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Psychological aspects of decision-making in the activity of the aviation sphere specialist

The article is devoted to the analysis of the problem of decision making in the activity of aviation specialists. Attention is accentuated on the universal nature of the decision-making process. Rationalistic and psychological approaches to the interpretation of the problem of decision making within the theory of activity are considered. The decision-making process is defined as a special mechanism of personality development in technical activities, and situations requiring decision-making as a situation of interaction of a person with the requirements of the environment.

Problems of practice related to decision-making learning by both young and experienced aviation specialists are always relevant. Readiness for action under uncertain conditions is largely dependent not on the list of specific deterministic algorithms of action, but on the ability to independently create them at the actual situationally specified level (probabilistic algorithm). That is, with the growth of the novelty of the problem, the importance of the personality characteristics of a specialist increases: the degree of generalization of the subjective image of an urgent solution, which is formed on the basis of direct and indirect information about all possible, as well as unlikely, actions in the actual production situation; level of self-regulation development; ability to solve contradictions; mobility etc.

The decision-making process is a universal problem in the work of a specialist, in particular aviation specialist. Everyday production situations constantly contain the need for decision-making. Analyzing aviation activities, we find the process of decision-making in the process of goal-setting, both in the process of processing information received and in the planning of the program of action, that is, the decision-making penetrates all its components. On the universal character of the decision-making process, J.Koen wrote: "... If we did not look at a person, in any era and in any social form of organization of society, we see that it constantly feels uncertainty from birth to death, therefore life can be described as a continuous sequence of operations of choice" [6, p. 5]. Because of this, in empirical psychological studies to optimize the process of professional identification of the person in the aviation sector, it is necessary to take into account the regularities of the decision-making process in this activity. At the same time, such studies are also important for improving the system of vocational training at technical levels, since developing skills to develop and correctly choosing the optimal solution is an important component of vocational training for any specialty, in particular for the training of future aviation engineers.

In the process of theoretical and empirical studies of this problem, considerable theoretical as well as applied results are obtained. There are several approaches to the interpretation of the problem of decision-making: within the theory of decision-making activity begins with the general readiness for action, the

awareness of its necessity and the sanction of its outcome (V.D. Sadrikov, G.P. Shchedrovitsky); the psychological criteria of the complexity of the decision-making process by the human operator are studied (V.D. Magazannik, Z.M. Zarakovsky); the decision-making process is considered as a volitional act of a conscious organization of activity (P.K. Anokhin, V.K. Kalin, S.L. Rubinshtein). As we see, in the activity approaches the process of decision-making and its components is most carefully studied, their development and development are studied, but within this analysis, the activity of the individual seems to be void, it turns into a set of psychological properties and components necessary for decision-making. One can agree with the fact that in these approaches, the person is considered as a subject, but the subject of a particular activity, and not as a flexible creative participant in the interaction "specialist-situation".

At the same time, personality aspects of decision-making need further elaboration (K.O. Abulhanova-Slavska, D.N. Zavalishina, T.V. Kornilova, O.K. Tikhomirov, Y.O. Ponomarev). In our study, the decision-making process is seen as a special mechanism for the development of personality in technical activities, which captures a certain level of development. "Every mental tumor can be considered as the result of a decision: new motives, meanings, goals, and evaluations" [3, p. 21].

The decision-making process is always associated with activities in the environment of information uncertainty. If there are no selection problems, then the decision is made automatically and unambiguously. If the choice is based on the goals, means and evaluation, then the decision is routine. The adoption of the decision is preceded by the processes of formation of new goals, tools and assessments. Applied research in this area proves that at all stages of decision-making there is a productive removal from the object of new content by including it in the new system of connections, which are manifested with the change in the levels of generalization of the properties of the object. According to the results of research on psychophysiology, the corresponding procedure contains a sample assessment of the informativity of the situation, which is based on the individual experience, the amount of memory on identical images.

In the decision-making process, two distinct phases are distinguished: 1) the generation of diversity, in which a certain number of variants of solutions that satisfy the conditions of the task are selected from a universal set of actions; 2) the restriction of this diversity - the implementation of a single alternative action [6]. In the technical field, the decision-making process involves the formation of a certain sequence of reasonable actions to achieve the goal based on the conversion of the output data, and therefore the search will last longer, and the time spent will reduce the effectiveness of such activities. In the conditions of the uncertainty of the situation in the production activity, the developed person tries to act in such a way that, based on the subjective assessment of the probability and usefulness of the actions, it was possible at the final stage of the activity to maximize the expected result.

Investigations carried out in the field of decision-making by a person, led to the formation of two theoretical approaches: rationalist and psychological. The first is based on the research of mathematicians, engineers, economists and tries to

answer the question of how to make decisions rationally and to choose optimal alternatives, that is, its representatives try to develop a certain universal algorithm.

According to V.F. Rubakhin, in the decision-making process, two types of actions can be distinguished - algorithmic and non-algorithmic, and two methods of their implementation are "preprogrammed" and are not actually deterministic. In the first case, the actions are automatically conditioned by the understanding of the situation and are in accordance with the scheme "stimulus - reaction". In the second there is a need for additional cognitive, motivational, and intellectual efforts [4]. That is, the preparation and implementation of decisions related to the personal preconditions and settings of the person. The settings and methods that are developed in the learning process and in the experience often allow you to significantly reduce the number of alternative solutions that are considered, but not always such actions will ensure the best, most up-to-date decision. Therefore, the development of such psychological mechanisms as reflection, goal-setting, and the formation of new senses will contribute to the improvement of decision-making strategies, based on informal operation of information, the creation of comprehensive search guides that would combine rationalistic and humanistic features in non-standard production situations. If a specialist acts on an algorithm, then the solution is implemented in strict sequence, but it is not flexible and sometimes does not correspond not only to the experience and purposefulness of the individual, but also to the production situation, which is dynamic and varies sufficiently quickly. Because of this, the choice of decision in the process of professional activity is often cyclical. The essence of such search activities is that the expert tries to distinguish from the many data the most promising, in his opinion. As a result of such creative activity, the decision-making process in aviation activities may have inconsistent cyclic nature. This is due, firstly, to the fact that not all existing possibilities are analyzed; and secondly, the existence of strictly determined rules of conduct in the aviation sector, even in certain situations [7].

The second, psychological, approach is developed in the theory of behavior. Researchers study how a person makes decisions in real situations, based on their psychological capabilities. T. Arroba, D. Mayers, K. Jung studied the style of decision-making through the analysis of personality traits. In the works of B.M. Teplov analyzed the individual style of the subject, the problem of qualitative individual differences in the performance of the same activities [5]. V.V. Zlagoduh, O.M. Ichanska study the professional responsibility of pilots through awareness of the risk of causing harm to themselves and others as a result of actions in the course of their professional activities [1], [2].

Conclusion. We emphasize that the parameters of any activity, in particular aviation, in many cases, not only depend on the characteristics of the decision, but also directly determined by them. We consider situations that require decision-making as a situation of interaction of the individual with the requirements of the environment. The need to include personal mechanisms in the decision-making situation is also conditioned by the fact that the individual develops and implements himself in the activities and actions. That is, situations requiring the adoption of a non-standard solution, are also situations of change that change the reality and produce something new.

References

1. Злагодух В.В. Психологічний зміст саморегуляції професійної діяльності у майбутніх операторів авіаційного профілю // Авіаційна та екстремальна психологія у контексті технологічних досягнень: збірник наукових праць / за заг. ред. Л.В. Помиткіної, Т.В. Вашеки, О.В. Сечейко. – К. : Аграр Медіа Груп, 2017. – С.104-109.
2. Ічанська О.М. Відповідальність майбутніх авіаційних спеціалістів в контексті проблеми безпеки // Актуальні проблеми психології: зб. наук. пр. – К.: НАУ, 2012. – Вип.21. – Т.10. – С.73 – 82.
3. Корнилова Т.В. Принятие интеллектуальных решений в диалоге с компьютером / Т.В.Корнилова, О.К.Тихомиров. – М. : МГУ, 1990. – 191 с.
4. Рубахин В.Ф. Принятие решения в деятельности оператора // Основы инженерной психологии. – М. : Высшая школа, 1977. – С. 64-76.
5. Теплов Б.М. Избранные труды. В 2-х т. Т.1. Способности и одаренность. Психология музыкальных способностей. – М. : Педагогика, 1985. – 328 с.
6. Чораян О.Г. Процесс принятия решения (Нейро- и психофизиологические аспекты). – Р.н.Дону : Изд-во Ростовского ун-та, 1988. – 128 с.
7. Яковицька Л.С. Психологічні особливості прийняття рішень фахівцями військово-технічної сфери // Актуальні проблеми психологічної допомоги, соціальної та медико-психологічної реабілітації учасників антитерористичної операції: матеріали міжвідомчої науково-практичної конференції (Київ, 26 травня 2016 р.) / Міністерство оборони України, Національний університет оборони України імені Івана Черняховського. – К.: НУОУ, 2016. – С. 395–397.