FORMATION OF FUTURE PILOT’S READINESS TO SOLVE PROBLEM SITUATIONS BY UPDATING COMMUNICATIVE SKILLS

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Summary. The article describes the role of the communicative skills of future pilots in the context of their readiness to solve problematic situations that may arise in the professional activities of flight personnel. Statistics show that it is precisely because of errors in activities that are associated with decision-making occur the largest number of accidents. This is evidence that the current pilot, for the most part, does not fully meet the modern requirements for the operation of aircraft. And although the flight institutions, in general, perform their functions of training pilots, the system of professional training that built mainly on the basis of the experience of the flight methodological work of its developers, often has no scientific justification and is not optimal. As a result, the cadets have not sufficiently formed the skills that contribute to their readiness to make a competent decision in a problem situation that arise during training flight. In this regard, the professional training of future pilots needs to revise a number of basic provisions. The authors provided definitions for such concepts as "skill", "communication skills" and "readiness of future pilots to solve problem situations", which reveal their essence and emphasize the feature of professional training of aviation specialists. The article focuses on the need to optimize the system of professional training of future pilots, which should contribute to the formation of readiness to solve problematic situations of professional activity.

Keywords: flight safety, professional training of aviation specialists, future pilots, skills, communication skills, readiness.

Problem. The professional activity of the flight crew is extremely complex and even more responsible, because it related to ensuring the safe operation of the air transport system. Recently, more and more often the cause of accidents is the human factor. Flight safety data indicate that 78% of accidents and disasters in air transport are caused by erroneous actions of a human operator in the "man - machine - environment" system. According to the statistics of long-term observations, the vast majority of aviation events and incidents in the airlines of different countries are related to the human factor. And although according to the International Air Transport Association (IATA) modern aviation is the safest mode of transport (8.7 million passenger flights account for only one disaster), all it is necessary to remember the significant social consequences of even one catastrophe [3]. Attention should also be paid to statistics showing that the share of the human factor has not actually changed, even in the light of numerous studies. And, the pilot (crew as a whole) is the last "line of defense", which in accordance with the sound conclusions of ICAO provides the ultimate efficiency of the "crew-aircraft" system, where processes characterized by high transience. At the same time the pilot acts as the generator of the purposes, alternative (non-standard) ways of operation of system especially in the conditions which are not provided by regulatory documents, and forms its behavior. It is also obvious and generally accepted that the level of professional training of the flight crew is the main factor of strength and stability of this "frontier" [3]. That is why the world's leading companies pay, on the one hand, more and more attention to the formation of high-quality specialists on early stage of their training - during initial professional training, and, on the other hand, to the development of various systems, programs, training advisors. Should note that the peculiarity of the professional activity of the pilot consists in ephemerality and probability of occurrence in both normal and non-standard conditions on the background of significant emotional stress. At the same time, one of the conditions of professional activity of pilots is constant interaction of crew members. And communication is the main tool of this interaction. Therefore, among the important professional skills of pilots of considerable interest are communication skills, especially in terms of solving problem situations of professional activity of the flight crew. The formation of communication skills of future pilots as a component of readiness to solve problem situations is an urgent problem of aviation pedagogy, the solution of which is important both for professional development and for flight safety in general [1].

The modern practice of air transportation and the level of safety of flights by air transport more and more attracts the attention of society to the problems of modern aviation. Politicians and journalists, scientists and designers,
teachers and sociologists are interested in solving the problems of this industry, a special place among which is occupied by the issues of professional training of aviation specialists [6].

It should be noted that the peculiarity of the pilot's professional activity consists in transience and probability of occurrence of proceeding both under normal and non-standard conditions against the background of significant emotional stress. At the same time, one of the conditions for the professional activity of pilots is the constant interaction of the crew members. Exactly communication acts as the main instrument of this interaction. Therefore, among the important professional skills of pilot’s communication skills represent significant interest. Especially in terms of solving problem situations in the professional activities of flight personnel.

Formation of communication skills of future pilots as a component of readiness to solve problem situations is an urgent problem of aviation pedagogy. Solving this problem is important both for their professional development and for flight safety in general.

**A brief analysis of relevant researches and publications that are connected to the problem.** Analysis of studies and publications on the problems of communication and the formation of communicative skills, namely the scientific works of A. Aleksyuk, I. Lerner, V. Kan-Kalik and many others indicates that the most studied problem of communicative training of students of pedagogical universities.

As for aviation psychology and pedagogy, the problem of communication skills was not singled out separately, but was considered only as a component of other studies. At the same time, in the second half of the 20th century, a large number of studies were carried out on the problems of the human factor in aviation in general and the problems of training flight personnel in particular. Studies that are devoted to the training of flight personnel in order to increase their professional reliability arouse particular interest in the framework of our study. For example, in the course of research conducted by R. Makarov, V. Marishchuk, I. Rudny, V. Ponomarenko was found that one of the most important components of the formation of professional reliability is theoretical training, which is basic in the formation of professionally important qualities. Namely in the process of special theoretical training a thesaurus of knowledge is formed, which in the future will form the basis of the professional thinking of aviation specialists [2].

**The goal of the research.** The purpose of the article is to analyze the condition of the studying problem to clarify the essence of the concepts of "skill", "communication skills", "readiness of future pilots to solve problematic situations" and determine their significance for the success of the professional activities of future pilots.

**The scientific novelty.** The novelty of the research lies in the fact that the communication skills of future pilots in solving problem situations of professional activity are considered as an obligatory component of the professional training of aviation specialists and appear as the subject of a special study.

**The statement of basic materials.** Qualitative training of such a specialist is possible if the formation of communicative skills is organically introduced into the existing system of professional training of specialists in a higher aviation educational institution. The pilot's profession, in the opinion of E. Klimov, belongs to the “man-technician” scheme. According to the subject of labor, the pilot's profession belongs to the technical group of professions. But, despite its technical skills, the pilot works in a crew, a group of aviation specialists who jointly carry out professional activities [2].

Aviation needs competent specialists who meet the social requirements, that have not only deep special professionally oriented knowledge, but also communication skills necessary to ensure flight safety.

The reliability and efficiency of the crew's activities depend not only on the individual qualities and professional experience of the specialist, but also on the well-coordinated participation of everyone in the common cause, as well as on personal relationships in the crew [5].

Exactly here the direct mutual influence on the personality takes place, exactly here direct issues of mutual assistance and collective relationships are resolved. Therefore, the correct organization of communicative interaction among the crew members affects their professional activities, and therefore, the safety of flights. The successful organization of communication among the crew members depends primarily on their communication skills.

The appeal to the psychological and pedagogical literature allows us to talk about the variety of interpretations of the concept of "skill". In particular, the pedagogical dictionary characterizes the ability as “readiness for practical and theoretical actions that are performed quickly, accurately and consciously, based on the acquired knowledge and life experience” [3].

In psychological science, the use of the concept of "skill" occurs in two aspects - operational and active. The first is associated with the ability to perform actions and operations. But the more common is the activity-based approach to the definition of skills, which is associated with the performance of any activity.

From the point of view of the activity approach, we think that the most appropriate formulation of the concept under consideration, which developed in the second half of the 80s of the twentieth century, defines skill as the ability to "perform a complicated complex action based on the acquired knowledge, skills and experience." In this definition, abilities are fundamentally viewed as creative actions. They cannot be automated, since they represent a person's
readiness to make decisions and implement them in changing (non-standard) living conditions. Skill includes a complex of knowledge, techniques, skills and various elements of experience - sensory and practical and provides exteriorization - the embodiment of knowledge in physical or mental action [8].

The analysis of scientific literature suggests that psychologists consider the problem of including methods of activity in the learning process, interpreting these methods of activity, namely skills, mainly in a subjective form, as elements of mental activity. Whereas in the pedagogical literature, issues related to the formation of various skills in the learning process, their influence on the development of individual aspects and personality traits are most often covered.

As for communication skills, the analysis of psychological and pedagogical literature revealed a relationship with the organization of verbal communication in accordance with its motivation, purpose, objectives and social norms of verbal behavior.

A specialist in the field of the study of the psychology of communication, A. Leontiev defines communication skills by the ability to differentially use excellent language skills or their sequences for various communication purposes.

V. Kunitsyna in her research defined communication skills as a structural element of communicative activity, where activity is a specific type of activity to establish connections with another person as an object of communication.

Analyzing the psychological and pedagogical literature, it is possible to identify various approaches to the classification of communicative skills. Among them: the ability to quickly and correctly navigate in the changing conditions of communication; correctly plan and implement a communication system, including its most important link - speech impact; quickly and accurately find communicative means adequate to the content of the act of communication, which correspond simultaneously to the creative individuality and the situation of speech, as well as to the individual characteristics of the object of influence (interlocutor); constantly feel and maintain feedback in communication; the ability to clearly express their thoughts and feelings [7].

T. Ladyzhenskaya singles out the skills of the intellectual-speech plan, in which she includes the ability to draw up a plan, theses, the ability to take notes, in detail or briefly state the content of the source text, prepare for oral expression, deliver messages, reports.

Such a statement has a particular importance for our research, insofar as the communication skills of cadets should also be essentially intellectual, and not automated. After all, the pilot programs, controls the aircraft, and then bears the ultimate responsibility for the safety of the aviation system.

The communication activity of the pilot should consist of sociability, activity, politeness, tact, ethics of speech, organizational skills, the ability to clearly, consistently and understandably express their thoughts.

Language and speech, namely communicative side of the activity, which are the components of the crew's activities, are a system of interaction between the commander and crew members, as well as an integral factor in ensuring flight safety. In the course of flight activities, difficult or even extreme situations often arise. In such cases, the pilot is assisted by professional and specialized knowledge, his skills and experience.

Communication skills are a component of the professional readiness of future pilots. So, R. Makarov notes that professional readiness includes 13 blocks of components [8]. These include parameters related to professional health, belief system and professional aspect. These blocks reflect the parameters of professionally important qualities, knowledge, abilities, skills, conditions, etc.

During the flight, the pilot interacts not only with the equipment, but also with other crew members. In the process of such interaction, sometimes the crucial condition for understanding the problems and making the best decision is to have accurate, comprehensive and timely information. In this case, the core are communication skills, without which, along with many others cannot be guaranteed safety of flight, success in work and achieve a common goal. Aviation events confirm the fact that the communicative interaction of crew members is an integral part of flight safety, it can play a crucial role in resolving the dangerous situation. The success of pilots depends on the level of development of communication skills and the skills formed on this basis to establish relationships with other crew members and organize it to perform tasks, and sometimes to solve problems in critical situations during flight activities [6].

During the flight, the pilot must take into account the psychological characteristics of other crew members, to know what can lead to psychological incompatibility. Proper division of responsibilities among the crew is very important for flight safety. Therefore, in the process of training pilots in a higher flight school is very important psychological and pedagogical training of future pilots, especially in the context of interaction with crew members. After all, only mechanical approach to the technology of work and crew interaction at emotionally saturated and complex stages of flight does not reveal all the nuances of the aviation event, which occurred due to the complex psychological interaction of pilots [4].
Let us emphasize that the peculiarities of the professional activity of the flight crew are due to the fact that professionally necessary qualities are manifested in most cases in extraordinary, extreme conditions and require mobilization of heuristic and creative abilities of the pilot to make an informed and correct decision and safe flight.

That is why training in flight higher education should form cadet’s readiness to solve problem situations in future professional activities, which, in turn, implies the need to develop cadet’s communication skills; training of intellectual functions and mechanisms of transformation of indefinite signals into definite ones for making a single correct decision in different conditions of educational activity; emergency modeling [8].

In the context of our research, we pay special attention to the professional aspect. It includes socio-psychological, individual-psychological profiles, moral and moral-legal portraits, heuristic components of flight activity, professional knowledge, skills, etc.

In turn, the socio-psychological profile includes such communicative qualities as sociability, openness, politeness, sincerity, language ethics, tact, the ability to clearly express one's thoughts, substantiate one's point of view, etc.

It is obvious that communication skills are one of the most important professional qualities that characterize the professional readiness of pilots, because the activities of the crew are largely determined by the communication of its members in the development and implementation of decisions.

Based on the considered theoretical approaches to the structure and content of communication skills, we can formulate a definition of the communication skills of future pilots.

Communication skills of future pilots are the ability to exchange information based on acquired knowledge, skills and practical experience with the aim of mutual understanding between crew members and performing professional activities in normal and extreme flight conditions.

We included the following components of the communication skills of future pilots: the ability to understand behavior, the ability to speak, the ability to listen, the ability to think flexibly, organizational skills, the ability to manage own behavior and the ability to resolve conflict situations.

Being able to understand behavior means to know the professional responsibilities of other crew members.

The ability to speak competently provides positive interaction among crew members. The ability to understand behavior helps in working out the technology of crew interaction.

The ability to express oneself is the ability to express own thoughts clearly and intelligibly, to express own point of view, the ability to build speech optimally. These skills are extremely necessary for future pilots, because during the flight the crew communicates with each other. The ability to express oneself is appropriate in the performance of professional duties during flights. Therefore, a very important role in the process of communication in the crew is a competent statement.

Ability to listen performs the function of feedback, gives information about the perception of the interlocutor. Listening skills are also useful in such professional moments as solving problem situations that arise during the flight, as well as these skills will be needed for making a joint competent decision. Listening should be active. It involves feedback to control the accuracy of information perception, helps to understand what is heard. Prospective pilots can also use active listening to find out the content of the information message.

The ability to think flexibly is manifested in the pilot's ability to quickly change their actions when the communication situation changes, freeing themselves from the dependence of the methods and techniques of solving similar communication problems established in previous experience. Being able to think flexibly is an extremely valuable quality for a future pilot, because there is always a time limit in flight. Flexibility of thinking is the readiness to quickly switch from one way of solving problems to another, to change tactics and strategy for solving them, to find new, non-standard ways of acting under changed conditions. First of all, flexibility of thinking is necessary for future pilots in critical situations when making the right decision.

Organizational skills are the ability to plan, organize, operate and control the process of communication in the crew in order to achieve coordination of interpersonal professional communication necessary for the effective performance of flight tasks. Organizational skills are mainly required for the crew commander to organize the work of the crew in accordance with regulations and flight regulations. But every pilot has the opportunity to become a commander in the future, so future pilots should master such skills.

The ability to control one's own behavior is a skill that future pilots need in any situation, especially when non-standard situations arise. In such cases, it is important to control your statements and your own communicative activity.

Ability to solve a conflict situation - reaching an agreement between crew members through various ways to solve the conflict and prevent it. But it is best to prevent conflict, because it depends on flight safety.

The next key question of our research should be to define the concept of the readiness of future pilots to solve problematic situations of professional activity.
In the 70-90s of the 20th century many pedagogues and psychologists were involved in the formation of graduates' readiness for professional activity. Studies were conducted on short-term readiness for flight activity (V. Marishchuk, E. Pletnitsky), in military activity (M. Dyachenko, S. Kubitsky), for the activities of a human operator (E. Milerian) [8].

In the psychology of labor and sports, engineering and military psychology, there are developments that directly or indirectly characterize a person's readiness to perform an activity. Scientists M. Dyachenko and L. Kandybovich note that readiness is a fundamental condition for the successful implementation of any activity. Readiness for activity develops on the basis of mastering general and professional knowledge, forming skills and abilities, improving the existing professionally important qualities. At the same time, scientists S. Maksimenko and A. Pelekh indicate that readiness for a particular type of activity is a purposeful manifestation of a person, which includes her beliefs, views, attitudes, motives, feelings, volitional and intellectual qualities, knowledge, skills and skills. It is achieved by the course of moral, psychological, professional and physical training, and is also the result of a cadet's all-round personal development, taking into account the requirements due to the characteristics of the activity, profession [4].

Research related to the formation of the professional readiness of future pilots arouse particular interest within the framework of our work. Thus, the study of the problems of psychological readiness was summarized in works by M. Dyachenko and L. Kandybovich, who considered a wide range of problems associated with the formation of long-term and situational readiness. They maintain that it can be formed with comprehensive training. It is the result of personality development and taking into account the requirements due to the characteristics of the activity, profession.

The problem of psychological readiness was also paid attention to by K. Platonov, who identified three meanings of readiness for professional activity: firstly, it is readiness for any work, which is the result of labor education, expressed in the desire to work, awareness of the need to participate in joint work activities; secondly, it is the readiness for a certain job, which has become a profession, which is the result of vocational training, education and social maturity of the individual; thirdly, it is readiness for work, which is the result of psychological preparation and psychological mobilization [8].

Thus, an analysis of the scientific literature has shown that there have been many studies devoted to the study of readiness for activity. In general, two main approaches can be distinguished in the study of this problem. In the first, readiness is viewed as a complex formation that includes the psychological structure of cognitive, motivational and emotional-volitional components, which determine the formation of relevant knowledge, skills, professionally significant personality traits that a specialist must possess for successful adaptation to activity. In the second, readiness is understood as a functional state that contributes to successful performance and ensures its high level.

It is obvious that the formation and functioning of the future pilot should be determined by such an important characteristic as the readiness to solve problem situations in professional activity.

That is why, under the concept of "the readiness of future pilots to solve problematic situations in professional activity" as a category of activity and a component of the professional reliability of a pilot, we understand the holistic manifestation of all aspects of the personality (experience - knowledge, skills and abilities; socially determined characteristics - motivation and focus; individual mental processes - attention, memory, thinking and communication skills), which is the result of professional flight training, contributing to the safe performance of the pilot's professional functions.

In the process of formation of the readiness of future pilots to solve problem situations by updating communicative skills, special attention should be paid to the principles that reflect the basic patterns that are highlighted in the theory of training, and should guide the organization of the training process for future pilots.

The principle of systematization presupposes such a construction of the educational process, according to which the acquisition of new knowledge and the acquisition of skills and abilities is planned in a certain, pedagogically conditioned system. When the formation of the necessary skills, accumulation and improvement of knowledge is carried out gradually, in a logical sequence, by complicating the exercises and tasks of theoretical training.

The principle of scientificity. We consider the principle of scientificity in the process of preparation as the development of future pilots' skills and abilities of scientific problem search, constant improvement of teaching methods and methods of their use.

The feature of the application of the principle of consciousness and activity is the impossibility of acquiring knowledge, developing skills and abilities without a conscious understanding of what should be mastered and why it should be learned.

The feature of the principle of individual approach in the training of future pilots is the impossibility of successful and conscious mastery of knowledge, skills, abilities without full consideration of individual characteristics, level of training and psychophysiological characteristics of each cadet.

The use of the principle of focus on future professional activity in our study consist in the training of professional communication of pilots includes tasks for the analysis of aviation events that took place in real life and associated
with impaired communication between crew members, finding solutions to problems, building image of the flight, which fully reflects the professional activities of the pilot.

The problem principle. We consider the problem as a means of developing mental skills, which should be the basis for the formation of creative activity of pilots.

For more effective formation of the readiness of future pilots to solve problem situations by updating communicative skills it is necessary to apply specific procedural principles that reflect the essence of flight training and are the basis for the formation of professional reliability. The principle of regulation and time limitation of the learned actions - formation of ability to work in a limit and deficit of time. The principle of additional psychophysiological load on the background of the main activity, which is based on the pattern of reducing the psychophysiological costs of the body as the improvement of knowledge and actions learned by the future pilot. The principle of rhythmic growth of psychophysiological load - alternation of psychophysiological load as the neuropsychological stress of the body. The principle of complex formation of psychophysiological qualities and mechanisms of adaptation provides simultaneous formation of a complex of qualities and mechanisms of mental adaptation, which provide reliability in extreme conditions of activity [7].

Each principle contains a certain position or idea that must be implemented in the process of forming readiness of future pilots to solve problem situations by updating communicative skills. It should be remembered that the essence of each principle implies a certain set of requirements. Taking into account these requirements ensures the optimal course of training, the normal course of the process of acquiring knowledge, skills and abilities, the development of mental processes.

The conclusions, prospects for further research, suggestions. The process of pilots training in a higher flight education institution is built mainly on the basis of many years of experience in the flight and flight methodological work of its developers, therefore, although it helps to obtain positive training results, but it isn’t optimal, as evidenced by safety statistics.

Thus, the practice of modern air transportation requires finding ways to optimize the training of aviation specialists to ensure flight safety. At the same time, the problem of formation of communicative skills of pilots, which will contribute to their readiness to solve problem situations that arise in the professional activities of the flight crew, is relevant and timely. This problem should be the subject of in-depth analysis and requires a solution in the process of special training of future pilots.

References:
разработчиков, зачастую не имеет научного обоснования и не является оптимальной. В результате, у курсантов в достаточной степени не сформированы умения, способствующие их готовности к принятию грамотного решения в проблемной ситуации, возникающей в процессе выполнения учебного полета. В связи с этим, профессиональная подготовка будущих пилотов нуждается в пересмотре ряда основных положений. Авторами предоставлены определения таким понятиям, как «умение», «коммуникативные умения» и «готовность будущих пилотов к решению проблемных ситуаций», которые раскрывают их сущность и подчеркивают особенность профессиональной подготовки авиаспециалистов. В статье акцентируется внимание на необходимости оптимизации системы профессиональной подготовки будущих пилотов, которая должна способствовать формированию готовности к решению проблемных ситуаций в их профессиональной деятельности.

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