On the issue of the level of estimation for professional mobility of the future expert in the field of operating security

E N Brukhov¹, L V Kevtunenko², E V Kalach³ and O E Melnik³

¹ Ural Institute of State Fire Service of EMERCOM of Russia, Ekaterinburg, Russia, 620062, Mira Str. 22
² Voronezh Institute of the Federal Penitentiary Service of Russia, Voronezh, Russia 394072, Irkutsk Str. 1-a
³ Saint-Petersburg University of EMERCOM of Russia, Saint-Petersburg, Russia, 196105, Moscow avenue 149

E-mail: AVKalach@gmail.com

Abstract. The article discusses the most important problem associated with the formation of professional mobility of future specialists in the field of life safety in educational institutions of the Ministry of Emergencies based on modular training. The modern social and economic situation actualizes the personality professional educational problem, the initiatives and competent, corporate, professional and mobile preparation in higher school. The authors, based on indicators of the formation of professional mobility and psychodiagnostic techniques that allow us to assess the level of formation of each of the selected indicators, identified and substantively characterized the levels of formation of professional mobility of cadets - future employees of the Ministry of Emergencies: partial, potential, updated.

1. Introduction

Nowadays provision of the personal security, public safety and state security just as mankind security as a whole can be efficiently realized only on the professional basis. Thus, it means the necessity of the transformations in the field of professional training as well as the formation of personality-centered professional skills for the future experts in the life safety activities providing a successful execution of the vested functions [1-4].

Today, the professional mobility determines the higher school social and cultural environment concept and the students’ involvement degree. In social and cultural higher school environment, one can use such mechanisms as mutual support, responsibility, and control for the development of characteristics such as the professional mobility and others. Various forms of social and cultural higher environment extend the social and cultural integration conditions and present the socialization "secondary institutions". In the author’s opinion, the social and cultural higher school environment is one of the most important areas for future graduates and has a great potential for the professional mobility development. One of the aims in higher school social and cultural environment is a graduate preparation for life [5-9].

One of the professionally meaningful personality qualifications in the conditions of impetuously changing and complicated profession-and-technological medium is a professional mobility comprehended as a readiness to the changes in the professional area of society. Just due to fact the
training of professionally mobile personnel proves to be as an actual social order of society to the professional education.

The term “mobility” was initially applied exclusively in sociological sense and got substantial meaning in the works by M. Weber, E. Durkheim, P.A. Sorokin and other sociologists [9-11].

The problems of formation of the professional mobility for future experts in the process of professional training are actively studied in the investigations of L.V. Goryunova, B.M. Igoshev, E. Yu Mishchenko, E.Yu. Samodelkin, T.A. Fugelova, etc. But comprehension of the essence of the professional mobility is characterized by the variety of the interpretations [7-13].

The author considers the professional mobility as a complex integrative phenomenon that includes the sociological, pedagogical and psychological components. A number of authors in their explorations on the professional mobility phenomenon provide common definitions of this phenomenon and etc., consider sociological aspects of professional mobility.

By the professional mobility of future experts in the field of life safety we mean the integrative quality of a person including a professional adaptability, the evident learning activity and professional competence, striving for personal and professional self-realization, social responsibility for the professional activity, valuable relation to the own profession assuming readiness and ability to the changes in the professional area, to the activity in the emergency situations breaking the vital activity conditions.

On the base of philosophers, educators and psychologists’ views and the own experience of theoretical research, the author considers the professional mobility definition as an integrative quality in the production conditions on the basic components of professional culture covers (key competencies and qualifications) and professional competence (high intelligence, creative skills, professionalism). This reflects in their ability to move horizontally and vertically on the social professional structure of society and to change a social, economic and professional (including status) position. This captures the motivational, cognitive, competence-based, operative, active components, reflecting a certain level of general cultural, general professional skills and competencies.

The mobility development basis can be the youth associations’ activity in higher school social and cultural environment and represents as an extension and deepening of the general cultural, general professional and professional competences [5-9].

Essence and specificity of the modular training in the process of formation for the professional mobility of the cadets in the departmental educational organization are determined by a specificity of conditions in the competently-oriented education. Note, that in order to realize variability of the training forms as well as to implement the differential approach for everyone of the learning persons to the mastering of the teaching material in accordance with their abilities is possible with the use of modular training which appears as a variable-integrative technology. Integrative character of the modular training is determined by the fact that if the learning information is divided into the modules its internal structural and substantive integrity of a particular discipline and external (realization of interdisciplinary links) integrity.

2. Research results

In accordance with the approach to the organization of pedagogical experiment that is a traditional one in pedagogy we have selected several criteria of the professional mobility for the future employees of the Ministry of Emergency Situations (MES): professional adaptability, learning activity, personal self-realization, social responsibility, valuable relation to the chosen profession.

All components of the students’ professional mobility development process in higher school social and cultural environment are in direct and reverse relationship.

Basing in the indexes of the formed professional mobility (adaptability, ability to construct non-conflict relationships, stress immunity, intellectual lability, trainability, readiness and ability to self-dependent learning, analysis, generalization and implementation, mastering of the new technologies, self-actualization of personality, independence, positive self-concept, goal-setting, motives of learning and professional activity, value orientations, valuable relation to the profession, value of significance of
the professional activity for the society) and mental examination techniques (multi-level personality questionnaire “Adaptability” by A.G. Maklakov and S.V. Chermyanin, questionnaire “Prediction”, test “Intellectual lability” by V.T. Kozlov, “Self-actualization test” by L. Ya. Gosman, M. Krozd et al., test-questionnaire for the estimation of the level of subjective control (LSC) by J. Rotter; adaptability by E.F. Bazhin, S.A. Golykina, A.M. Ethkind “Technique of the examination of self-relation (TESR)” by S.R. Panteleev, questionnaire “The study of the motives for the learning activity” (in the modification by A.A. Rean, V.A. Yakumin), technique for the study of the factors of the attractiveness for profession by V.A. Yadov et al.), that allow to evaluate the level of well-formed relation for each of the indexes. Hence, we performed a corresponding research [14-16].

82 cadets learning at one of the educational organizations of the State Fire Service at MES in the specialty of specialty Fire safety participated in these investigations.

According to the obtained results of the experiment all of the cadets were divided into three groups by the level of their formed professional mobility: high – 31.4 %, mean – 42.2 % and low – 26.4 %.

Let us characterize substantially-selected levels of the formed professional mobility for the cadets – future employees of MES.

Low (partial) level of the professional mobility means the ability and readiness of a cadet to the horizontal (i.e. to the change of the kind of activity, functional obligations, place of work, and profession as a whole) and vertical (i.e. career up-growth, increase of social and professional status) mobility in the professional area. Note that the horizontal and vertical redeployments within the professional activity require a lot of efforts, considerable power and time expenditures combined with the difficulties in adaptation, not a high orientation to the personality and professional self-development, weakly-expressed professional motivation.

Mean (potential) level of the professional mobility implies personality orientation of the horizontal or vertical professional redeployments for satisfying of the personality needs in the provision with the material assets, in career growth, increase of the social status, acknowledgement from the others; to the less extent – for satisfying the needs in self-awareness, self-actualization, self-development. Future specialist is rather adaptive one; he is oriented at mastering of the new skills and new kinds of activities, shows a high or mean level of the cognitive activity, self-sustained, capable to goal-setting in his profession. Nut the valuable relation to the profession, awareness of importance of the professional activity for society are expressed insignificantly.

High (actualized) level of the professional mobility provides realization of the professional redeployments on the basis of awareness of social significance for his professional actions, his own working activity.

Future specialist is characterized by the valuable relation to his professional activity and its social mission. High level of adaptability, a high learning activity, personality orientation to satisfying of the needs in self-knowledge, self-actualization, self-development makes it possible to realize quite efficiently the professional mobility of a specialist in the area of life safety.

As a result of realization of the modular program for the formation of the professional mobility for future specialists in the area of life safety the levels of the formed professional mobility have considerably changed: high level – 47.4 %, mean – 45.5 % and low – 7.1 %.

Results on the formed levels of professional mobility for the cadets which did not participate in the learning with the use of modular program did not actually change: before starting of the discipline learning: high level – 30.2 %, mean – 42.2 % and low – 27.6 %; after learning: high level – 31.2 %, mean – 44.3 % and low – 24.5 %.

3. Conclusions

The study allows us to conclude that professional mobility of the cadets participating in the experiment, based on the introduction of the modular program for the formation of the professional mobility for future specialists in the life safety area, into the training process, is formed at the higher level as compared with the learning cadets in the control groups that did not participate in the experimental work.
Based on the study of theoretical approaches, factors are identified that contribute to development of professional mobility. It is also concluded that it is necessary to develop modern pedagogical science, since only the basics of readiness for professional mobility are formed in the university educational process. Criteria presented in the article as well as the indexes and levels of professional mobility for the future specialists in the area of life safety can be applied in the practical work as a diagnostic material.

Only with mobility, dynamism, constructiveness, and a developed sense of responsibility success can be achieved in professional activities. The results of the work can be used as recommendations for preparing graduates for effective adaptation in the labor market.

References
[1] Steve L 2005 Understanding Mobile Human-Computer Interaction (Butterworth-Heinemann)
[2] White R W 1959 Motivation reconsidered: The concept of competence Psycho-logical review 66 313-24
[3] Masaharu T, Eiji A and Tatsuo A 2001 Human Friendly Mechatronics (Elsevier Science)
[4] Duncan S S 1979 Qualitative Change in Human Geography (Pergamon)
[5] Hanns-Christian Gunga 2014 Human Physiology in Extreme Environments (Academic Press)
[6] Balikaeva M B 2017 The interconnection between future engineers professional mobility in higher school social and cultural environment Modern Journal of Language Teaching Methods 11 70-8
[7] Balikaeva M B, Chizhevskaya E L, Grevtseva G Ya, Kotlyarova I O and Volkova M A 2018 Innovative technologies as a means of the development of future engineers professional mobility abroad IOP Conference Series: Materials Science and Engineering 012007
[8] Balikaeva M B 2018 Theoretical and Methodological Foundation for Students’ Professional Mobility in Higher School Social and Cultural Environment (Atlantis Press)
[9] Spector M, Merrill M D, Elen J and Bishop M J 2014 Handbook of Research on Educational Communications and Technology (Media New York: Springer)
[10] Malygina O A 2010 Professional mobility of specialist: psychological and pedagogical aspect Higher education in Russia 2 119-24
[11] Shavyrina I V 2016 Vectors of imbalances in the vocational and educational intentions of youth Kazan Pedagogical Journal 2 410-3
[12] Iskhakov R Kh 2015 Assessment of the performance of future social educators ‘professional and mobile practices European Social Science Journal 10 253-62
[13] Tran Ly Thi and Dempsey K 2017 Internationalization in Vocational Education and Training, Technical and Vocational Education and Training: Issues, Concerns and Prospects (Springer Publishing)
[14] Neff K, Rude S and Kirkpatrick K 2007 An examination of self-compassion in relation to positive psychological functioning and personality traits Journal of Research in Personality 41 908-16
[15] Robitschek C 1998 Personal growth initiative: the construct and its measure Measurement and Evaluation in Counseling and Development 30 183-98
[16] Seligman M E and Csikzentmihalyi M 2000 Positive psychology: An Introduction American Psychologist 55 5-14