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The features of the educational and professional motivation of future specialists of air transport emergency service

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Abstract. The article presents the results of the theoretical analysis and empirical research of the features of cadets' professional orientation of Kirovograd Flight Academy of National Aviation University with the help of the professional motivation analysis. The motivational complexes of the cadets' professional motivation are determined. The levels of learning motivation of future specialists of air transport emergency service are established. The author's methods to determine the educational and professional motivation of the future specialists are suggested.

Keywords: *motivational complex, motivational level, professional orientation, learning orientation, inner orientation, educational and professional motivation*

Introduction. The question of the motivational formation was and still remains relevant in all the areas of human activity. The motivation of the learning activity, for example, can determine the attitude of the individual to the professional activity throughout life. It is also found in the modern theory of lifetime education, which states that the features of a personality developed at school, university, the pursuit of knowledge will help a person to be an active member of society throughout life and thus will make it possible to achieve both personal and professional excellence. The understanding of the value of education will guarantee successful industrial and social activities as the possibility to apply practically the acquired theoretical knowledge.

The analysis of recent research and publications. Due to the works of T.L. Badoev, V.A. Bodrov, B.M. Goldstein, V.L. Marishchuk, K.K. Platonov, V.A. Ponomarenko, S.L. Rubinstein et al. the key role of motivation to provide the efficiency and safety of the work, the resistance to stress factors, successful learning, the adaptation of the specialist and mastering the profession is revealed, the idea of motivation as a complex phenomenon, the feature of which is the unity of content and dynamic aspects is formed.

The motivation of university students was studied by L.A. Buynovska, B.I. Dadonova, T.D. Dubovytska, Yu.P. Yevreyenko, M.M. Lipkyn, V.V. Lutayev, A.A. Rean, E.I. Savon'ko, N.M. Symonova, N.V. Yakovlyeva et al. The issue of the formation of specialist's professional motivation of extreme professions has been the subject of study of Y.V. Bessonova, O.P. Kvyatosh, A.S. Kufliyevs'ky, K.A. Holuyeva, O.V. Odyegova et al.

However, despite the considerable amount of research devoted to the issues of the content and structure of the motivation, its role in the profession, the nature of its development and the factors that influence it, the question of the formation of educational and professional motivation of future specialists of air transport emergency service for has not found its realization in the works.

The aim of our work was to study the features of learning motivation of cadets of Kirovograd Flight Academy of National Aviation University (KFA NAU) in the context of their professional orientation.

The main text. The learning activity of cadets can be represented as the activity to solve the cognitive tasks and issues. The professional activity (presented in the form of model throughout studies) can be related with activity to solve the cognitive tasks and issues. The motives that

induce both of these activities will also differ in their subjects.

The subject of the cadets' learning motivation is the knowledge which is the means of dynamic modeling of the professional activity in the process of learning. The opportunities to transform this subject into the qualitatively different subject of professional motives are being created – the production and transformation of the product of labor, although in the model form. Thus, the purpose and result of the learning activity is the transformation, development of the subject itself in terms of learning new knowledge, and the purpose and result of professional activity – the transformation of its subject into the product on the basis of the assimilated information (which becomes the knowledge) as a means of such transformations.

As a result of the subject transformation of learning activity in the process of its development, the fact of the meaning transformation of this activity is obvious: the meaning of the learning activity (transformation, subject development, realized in the mastering of learning tools of future professional activities – the knowledge and the ways to master it) is transformed into the meaning of professional activity (the transformation of the subject, methods and means of the professional activity).

It can be claimed that in a situation that requires solving any practical problem or learning problems for future specialist are presented as both learning and practical (professional) motives because the cadet uses the theoretical knowledge as the means to solve them. Perhaps this explains the easy way to assimilate the content of university subjects, under the condition the cadet does not lose the logic of the deploying of the content of these subjects.

The creation of the professional motives in a situation which requires knowledge usage provides personal meaning to the professional content that is enclosed in any type of learning, the professionally-related tasks unconditionally or problems acting as purely academic and formal in traditional learning.

The aim of our work was to study the features of learning and professional motivation of cadets of Kirovograd Flight Academy of National Aviation University (KFA NAU). According to the purpose of study the methods of K. Zamfir in the modification of A.A. Rean "The study of the motivation of professional activity" and "The methods of determining the learning motivation of students' by V.G. Katasheva were used.

The cadets of faculty of air traffic services of KFA NAU with the professional orientation of "Emergency services and aviation safety" were involved to the conducted study. 52 persons were selected.

K. Zamfir determines the relevance of the following types of motivation: 1) material reward; 2) the desire for career advancement; 3) the desire not to be criticized by the director and colleagues; 4) the desire to avoid any possible penalties or trouble; 5) the focus on prestige and respect from others; 6) satisfaction of a well done job; 7) public usefulness of the work.

The cadets were asked to complete a question form. The following scale was used for answers: 1 point – "to a very small extent", 2 points - "to a sufficiently small extent", 3 points - "not in a great, but not in a small way", 4 points - "to a fairly large extent", 5 points - "to a very large extent".

On the basis of the received data the motivational complexes were calculated: the optimal balance of motives $IM > EPM > ENM$ and $IM \Rightarrow EPM > ENM$, where inner motivation (IM) – is high; external positive motivation (EPM) – is equal to the inner motivation or is lower, but is relatively high; external negative motivation (ENM) – is very low and is close to 1. The more the motivational complex is optimal (balance of motives), the more the student's activity is motivated by the content itself of the professional training, by the desire to achieve some positive results.

The analysis of the received results showed that the cadets are mostly satisfied with the chosen profession. The most of the cadets chose the optimal complexes for prevalence of inner motivation, presented by the combinations of:

$IM > EPM > ENM$ (40.4%), $IM > ENM > EPM$ (5.8%) and $IM > EPM = ENM$ (1.9%). In general, it makes 48.1% of cadets (table 1). It testifies to the idea that cadets with these motivational complexes are involved into the learning activity for its own sake rather than to attain certain external rewards. This activity is an end in itself rather than a means to achieve some other goal. That is, these are the students who are primarily interested in the learning process, they tend to choose more difficult tasks that positively affect the development of their cognitive processes.

Table 1. The accordance between the studied and a particular type of motivational complex

The motivational complexes					The number of cadets
IM	>	EPM	>	ENM	40,4 % (21)
IM	=	EPM	>	ENM	7,7 % (4)
IM	<	EPM	>	ENM	30,8 % (16)
IM	<	EPM	<	ENM	7,7 % (4)
IM	>	ENM	>	EPM	5,8 % (3)
IM	=	EPM	<	ENM	5,8 % (3)
IM	>	EPM	=	ENM	1,9 % (1)
IM	=	EPM	=	ENM	3,8 % (2)
ENM	>	IM	>	EPM	1,9 % (1)

The cadets whose motivational complexes are characterized by the predomination of external motivation make 46.2% out of the respondents (30.8% of them with the external positive motivation and 19.2% with the external negative motivation).

Choosing between optimal, sufficient and the worst type of relationships, a small number of cadets have chosen the intermediate complex, represented by a combination of:

$$IM = EPM = ENM (3.8\%).$$

It testifies to the idea that the cadets with this motivational complex are interested in the activity they have chosen, but still there is a significant share of desire to achieve certain external rewards. This activity serves mainly as a means to achieve personal gain.

The worst motivational complexes are presented in the following correlations: $ENM > EPM > IM$; $ENM > EPM = IM$; $ENM > IM > EPM$.

These complexes respectively make 7.7%; 5.8% and 1.9% of cadets. Collectively it makes 15.4% out of all surveyed students (table 1). This fact indicates the indifferent and possibly negative attitude towards learning and the career choices in general. The basic value of the professional training for these cadets is not to receive professional knowledge and skills, but the final outcome of their studies in the university - namely university degree. We can assume that these cadets entered the university being motivated by some other reasons rather than their own internal motivation: being forced by parents, following friend's choice, did not pass the exams to some other university and so on. The cadets with the external motivation, as a rule do not enjoy coping with difficulties when solving learning tasks. So they choose simpler tasks and prepare only the necessary minimum to get marks. The lack of inner stimulus contributes to increasing tension, anxiety, spontaneity, making it impossible to develop creativity throughout the learning activity, while the presence of inner incentives contributes to the manifestation of originality, increase of creativity. The external motivation is based on the "carrot-and-stick" approach (encouragement, promotion, criticism, punishment) or on the formula of behaviorism (B. Skinner, K. Hull et al.) S - R (stimulus - response), the introduction of competitive principles and so on. The main elements of this type of motivation are external stimuli – the leverages or "stimuli" that cause the action of certain motives.

It should be noted that the cadets with the similar professional motivation have not formed their professional orientation. The opportunity to be rewarded (materially, socially, and psychologically) or the desire to avoid trouble encourages them to study. The risk of it for the activity in the structure of emergency service lies in the idea that when it comes to human life and health, one cannot be completely confident that the professionals with such professional motivation will carefully carry out their duties, i.e. the level of their professional reliability will be low.

Describing the group in general, we note that the predominant type (though not greatly) of professional training motivation is the inner one – 48.1%. The cadets with the external positive motivation are on the second place – 30.8%. This type of motivation is "worse" than the inner type, because the cadets are attracted by the people's opinion (positive evaluation, encouragement, praise, etc.) rather than the activity itself. The students with the external negative motivation are on the third place – 15.4% (table 2). The learning activity of cadets with this type of motivation is characterized by the following features: learning without

pleasure of the activity done or without interest to the subject; learning with the fear of failure, under the force or pressure and so on.

As shown in table 2, the motivational complex of the group has the following scheme: IM> EPM> ENM. But the numbers of these types of motivation don't differ from each other significantly.

Table 2. The dominating type of motivation of the investigated cadets

The dominating type of motivation	The number of students
IM	48,1 % (23)
EPM	30,8 % (16)
ENM	15,4 % (8)
IM=EPM	7,7 % (4)
IM=EPM=ENM	3,8 % (2)

According to V.G. Katashev, the methods of measuring the professional training motivation of cadets lie in the following: on the basis of the levels of motivation described in the text cadets are offered the complex of questions and a series of possible answers. Each response is evaluated by the cadets form 01 to 05.

- 01 - surely "no"
- 02 - more "no" than "yes"
- 03 - not sure, do not know
- 04 - more "yes" than "no"
- 05 - surely "yes"

The evaluation is carried out by cadets on special cards. Since the motivation of the individual consists of volitional and emotional spheres, the question seems to be divided into two parts. The half of the questions (24) involves the identification of the level of conscious attitude to learning, and the other half of the questions (20) is aimed to detect the emotional perception of different activities in changeable situations.

When filling the motivational scales the cadets assess each question and mark each blank. The teacher then summarizes the scores horizontally and in the far right vertical line. The vertical scales of the first row indicate not only the numbers of questions, but the level of motivation. In each scale, according to a particular level of motivation, one can score from 11 to 55 points, excluding the number 0. The number of points of each scale describes the attitude of cadets to various types of learning activity and each scale can be analyzed separately.

The scale, which differs from others in the highest number of scores will determine the level of learning motivation in university. Having calculated the group's arithmetic mean for each scale, one can get a general, group level of motivation.

According to the methods of V.G. Katashev and the results of the study of cadets' learning motivation it can be established that the majority of students (53,8%) is characterized by the average level of learning motivation in university (table 3). The cadets with normal and high levels of learning motivation make 36,6% of the total respondents.

Having calculated the arithmetic mean for each level of motivation for this group of cadets, we have received a general, group level of motivation, which is 43,6 points (intermediate level).

Table 3. The correspondence between the investigated and the levels of motivation

The level of motivation	The number of cadets
I (low level)	9,6 %
II (intermediate level)	53,8 %
III (normal level)	19,3 %
IV (high level)	17,3 %

The diagnosis of the attitude of KFA NAU students to learning and to general education and professional area subjects has shown that the "not favourite" include subjects both of the professional orientation and general, but still being necessary for the further professional learning. Moreover the students demonstrate the arguments describing the negative attitude to the subject: do not like the teacher's methods; the subject is boring; not needed for further work; do not get any pleasure while learning it, that is why the students do not realize the importance of the subject for the future professional activity.

The cadets used diametrically opposing arguments when justifying the "love" to the subject: need for future work; the subject should be learnt by everyone, makes one think; some interesting facts; enjoy its learning; good relationships with the teacher; the teacher's explanation is interesting. When correlating the research results with the level of motivation of professional training it may be noted that the cadets with high levels of motivation of favourite subjects indicate both professionally oriented and general subjects. Moreover they note that this subject stimulates intellectual activity, they get pleasure from the process of learning. The cadets with the intermediate level of motivation prefer subjects of professional orientation, as they are needed in the future work and they are only interested in some facts and the personality of the teacher. For the cadets with the low level of professional training motivation the main indicator in determining the criteria for "love" to the subject is the need to study and good relationships with the teacher.

Our studies support the view of scholars that the development of broad cognitive motives continues in the process of learning in university – interest in new knowledge, overcoming the difficulties throughout their obtaining. The interest in the knowledge becomes deeper, touching not only the logics of learning discipline, but also the foundations of the science [1; 2].

The educational-cognitive motif (the interest in ways of mastering knowledge) is improved as the interest in theoretical methods and creative thinking. This is especially true of cadets with the high level of professional motivation. They are interested in participation in scientific societies, the application of research methods in the classroom. However, they are also attracted by the ways to improve the productivity (effectiveness) of cognitive activity, as evidenced by their interest in new methods of rational organization of learning. Thus, we can assume the existence of cohesion both of procedural and effective learning motivation within the present investigated population. It should be noted that this unity is possible within the cadets with the intermediate level of professional motivation, but only with the regard of the favorite subjects. The cadets with the low level of professional training motivation improve the educational cognitive motif under the influence of pedagogical skill or the authority of the teacher only.

During the professional training the motives and methods of cadets' educational activity are developed. At this stage, the distant goals associated with the life prospects, occupational choice and self-education dominate. These motives and goals evolve in the cadets with the high level of professional motivation fundamentally new ways of educational activity, such as the awareness of the features of one's learning activity; their correlation with the requirements of the society; their evaluation and conversion; the search and development of new methods of cognitive activity; the development of the new personal positions; the understanding of the education as an exceptional activity; the correlation between the tasks and the ways of learning activity; detailed self-control and self-esteem, expressed in self-planning and reasonable self-restraint of one's own activity. At this stage of cadet's development the interest in these forms of training lessons increases, as the self-control and self-assessment of one's own learning are performed by the students, not just by the teacher [3]. The cadets with the intermediate level of professional motivation are dominated by the distant goals associated with the life prospects, they realize the peculiarities of their learning activity related to the professional choice, but their learning activity is not aimed at developing new

ways, new solutions. The assessment and monitoring of learning activity are carried out directly by the teacher. The cadets with the low level of professional motivation do not reflect on the ways and methods of their learning activity.

Having analyzed the development of various motives of cadets of Kirovograd Flight Academy of National Aviation University (KFA NAU), the great selectivity of the educational and professional motivations can be noted, besides that this selectivity is not only dictated by the interest in learning, but also by the choice of profession (which sometimes leads to the decreased interest in certain subjects). Summing up, it can be said that the development of educational and professional motives is the basis for the further development of all the special abilities and the formation of professional reliability of future specialists of air transport emergency service.

The conclusions. Thus, during the process of learning of future professionals of air transport emergency service, special care is given to the problem of formation of their professional reliability. One of the factors that reflect the level of professional self-determination and affects the present process is the consideration of the features of educational and professional motivation of cadets.

REFERENCES (TRANSLATED AND TRANSLITERATED)

1. Климов Е.А. Пути в профессионализм (Психологический взгляд): учебное пособие / Е.А. Климов. – М.: Флинта, 2003. – 318 с.

Klimov E.A. Puti v professionalism psihologicheskij vzgljad: uchebnoe posobie [Ways to professionalism (psychological opinion)] / E.A. Klimov. – M.: Flinta, 2003. – 318 s.

2. Лапкин М.М. Мотивация учебной деятельности успешности обучения студентов в вузе / М.М. Лапкин, Н.В. Яковлева // Психологический журнал. – 1996. – Т. 14, № 4. – С. 6.

Lapkin M.M. Motivacija uchebnoj dejatelnosti uspešnosti obuchenija studentov v vuze [The motivation of students' learning activity in university] / M.M. Lapkin, N.V. Jakovleva // Psihologičeskij žurnal. – 1996. – T.14, № 4. – s. 6.

3. Маркова А.К. Формирование мотивации учения / Маркова А.К., Матис Т.А., Орлов А.Б. – М.: Просвещение, 1990. – 192 с.

Markova A.K. Formirovanie motivacii učenija [The formation of learning motivation] / Markova A.K., Matis T.A., Orlov A.B. – M.: Prosveshhenie, 1990. – 192 s.

Лещенко Г.А. Особенности учебно-профессиональной мотивации будущих специалистов по аварийному обслуживанию на авиационном транспорте

Аннотация. В статье представлены результаты теоретического анализа и эмпирического исследования особенностей профессиональной направленности курсантов Кировоградской летной академии Национального авиационного университета с помощью анализа профессиональной мотивации. Определены мотивационные комплексы профессиональной мотивации курсантов. Установлены уровни учебной мотивации будущих специалистов по аварийному обслуживанию на авиационном транспорте. Предложена методика определения учебно-профессиональной мотивации будущих специалистов.

Ключевые слова: мотивационный комплекс, уровень мотивации, профессиональная направленность, учебная мотивация, внутренняя мотивация, учебно-профессиональная мотивация