials in various kind, determining of the aim, place and time of use it at classes.
- 2 Thinking of opportunities by a teacher for independent appearance of learners. Providing for opportunities to them to ask questions, to tell original ideas and hypothesizes.
- 3 Organization of change of thinking, opinions, estimates. Stimulation of learners to addition and analysis of replies of their friends.
- 4 Use of subjective experience and support to intuition of each student. The use of complex situation aroused in the course of lessons as a field of knowledge application.
- 5 Aspiration for creating the situation of success for each learner.
- 6 Stimulating each learner to search of alternative information when preparing to seminar, practicum and etc.
- 7 Well thought-out alternation of the kinds of work, types of tasks that will decrease a fatigability of learners.
- 8 Observing learners [3].

In the system of personal-oriented education the teacher and the learner will act *as equal right partners*, bearers various but required experience. The professional position of the teacher is that to know respectful care to any opinion of learner on the content of the theme discussed.

The teacher must think not only that, which material advice, but guess what from this material there is in the subjective experience of learners as a result of their previous education and own vital activity. At the same time to discuss “versions” not in appraisal situation (right-wrong), but in equal right dialogue, generalize these “versions”, to mark out and support corresponding theme of class to the tasks and aims of education.

In such conditions the learners will aspire for to be heard, actively say their opinions on the topic discussed, offer not being afraid of being mistaken their versions. Discussing them, the teacher will forms collective knowledge not simply obtain from the audience reproductions of finished specimen prepared to them for mastering.

Choosing a didactical material, the teacher must take into account both its objective complexness and individual

preference of each learner. The collection of such a material should be used flexibly during the classes, without this it will not be personal-oriented one in original meaning of this word. When preparing for the classes it is required to design in advance all kinds types of communications belonged to educational aims, all the forms of cooperation between learners.

Interpersonal interaction during the classes will be provided for by:

- the use of various forms of communications;
- taking into account of personal properties, requirements to intergroup interaction (distribution by groups, pairs and etc.)
- anticipation of possible changes when organizing a team work of the group, correcting them by the course of the class [4].

Effectiveness of the class is determined by generalizing the obtained knowledge and skills, the mark of their mastering; the analysis of the results of team and individual work; great attention to the process of fulfillment of tasks, not only to the final results; discussion at the end of the classes of that what did “we know”, what did we like and why.

One can mark out the follow ways of organization of research education in preparing the masters in the field of military knowledge: initiation of the masters’ activity; fitting out with the ways of productive activity, work with variety of informational texts; stimulation of individual choice and motivation of creative work; providing for development of criticality of thinking, change of appraisal opinions; activation of cooperation in a team work; training of models, strategies of behavior and communicative skills; help in self-management of independent activity, obtain “I-massage”, taking decisions.

On the assumption of before said, we offer the follow scheme of studying the theme within educational classes and their cycle;

- problem actualization of the theme, within which it is formed emotional relation to the theme and necessity of its study (cognitive motivation), investigation of problems leading to necessity of study of educational question;
- the results of the investigational process;
- correction by the teacher of the process of investigation depending on the level of readiness of learners;
- problematization of separate notions, building hierarchy of notions (the basis of the notions), links;
- the series of study tasks; discussion of tasks by the groups of masters (mark out the marks, substantial marks, functions, the main mark as a origin of development), search of salvations; theoretical determination of notions;
- the analysis of educational material with applying new notions (use of texts-origins, maps);
- creative tasks to the understanding the processes of internal development of pedagogic phenomenon, forecasting them, interpretation; control – to skills to operate with notions, creative types of the control (it is possible specific practicum where taking place joining of various skills – theoretical

knowledge, psychological, pedagogical, for example, working out a theme, the parts of the theme and etc.)

- during the study the constant activity of masters on estimating their own results;

One should underline that in research model of education the teacher occupies a new but not habitual for him *professional position* - at the same time both the teacher and psychologist who can fulfill the complex observation each learner in the process of his/her individual development, personal forming.

The general principles of organizing the educational process in the system of master preparation are the principles: activity in which the learner acts as a subject of educational activity able to having an influence on the process of education and to occupy in it an active and selective position; freedom of self-expression and self-realization of the subject of educational activity; actualization of creative ability of adults in the process of education; fixing the accent with accumulation of knowledge, skills, habits for the search of individual strategy of self-determination of the subject; re-consideration of traditional approaches to the content, the forms of educational process, refuse from authoritarian, manipulative pedagogy; freedom of the choice of strategies of individual vital way of the subject of the educational activity [5].

In this context the program of mastering the future masters' methodology research includes the parts, orientated to:

- *getting acquaintance* with the results of the analysis of theoretical-practical preconditions, international inter-governmental and expert papers, revealing the main tendencies of development of education in the world, stating the intentions and planned program actions;

- *the understanding* of analytical research data obtained as a result of international investigations in the field of education which reveal the problems, progress and factors of successful activity in the educational systems in various countries or establishments;

- *mastering* the ways of investigational practice represented in recommendations and text books of international organizations, work of specialists of various countries;

- *development* of reflexive experience, citizen position, abilities to solve the problems and tasks which determined as priority of international and national policy of education;

- *forming* a individual and team responsibilities for professional activity.

The set of actions of the teacher on development in the process of mastering by the masters the methodology of study activity are given below:

TABLE I
THE SET OF ACTIONS OF THE TEACHER

Types of the teacher's activity on the separate stages of mastering the methodology of study work	The teacher's aim	The teacher's task
Diagnostic work – determination and fixation of the fact, signal of problems; the absent of orientation, the presence of difficulties, a lack of abilities and qualities, external obstacles.	Creating the conditions for understanding by the master the meaning of the problem (“determination of meaning”, taking out unsubstantial one behind the brackets), determination of estimated contradictions of own meanings (meaning-creative function of mind)	Verbalization of the problem
Joint searching organization with learners the cause of arising the difficulties, possible consequences of keeping out it (or overcoming)	Support and being responsible of the master for arising and solving the problem with by using the data of diagnostic stage (determination of locus of self-control)	Support in determining the aim of forthcoming choice – in the course of detection of facts and causes there will be appeared the advance “working” conclusions and the ways of reaching the aim as a way out from the problem.
Active work – organization of mastering new methods and strategies of the activity	Creation of the conditions for using the separate ways of actions, operations and activities.	Providing for independence of the actions of the learner.
Reflexive work – joint discussion of successes and failures of previous stages of the activity, constant the facts of solvencies of the problem for its re-forming.	Help in determining and thinking linked with the problem of the facts and conditions, causes which had lead to difficulties.	Providing for of the analysis of the action by the master both as the way of actions and reached result.

The level of development of those or other components of the process of mastering by the master in the field of education the methodology of the research work is shown in the course

of mastering a concrete occupational work with scientific-research direction.

The level of mastering the methodology of the research work shows those thinking and active abilities which the master has got topically what can do and for what he is fit the conditions of changing and arising of unseen situations.

Each of the levels of the process of mastering by the master of the military school the methodology of the research work supposes *the mastering four components, but various by quality content. This is notional difference, research models, intellectual research techniques, the ways of organization of communication and collective work.*

Those masters which master more qualitative parameters of the methodology of the research work show the best skills in designing and forecasting the future, in making out paradoxes and building the pedagogical models, in organization of pedagogical experiment and placing the experimental tasks for applying the knowledge, in proof and denying, building the notions and in carrying out qualitative researches.

If the qualitative parameters of the process of mastering by the master the methodology of the research work at the base level one can analyze by the quality of the current educational tasks, research designs and independent work, changing at the functional level one can follow through:

analysis of the process of carrying out the research work of a master, in the course of which for substantiating and verification of the scientific results his work the master acts in interactions with the other people, builds communications in various order;

the property of problematic of the individual research work of the master, holding a subject nature and allowing showing all individual properties of personality;

aspiration for substantiating the obtained scientific knowledge, openness of it for a competence critics during which there is satisfaction of necessity of the man in cognition activity and self-confirming the personality of the master.

The dynamic of development of the phenomenon studied at a potential level can be followed:

in abilities of the master to flexible application of research skills, general representations of himself and his/her research work, motivation to scientific search in solving the tasks of education;

in fulfilling the actions and work when solving the various research situations oriented to the solving of the problem of military education;

by the quality of work over the dissertation, though their version is determined by the field researched and a scientific direction of master preparation, belonging of the research of the master to this or other scientific school.

The indexes of quality of the master dissertation along with the general requirements put forth to all kinds of qualification work, we marked out the specific requirements to: the direction of master work for obtaining a general new knowledge significant for solving real problems of military education; in use of materials; substantiation and modernity of bibliography, literature in foreign languages, materials presented in the modern information systems (internet); to

presentation and approbation of the results of research in various social-cultural forms.

The levels of the process of mastering by the master the methodology of research work are shown in personal qualities of learner. The subjective conditions of estimation of the level of mastering by the master the methodology of research work are satisfaction of the participants of educational process in magistrate its conditions and results of the research work, adequateness of self-estimation and stability of research motivation of the masters.

Consequently the development of the process of mastering by the master of military school the methodology of research work as a task of educational process determines its content including philosophy of science (for understanding the role and the place in modern society), axiology of scientific work (for self-determination in its estimation-meaningful foundations), the methodology of the scientific work (for mastering the norms of investigations and designs).

Such an opinion determines the choosing the organizational forms of educational process in the magistrate constituted of audience classes, consults with scientific manager and an individual work.

III. RESULTS OF RESEARCH

Features of the organization of research training of military masters will claim careful development of its methodology. Thus principles and methods of the organization are identical to what are applied in an education system as a whole.

Mastering by masters of military higher education institution by methodology of research activity allows the trainee serviceman to organize and operate research activity and individual resources during realization of military and scientific researches. Such understanding of research preparation defines a choice of organizational forms of educational process in a magistracy, consisting of auditorny occupations, consultations of the research supervisor and individual work.

Realization of a master educational program consists of theoretical training and passing scientific and pedagogical the practician, and also writing and protection of master dissertations. By the curriculum theoretical training is determined by the maintenance of base obligatory subject matters, base disciplines of a component by a choice and profile disciplines of the obligatory block and a component for choice.

The analysis of the organization of educational process showed that as a whole practically all teachers of military higher education institution use connection on occupations of elements of research and technology of cooperation. Results of supervision and the analysis of occupations show that different levels of interaction are used: the teacher – the trainee (at the work organization in collective, individual, nonlearning, and also situational interaction); the organizational – (in group between undergraduates, between creative groups). However the interaction potential the undergraduate – the operating organization which can be expressed by activity of undergraduates in carrying out scientific seminars,

conferences, and also work on ensuring continuity of school of sciences of higher education institution, traditions, is used not fully and is a reserve.

By means of questioning obstacles in development of process of mastering by methodology of the research activity, called undergraduates became clear. They were classified in the following groups: a) lack of skills of public scientific statement; б) absence of knowledge and abilities of possession of means of self-development (as it to do); в) negative attitude to self-education and self-development process; г) lack of skills of the organization of individual NIR; д) absence of access to an empirical material. The difficulties allocated by teachers of a magistracy, made the following groups: a) lack of a sistemnost of collaboration; б) problem of motivation of the listener; в) insufficiency of motivation of the head.

The program of forming experiment on the organization of process of mastering by methodology of research activity of undergraduates included three stages:

1 stage - a stage of an objectivization of need of mastering the Ministry of Foreign Affairs in the course of studying of disciplines of a base component, a zadachny form of the organization of seminar occupations, training to planning and the organization of research activity

2 stage - development of process of mastering by the undergraduate the Ministry of Foreign Affairs through the maintenance of the main subjects («Modern technologies of training», «Methodology and a technique of military and scientific researches», etc.); formation of independence and activity self-organizing through the solution of research tasks, implementation of educational and research projects, research activity of undergraduates and research supervisors, research practice, a special course «Methodology of research activity and the practician of its mastering».

3 stage - development of process of mastering by the undergraduate the Ministry of Foreign Affairs through familiarizing with work of «School of young scientific undergraduates», implementation of the master dissertation, carrying out treningovy occupations, master classes, further acquaintance to school of sciences of the head, approbation of results of research.

The developed practical course «The methodology of research activity and the practician of its mastering» provides participation in self-researches, projects; performance of creative works; expression «I - positions» during occupations; drawing up of own psychological portrait; ability development in introspection and psychological supervision; participation in intellectual and creative actions; determination of self-image through questioning, a reflection, conversation.

Semantic kernel of this course is the concept of a subjektnost of research activity. Giving idea of research activity of the person, of methodology of research activity as the doctrine about the organization, this course promoted understanding of own possibilities. Besides illumination of a complex of such general questions as the subject of professional and personal development, a subject position in life and scientific creativity, the relation to a profession, bases of self-organizing and some other questions, the special course

practical work assumed judgment of the choice of profession, aspiration to personal and professional self-realization, the relations to as to the subject of own activity, formation of abilities independently to set the research purposes, to plan, predict, rationally to organize and carry out correction of research activity, to supervise, analyze and estimate itself as the subject of self-education and self-education.

Besides, the cycle of training occupations with teachers on the organization of development of subject potential of undergraduates in the course of mastering by methodology of research activity was developed. The main form of its organization – master classes, discussions, discussions of occupations by that, demonstration of a first-hand experience. On occupations there is a reflection of a personal experience, synthesis of pedagogical experience, joint development of an intellectual product on an occupation subject. At the end of a cycle press conference or a round table is supposed.

IV. CONCLUSION

The complex analysis of results of practical work shows the importance of mastering by undergraduates of military higher education institution methodology of research activity. Those undergraduates who seize the most qualitative parameters of methodology of research activity show the best abilities in design and future forecasting, in allocation of paradoxes and creation of pedagogical models, in the organization of pedagogical experiment and statement of experimental tasks on application of knowledge, in the proof and a denial, creation of concepts and carrying out high-quality researches.

Teaching experience show that one of the directions of improvement of educational process in a military magistracy is change of the main approaches and principles of the organization of auditorny occupations which provide development of norms of research activity, to increase culture of scientific thinking and to "start" self-education and self-development mechanisms.

From strategy of informing and education it is necessary to pass to reflective деятельностью to forms of the organization of the educational process, promoting forming of the general semantic field. Such forms of the organization of a collective mysledyatelnost as discussions, debate, problem деятельности and organizational and cogitative games, public examination of the turned-out materials, round tables and meetings with leading scientists of the republic, provide development by the military personnel of ways of system thinking, the technician of a mysledyatelnost, methods of research, communicative and aksiologicheskyy activity. In a situation of collision and coordination of the various points of view, discussions of different scientific currents occurs both acceptance of professional ideals of scientific community, and "crystallization" of own scientific style which is realized in individual creative research work.

Thus, the contents and forms of educational process in a magistracy should become that the developing educational environment in which there is a formation of the scientists-researchers realizing the mission, possessing the research

position, capable to innovative activity in various areas of social practice.

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