Modern Educational Technologies as Effective Means of Psychological and Pedagogical Training of Military-Technical University Adjuncts as Teachers and Researchers

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Abstract
The relevance of the problem discussed in this article is determined by the existing contradiction between the humanistic orientation of the competent educational paradigm, which determines the personal-oriented organization of the educational process of the military-technical university and the dominance of the technocratic approach, due to its closed nature of military education as well as its profile orientation of the military-technical university.

On this basis, this article identifies the place and role of modern educational technologies in the development of personal and professional reflection of military-technical university adjuncts in the process of their psycho-pedagogical training as teachers-researchers. The leading method was the method of studying and summarizing the author’s pedagogical experience.

The article justifies the essential and phenomenological orientation of the self-development technology of the person, dialogue and interactive technologies in the process of teaching psycho-pedagogical disciplines in the educational practice of adjuncts. The essential focus, in general, is characterized by the development of personal and professional reflection of adjuncts of the military-technical university as a mechanism of their self-development, self-education, self-realization, both in the educational process, and in research, service and social activities. Phenomenological focus is reflected by specific psycho-pedagogical disciplines («Psychology and pedagogy of higher school», «Methodology and techniques of vocational-oriented teaching») along with the implementation of dedicated technologies.

Keywords: self-development technology, dialog technology, interactive technology, psychological and pedagogical training of adjuncts as research teachers, reflection, personal and professional development.

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Published by Kazan federal university and peer-reviewed under responsibility of IFTE-2020 (VI International Forum on Teacher Education)

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Introduction

The development of the national system of military education at the present stage is carried out in the framework of continuing education model and competence-based educational paradigm, which is enshrined in existing normative documents (State Duma of the Russian Federation, 2012; Order of the Minister of Defense of the Russian Federation, 2014), and therefore, necessarily determines the use of the psycho-pedagogical training process of adjuncts as teachers and researchers of modern educational technologies aimed at the formation of their subjective experience as the foundation of their personal and professional development: the experience of cognition, the experience of owning methods of activities, experience of communication.

At the same time, the specific nature of higher military educational institutions is characterized by the closed nature of the military educational environment, which results in a commitment to the traditional model of organizing the educational process and pedagogical tools that have been tested over time and proved their effectiveness in the existing experience. Along with this, the specificity of military professional education is also manifested in the relationship of educational, extracurricular and service activities, which, in itself, determines the hierarchy of service relations that are transferred to the educational process. The military-technical orientation of the Military University is also associated with the dominance of the technocratic approach in the educational process, which contradicts, in its functional orientation, the humanization of the educational process and its modern competence-based educational paradigm.

Various aspects of the specifics of military education, military-pedagogical process, pedagogical culture, military-pedagogical qualities of the officer, competence approach were studied by Alekhin (2020), Beloshickij & Meshcheryakov (2013), etc. Essential characteristics of the technology of self-development of personality are presented in the works of Andreev (1996), Bordovskaya (2013), Selevko (2002), etc. At the same time, the competent model of psychological and pedagogical training of adjuncts of the military-technical university, as teachers-researchers, has not been studied yet.

Purpose and objectives of the study

Justification of personal and professional potential of modern educational technologies and synthesis of experience of their implementation in the process of psychological and pedagogical training of adjuncts of a military-technical university as teachers-researchers.

Methodology

Analysis, synthesis, comparison, contrast, study and generalization of pedagogical experience.

Results

The level of psychological and pedagogical sciences’ development to date makes it axiomatic that the greatest progress in learning, personal and professional development is achieved by self-developing individuals.

The focus characterizes the technologies of self-personality (Andreev, 1996; Beloshickij & Meshcheryakov, 2013; Prosvetova, 2017; Prosvetova & Beloshickij, 2018), which is a basic technology in the study of psychological and pedagogical disciplines (Selevko, 2002; Order of the Minister of Defense of the Russian Federation, 2014) by the
adjuncts of the military institution and it is aimed at self-educating, self-improving, self-developing personality of an officer of the teacher-researcher, the characteristics of which are: spirituality, ideological orientation, sustainability of goals and objectives of self-improvement; possession of self-improvement set skills; high level of personal independence, readiness to engage in various types of personal and professional-oriented activities; readiness for creativity.

The goal of the technology of personal self-development in the educational process of military University adjuncts is systemic in nature and includes a set of sub-goals and tasks that are reflected in the real educational process in the formulation of educational, developmental and educational goals of each class. Developmental goals include: development of individual abilities; formation of a positive self-concept of the individual; formation of a dominant self-improvement of the individual, development of creative thinking. Implementation of educational objectives involves the conversion of education process into self-education through the formation of self-education and self-improvement skills; the implementation of personal, student-centered approaches; the development of moral, aesthetic and volitional spheres of personality; the formation of creative qualities of the person, faith in yourself; the formation of moral attitude to oneself (self-esteem, self-respect, dignity, honor, conscience) and the world (humanistic, dialectical, ecological thinking), the formation of independence as an integrative personal qualities of the adjuncts; creation of conditions for self-expression, self-assertion, self-realization; creation of educational environment, stimulating the adjuncts needs in self-improvement; developing skills for self-management, self-regulation, programming self-identity. Educational goals include: the formation of a stable motivation for learning as a vital and professionally important process; the formation of universal, professional and special competencies defined in the main professional training program.

In the educational process of adjuncts, the technology of personal self-development includes three mutually dependent components. This is a theoretical component, characterized by the fact that the effectiveness of the processes of self-improvement, self-education, and the influence of the individual on itself is determined by the level of awareness of the adjuncts' goals and opportunities for their development. The study of psychological and pedagogical disciplines gives them the opportunity to master theoretical categories and concepts, as well as the laws of self-knowledge, self-development, and self-education. This component is interconnected with the "practical" component, which in the educational process organizes the experience of independent and creative activities of students, aimed at the formation of universal, general pedagogical competencies. The main goal is to accumulate experience of independent activity and develop independence as an integrative personal quality that characterizes the level of skills to regulate their relationships with others and themselves. Independence is manifested in an adequate self-assessment of their forces and abilities, in the presence of skills and abilities of self-education, in the ability to self-determination in educational, life and professional circumstances, to assert themselves in society and the professional sphere. Independence is the result of education and self-education; at the same time, it acts simultaneously as an important condition and tool for self-development of the individual. The core of independence is the self-concept of a person whose positive orientation (I know, I can) is a necessary condition for its success, corresponding to a high level of independence. Theoretical and practical components of self-development technology are interconnected with the methodological component, involving the creation of psychological and pedagogical conditions by a teacher to implement technologies of self-personality at every lesson with adjuncts: pedagogical support of self-education of adjuncts; shifting the focus from teaching to learning and to independent, creative activity of adjuncts; developing not only cognitive, but also moral and volitional motivation of adjuncts; stimulating their understanding of the teaching process (development of personal and professional reflection); systematic and consistent formation of universal, general professional and professional competencies.
Along with the technology of personality self-development in the educational process of the adjuncts the study of psychological and pedagogical disciplines systematically applied interactive technology of special educational and communicative environment in class, contributing to not only mastering the dialogical way of thinking, but to provide a reflection, the development of intellectual and emotional qualities of the personality (stability of attention, observation, memory, imagination, the ability to analyze the activities of others). During such classes, the content of educational material is learned, mainly as a result of communication, during which there is an appeal to personally significant meanings, to one's own consciousness, experience. Dialog technology helps to accumulate experience of solving psychological and pedagogical problems by adjuncts, as future teachers of a military university, and to form the experience of communication.

Dialog technologies, in turn, in the educational process of adjuncts are interconnected with interactive technologies that were used in the study of the discipline «Methods and techniques of professionally-oriented teaching» (State Duma of the Russian Federation, 2012). The use of interactive technologies and methods (brainstorming, case technology, «PRES-formula», «Take a position», etc.) caused the subject-subject nature of interaction in the systems «teacher-adjunct», «adjunct-adjunct». Interactive technologies allow, while preserving the purpose and main content of the educational process, to change the forms – from broadcasting to dialogue (information exchange based on mutual understanding and interaction). Interactive technologies also allow you to simultaneously solve three main tasks: a specific cognitive task that is related to the direct educational purpose of the lesson; communication and development, in the process of which the basic communication skills are developed inside and outside the study group, as well as socio-pedagogical, aimed at personal development, necessary for positive socio-cultural socialization. The use of interactive technologies in the educational process of adjuncts opens up opportunities for them to develop personal reflection; awareness of involvement in common work; development of an active subject position in educational activities; development of communication skills; acceptance of moral norms and rules of joint activity; increased cognitive activity. For the teacher, interactive technologies expand the opportunities to purposefully put pedagogical situations before adjuncts that encourage them to integrate efforts aimed at solving typical and atypical educational and interpersonal situations; as well as to purposefully create psychological and pedagogical conditions for the development of their independence in intellectual behavior; development of readiness for reflection and self-reflection, which, due to the purposefulness of the teacher's actions, acquire a systematic character and integrate into personal properties as an immanent mechanism of self-development.

Interactive educational technologies are interconnected with training technologies, the subject of which is personal and professional interaction. The main goal is to form an interpersonal component of future professional pedagogical activity by developing psychodynamic properties of students and forming their emotions, intelligence, and meta-competence.

During the training, the following tasks are implemented: practical application of knowledge, skills and abilities of professional interaction; discovery, awareness and demonstration of behavior models, as well as behavioral reactions of partners, manners, individual communication style, etc.

In contrast to the theoretical schemes offered in lecture courses, which usually have few options, in the course of training, students form the most productive methods and methods of interaction based on their individual characteristics and communicative competence. The high educational effectiveness of the training is also determined by the fact that the training, being built on the simulation of real professional situations, requires of its participants to be actively involved in the process of communication and mobilization of intellectual and analytical potential.
Formally, training is a practical activity under the guidance of a teacher, aimed at developing personal and professional qualities of students, a better understanding of themselves and others; one of the specific ways to gain personal experience. The training is based on group work, which expands the possibilities of influencing the individual in specially organized group interactions.

The modern educational process in a military university, and specifically practical courses, makes it possible to combine various types of training: instructional training, characterized by the acquisition of new knowledge; professional training, involving the formation and development of students’ necessary professional qualities; personal training, aimed at the formation of individual abilities and personal qualities necessary for professional and life activities; personal advancement training, involving the creation of a learning environment in which through exercises, students can discover and understand the interpretations that directly affect the results of their activities. At the same time, the author's pedagogical experience allows us to state that in the educational process of a military university’s postgraduates training courses based on the use of various games and training exercises and personally important communications are more applicable in the process.

When using a variety of interactive technologies in the training process, participants are usually expected to encounter relevant situations that arise in their real military professional activities, which can not be resolved by applying standard, traditionally used techniques and tactics of behavior. This is important for finding optimal ways to resolve situations and develop an effective formal interaction scenario.

The use of training technologies in the process of psychological and pedagogical training of a military university's postgraduates significantly changes the role of the teacher, who turns mainly into a facilitator, stimulating the work of the group when performing tasks. The teacher, supporting the atmosphere of cooperation, acts as an analyst and commentator at the same time. Its main goal is to organize the development direction.

An essential feature of training as an educational technology is also that it allows to play the process of interaction through the search and implementation of decisions, choice of acts and operations. The boosting effect of training is also due to the creation of a special educational and experimental environment that provides participants with an understanding of what individual and group psychological events unfold in the processes of interpersonal communication, intensive feedback, and the formation of practical skills necessary in everyday work. Postgraduates which take part in the training become witnesses of how each of them affects the others, what is the role of joint activity and its content, how the situation as a whole (that is, the dynamics of relationships and actions) governs the behavior of individual students and the entire group.

For learning and development of competencies in modern training, almost all methods and technologies are used, namely: information, message, mini-lecture; structured and controlled discussion; brainstorming, which are case analysis and case study; role-playing and acting out situations; communicative tasks and exercises; presentations and self-presentations; analytical exercises; simulation games, pretend plays; elements of professional simulation; video demonstrations, etc.

Modern stage of higher military professional education (training of highly qualified personnel), both by its development trends and by the regulatory framework, determines the need for the formation of personal and professional competencies of a military university’s teacher as a researcher. In this context, training technologies are presented as a mechanism for
translating theoretical knowledge into the practical field of skills and abilities not only of military professional pedagogical activity, but also of personal development.

**Discussions**

The subject of discussion is the availability and scope of psychological and pedagogical disciplines in the curriculum of adjunct studies, despite the fact that the result of training is the assignment of the qualification «Researcher. Teacher-researcher». In particular, this is expressed in the position formulated by Beloshickij & Meshcheryakov (2013, p. 25) about «the need to replace pedagogical disciplines with mathematical ones». This point of view reflects the long-dominant and prevailing technocratic approach of military-technical higher education, which is a consequence of the relatively closed nature of military education with the existing system of restrictions that practically exclude the possibility of not only initiating innovation, but also the application of standard-based and implemented innovations in higher education. This point of view does not correlate with objective processes, in particular with the competence-based educational paradigm, which shifts the emphasis towards humanization and humanitarization of the educational process not only in higher education, but also in higher military schools. Moreover, the results of the research conducted by the opposing authors are not the basis for such conclusions. Thus, of the significant motives for entering the adjunct program and evaluated on a seven-point scale, the first two positions were occupied by: self-realization, gaining experience in research (6, 21), self-realization, gaining experience in teaching (5, 91).

Thus, the process of self-realization is the main motivation for adjuncts to obtain this level of training. And it is precisely psychological and pedagogical disciplines, which use modern innovative educational technologies, give adjuncts the opportunity to develop personal and professional reflection as a condition for their self-knowledge, self-education and self-development. And this is a real component of the humanization of their educational process, which of course contradicts the priority of the formal indicator – the protection of scientific and qualification work after completing their studies at the adjunct school.

**Conclusion**

The implementation of modern educational technologies (self-development technologies, dialog technology, interactive technologies) in the process of psychological and pedagogical training of a military technical university’s adjuncts as teachers and researchers contributes to their personal and professional development and the formation of subjective experience (knowledge, possession of methods of professional and pedagogical action, interaction in various pedagogical systems). The pedagogical task of the teacher of psycho-pedagogical disciplines is to help adjuncts to exercise self-development, self-education in the educational process through awareness of the processes occurring in their psyche, development of the ability to consciously comprehend and manage them; development of motivation to achieve the goal of their personal and professional development.

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