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**Human factor as an inherent part of aviation safety**

*Safety is the most discussed topic in the field of aviation nowadays. A lot of factors should be followed to make aviation safe. In order to avoid mistakes, at any stage it is necessary to take into account the human factor clearly aimed at the safety of any actions in the aviation sector. And if the concept "human factor" is applied appropriately, it is likely that aviation will be safer. The present research deals with the human factor in aviation, considering English language proficiency in particular.*

Human factor usually means a row of human conditions such as stress, complacency, fatigue and many others. It is worth noting, that human factor can become a reason of many aviation accidents.

According to the official ICAO (International Civil Aviation Organization) data, three out of four aviation accidents occur as a result of a failure in human performance, that is, about 80% of aviation accidents occur due to erroneous actions of aviation personnel in the air and on the ground [4, 5].

Thus, we can assert that the "human factor" is a priority in ensuring aviation safety. In professional literature there are different definitions of the "human factor".

Human factor covers a range of issues including perceptual, physical and mental capabilities, the interaction and effects of working environments on individuals, the influence of equipment and system design on human performance and, finally, the organizational characteristics which influence safety related behaviour at work [6].

The human factor is a polysemantic term applicable to all spheres of human life and society, which describes the possibility of a person to take erroneous actions in a particular situation. In socio-humanistic literature, the human factor is traditionally understood as the functioning of a person as a subject of activity in various spheres of social life. In technical literature, according to L. Kaidalov, the human factor is investigated in the context of safety issues of various technical systems and denotes the integral characteristics of the connection between a person and a technical device that arise in the specific conditions of their interaction [1].

The authors of the article consider human factor to be the property of a person to perceive, understand, interpret, use, assimilate or reject everything that surrounds them. Human factor plays a significant role in the field of civil aviation. It is commonly known that the training program for aviation personnel, according to ICAO requirements, includes the study of the human factor, since a lot of air accidents occur precisely because of the human factor and, in order for the number of such accidents to be minimal, it is necessary to better understand the role and significance of the human factor in aviation, and previously acquired knowledge can be simply used to prevent errors.

The whole issue is that the use of new information technologies helps avoid some errors, but at the same time, nobody can guarantee the appearance of new

ones, where the intellectual component is in the first place. Thus, the types of errors are constantly changing. The solution to this problem is the awareness of physiological and mental laws by aviation specialists, the acceptance of the fact that the perception of aircraft accidents as something fatal or inevitable is a mechanism for protecting the psyche for refusing to counteract the psychophysiological factors of flight. In this regard, the work to prevent such errors comes down to knowing the main psychophysiological dangerous factors of flight, the mechanisms of the body's functioning, and constant self-improvement.

In order to avoid errors, at the initial stage it is necessary to use the human factor clearly aimed at the safety of any actions in the aviation sector, before the personnel receive a certificate and begin their direct duties. And if the concept "human factor" is applied appropriately, it is likely that aviation will be safer.

Why, in general, was it necessary to start studying the human factor? It was necessary to understand the attitude of a person to one or another field of activity and make this attitude more meaningful and effective. The aviation safety sector is a rapidly developing area where human safety (whether these are pilots, air traffic controllers, technical staff, servicemen, flight attendants, passengers) is above all. Optimization, improvement, correctness of their interactions will increase safety in aviation.

A scientific approach was used to solve this problem. However, there is every reason to believe that the new interest in the role of the human factor in ensuring aviation safety was caused by the technological limitations prevailing at the time when this concept only started to be studied. Further the application of knowledge about the human factor led to the fact that the maximum capabilities of a person were taken into account, but at the same time their limitations were often overlooked.

Awareness of the need to train aviation personnel in the basics of human factor has led to the fact that in various countries mandatory training courses in this area have been organized. This need has been confirmed by the results of investigations into a number of aircraft accidents, which were mostly the result of the neglect of a number of aspects connected to human factor. Thus, it prompted ICAO to include human factor training requirements in the list of aviation personnel training requirements for licensing [2].

It is worth noting that the concept "human error" has nothing to do with accident prevention, as it can usually only help to identify where a failure occurred in the system, but it does not help to find out why exactly this failure happened [2].

An error associated with human activity in the system can be predetermined at the system design stage or provoked by insufficient personnel training, poorly developed procedures, imperfect concept and format of the current checklists or manuals. In addition, the definition of the concept "human error" does not take into account any hidden factors that must be carefully analysed in order to prevent accidents.

In the field of aviation crew errors can be conditionally divided into several groups:

1. Active errors are those that are manifested in violation of established rules and standards, lack of discipline.

Prevention method: selection of pilots at the stage of training and hiring. Particular attention is paid to the development of the algorithm and the selection of personnel when recruiting.

2. Passive errors are the lack of mutual understanding of the aircrew members, impaired coordination during joint activities, fatigue, forgetfulness.

Prevention method: improving communication inside and outside the cockpit. Communication must be practiced, culture of communication and obedience to commands are needed. One of the factors for eliminating passive errors is a light, kind atmosphere in the cockpit, which is an indicator of a good crew.

3. Insufficient training of crew members and / or incorrect decision making.

Prevention method: conducting a standard pre-takeoff and pre-landing setup conversation between the aircraft commander and the aircrew regarding the forthcoming actions in the event of any system failure.

4. Deviation in the state of health of the aircrew members, psychophysiological deficiencies that appear suddenly.

Prevention method: posing a question and getting an adequate answer, working out the situation when training on simulators.

5. Difficulties accumulated during the flight.

Prevention method: elimination of stress factors, creation of conditions for the removal of psychophysiological stress, provision of typical operational factors.

However, in the process of transmitting information, human error can lead to fatal consequences. There is one rule put forward by the International Civil Aviation Organization (ICAO) that requires all aviation field specialists to speak English. It is necessary to avoid confusion and provide safer environment for international flights [3].

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