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Toronto, September/October 2016

The Motives of Technical Competence Formation in Future Radio-Electronic Officers: Modern Trends

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Abstract

The article studies the essential features of technical competence of future radio-electronic officers as well as traces the motives of students' entering the military school. The paper represents the results of studying the significance of future officer's forming motives of technical competence as well as determines five groups of motives (material incentive, occupational prestige in the society, personal realization within the professional activity, comprehending the function of the profession, the professional activity proper). The attention is paid to the teachers' educational activity aimed for the students to realize the applicability of the military officer profession as well as their occupational self-actualization.

Key words: competence, professional competence, technical competence, a radio-electronic profile.

Formulation of the problem. Modern worldwide globalization and integration processes call for the training of military specialists able to quickly adapt to complicated circumstances of the professional activity as well as make independent and responsible decisions aimed to get success and long-live self-perfection. The abovementioned presents the issue of technical competence formation as a peculiar integrational training of future radio-electronic officers.

Analysis of recent researches and publications. The results of professional, methodological, subject, psychological and pedagogical are represented in the works by V. Adolf, V. Baydenko, O. Bihych, O. Hura, I. Ziazun, O. Kovalenko, N. Kuzmina, M. Lukianov, A. Markova, I. Mishchenko, O. Ovcharuk, V. Svystun, S. Sysoyeva, V. Strelnikov, Yu. Tatur, L. Tarkhan, V. Ternopilska, A. Khutorsky and others. The theoretical aspects of competence approach in the process of military specialists' training are considered in the papers by V. Yahupov, V. Druzbyn, O. Yevsiukov, P. Korchemny, Ye. Lytvynovsky, Ch. Chystovska and others.

The essential features of personal motivation sphere are analyzed in the works by K. Abulkhanova-Slavska, V. Aseyev, D. Atkinson, Ya. Bozhovych, V. Viliunas, V. Davydov, V. Semychenko, V. Klymchuk, V. Kovaliov, H. Kostiuk, O. Leontiev, M. Mahomed-Aminov,

D. McKlelland, A. Markova, A. Maslow, Ye. Pavliutenkov, S. Rubinshtein, H. Heckhausen, P. Jacobson and others.

We define the technical competence as integrated formation of future radio-electronic officers, which manifests in technically and practically oriented knowledge and skills (the principles of structure and functioning, maintenance, technical equipment for automatized retrieval, processing, monitoring, and saving information); the motivation to acquire the technical knowledge and skills, data processing technologies; the readiness to quickly change the performed duty assignments; the developed personal qualities (mobility, responsibility, ability to make independent decisions).

Scientific results. Given it, the main competence characteristics of a military specialist include (1) professional independence (ability to plan, perform, and control their own activity); (2) professional mobility, that is the readiness to quickly change the performed duty assignments; (3) ability to quickly learn trades or changes in them, which are results of progress in science and technology; (4) the responsibility for own actions; (5) the readiness and ability to change either methods, means, ways of solving the performance targets, or their own social duty role – “officer in command – subordinate”, “subordinate – officer in command”; (6) the ability for full personal expression in professional activity; (7) the ability for career development in case of standing on a duty ceremony as well as the requirements of military manual and orders [7, p. 115].

For thorough understanding the essence of technical competence of future radio-electronic officers, we have checked the major motives of students' entering the military school as well as those of their studying activity. The motive is considered to be the combination of internal and external agents connected with the satisfaction of a person's need, which predetermine the degree the character and purposefulness of their activity. Therefore, the direction is manifested in the stable motives, which coordinate the activity and behavior of a person regardless of the situation. The purposefulness is determined by the presence of the exigent motives, the correlation between single motives, by the character and the power of the overriding motive, the thingness degree of single stimuli, in particular, of the overriding agent [4, p. 142].

The motives of students' entering the military school is traced with the help of the questionnaire, based on the methodology developed by T. Ilyina. The basic motives of students'

entering the military school include the interest in knowledge, the satisfaction from the cognitive process, inquisitiveness, striving to obtain professional knowledge and skills, to form professionally important qualities and to get the diploma.

23.7 % of the first-year students demonstrate the motive of “the interest in knowledge, the satisfaction from the cognitive process”, 46.9 % of the respondents emphasize the striving to obtain professional high-level knowledge and skills, 19.4 % of the students prefer getting the diploma in case of formal assimilation of the knowledge. The results of the investigation witness the values of the respondents being beyond the profession of a military specialist. Such respondents need more attention during their professional training.

To study the significance of the motives forming the technical competence of future radio-electronic officers, we applied the self-assessment procedure by M. Vilensky and T. Obraztsov. The respondents were suggested to define the most significant motives matching their subjective rank value and goal system. The external motives are the most important for the respondents and reflect the material incentive in the results of their activity (the desire to get a well-paid job – 37.4 %, the need to provide for themselves – 23.7 %). The point to be emphasized is that the abovementioned motives are of great importance in the learning activity of the students. At the same time, they are not crucial as they are connected with a longer time lag while the learning activity is considered to be a way to achieve the goal.

The next stage (35.1 % of the respondents) in the hierarchical arrangement of the technical competence structure is concerned with the occupational prestige, the desire to get a certain social status. In view of this, the military specialists perceive higher education as a universal value, as an absolutely logical stage of their social and professional make-up. The students take their studying as a high social duty, their training to perform future activity of a military specialist.

The third stage (28.1 % of the respondents) in the hierarchical arrangement of the future officers' technical competence structure is associated with the motives the actualization of the personality within the occupation, connected with the future professional activity, the peculiarities of self-comprehension formation in the context of the interaction with the profession (the expectation of professional vocation, personal professional aptitude, personal features compliance with professional requirements, sufficient creative strength for

self-realization). However, the investigation evidence that a part of the students fail to form the image of their future profession and the clear perspectives of their future life.

At the same time, the human's desire fulfil themselves through the professional activity is the one of the basic cultural values. That is why the support of this desire should make up the main tasks of a professional education. The students' involvement in the designing and realization of the professional education can both strengthen professional readiness and provide an example of making up life and professional strategies. According to the modern beliefs, the scheme of forming students' value attitude towards future professional activity consists of four blocks: the acquaintance with the future professional activity; making up its general image; forming a real concept of a keen specialist in this area; developing value beliefs; making generating their own professional image [4, p. 142–143; 2; 3].

The motives of comprehending the profession function take the fourth place in the hierarchical structure of the future officers' technical competence arrangement (26.5 % of the respondents). The motives of comprehending the profession function are defined as the form and degree of professional interest, personality orientation, the desire for constant self-perfection within the chosen professional area. In this context it is important for a radio-electronic engineer to be spurred on the desire for the realization of personal potential in profession and career as well as to be ready to solve professional tasks. What is important to notice is that 17.5 % of the first-year students reflect the indifferent attitude towards the chosen occupation as their parents and other authorities affected their choice. 36.8 % of the first-year students realize the intended purpose of the military profession as well as understand its function in the society. The motives of the professional activity proper are processual (aimed at process and content of the professional activity) take the fifth place (20.7 % of the respondents). The motives of the professional activity proper include those connected with understanding the social and personal significance of a military profession, the desire to become a highly trained specialist, able to perform military service and actualize individual activity strategy.

The undertaken study of technical competence of future radio-electronic officers proves the necessity to enhance the educational impact as for the function of a military profession, its manifestation and profession self-realization.

While giving consideration to the motives of educative activity of a personality, the scholars often turn to the concept of "potential and actual motives". Most notably, in the process

of cognition, activity and communication, the potential motives of an active person develop into the active ones: a need turns into a drive, an intention – into an action, attitude – into a deed, plans – into activity. Consequently, personal motivation sphere has different structure. The stage of the career choice characterized by fixing the interest in the content of the future profession, understanding the social and individual importance of the profession, comprehending the intended purpose of the profession, the desire to enter the professional fellowship. The stage of professional teaching is determined by the professional adaptation, the elaboration of professional expectations, the reconsideration of the reasons to choose the profession, the transition from the external attributes into the functional content. Sometimes it galvanizes an individual into revising their professional preferences and the change of profession. At the stage of the practical acquisition, it is typical for an individual to get adapted to the profession, to correct professional motives and aims, to fix the motives of learning professional excellence, to form the motives of individual self-realization in the activity and to enjoy the work.

The high noon of the professional activity is characterized by the rising the role of motives aimed at the individual contribution to the profession and creative work. An individual opens up new personal senses within the professional sphere. At this stage there appear more constructive motivation trends aiming individuals at creative work, a person is able to solve more tasks due to professional intuition [1, p. 32–33].

To study the professional interests of the students we applied standardized psychognostic technic “The sphere of professional preferences”. The investigation results evidence that 63.1 % of the students have a penchant for engineering activity that is they have chosen a higher educational establishment according to their interests and abilities. Herewith the education is not at the top point in the students’ system of life values. The students estimated the significance of education at 5.4 grades (arithmetic mean) out of greatest possible 10, preferring entertainment sphere (7.3 grades).

The clarification psychognostic interviews with the students proves that the vast majority of future radio-electronic officers’ avocations belong to the sphere of their professional interests. The inference should be drawn that the students do not correlate the learning activity in the institute with potential self-realization (they do not connect studying material with their future professional activity). Only 31.0 % of the students claim to apply in future the knowledge

and skills that they have obtained during their studying. 37.1 % of the respondents place greater focus on the deficiency of practical activity within the curriculum.

According to the students, the main reasons for the low performance (the questionnaires to define the learning motivation of students as well as to trace the teachers' impact on their formation) comprise: (1) the absence of encouraging the diligence and progress in education – 18.5 %; (2) boring and unanimated studying material and teaching techniques – 30.8 %; (3) bad experience (unfair judgment and assessment) – 15.9 %; (4) failed expectations – 5.3 %; (5) insufficient formedness of self-organization and self-control – 29,5 %. Special focus should be on the widespread reasons of students' academic failure, especially that of insufficient formedness of self-organization and self-control. Such students are not able to map out their time, which results in performance impairment and, as a consequence, in academic failure.

Whereas the teachers define the following reasons of academic failure such as the indifference to the profession chosen, the weak educational background of high school graduates, being unable to map out the intellectual capacity as well as to work on one's own.

Conclusions. Beyond doubt, the current situation predetermines the necessity to seek new approaches to the professional training of military specialists, aimed at developing of accomplishment, technical competence, professional mobility, responsibility, and spirituality. The practical value of the investigation on studying students' motivation lies in the fact that the teacher, being aware of students' entering and learning motives, is able to aim their activity at the comprehension of the future profession importance, making up professional personal qualities, and technical competence.

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Translation of the Title, Name and Abstract to the Author's Language

УДК 37.6

Тернопільська В. І., Андрущенко І. С. Мотиви формування технічної компетентності майбутніх офіцерів радіоелектронного профілю: сучасні тенденції

У статті розглянуто сутнісні характеристики технічної компетентності майбутнього офіцера радіоелектронного профілю. Окреслено провідні мотиви вступу курсантів до військового інституту. Презентовано результати вивчення значущості мотивів формування технічної компетентності майбутніх офіцерів. Визначено п'ять груп мотивів (матеріальна зацікавленість, престижу професії у суспільстві, прояву особистості в професії, розуміння призначення професії, власне професійної діяльності). Акцентовано увагу на активізації викладачами навчально-виховних впливів щодо усвідомлення майбутніми офіцерами призначення професії військового, самореалізації у професії.

Ключові слова: компетентність, професійна компетентність, технічна компетентність, радіоелектронний профіль.

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