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PROGNOSIS OF ETHICAL NORMS' FORMATION AND DEVELOPMENT FOR TECHNICAL EXPERTS

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Nowadays development of technical systems shows the necessity to forecast the global consequences when the projects are not very carefully planned and moral ethical norms are not taken into account. The main difficulty that technical experts face while in the process of developing objects to be required is the necessity to make the object ready for the future operation, perhaps, in new conditions without lowering tactics and technics characteristics.

Key words: prognosis, technical expert ethics, technical systems' development.

Ethical matters in the technical area are becoming more important on the stage of technical system project design. With complexity of the growth and speed increase of processes being involved in the human activities, human aspects, namely, psychological characteristics of a human being engaged in project design and development, technical objects' operation and management are being viewed as very important ones. Ethical matters for technical experts are being considered to a greater extent in the process of training and future professional activities.

At present scholars focus on the project design rather than the process of technics exploitation itself. Designers and technologists have to pay more attention to the exploitation safety issues, effective management and self-regulation, safe utilization of technical objects in the process of the project design, development and manufacture of the technical objects.

Educational technologies enable to forecast the most possible result of their implementation under the certain circumstances. The educational system is a dynamic process. With rapid changes in external and internal environment the prognosis of the future state of managed processes and systems that allows to increase the range of decision and operations being planned as well as assessment of risks in the long-term and argumentation, is able to play an independent role in increase of efficient performance of technical experts.

Prognosis enables to perceive the future objectively, to identify the possible difficulties, to find out the ways of problem-solving and diminish their negative impact. The main difficulty that technical experts face while in the process of developing objects to be required is the necessity to make the object ready for the

future operation, perhaps, in new conditions without lowering tactics and technics characteristics.

It is difficult for a technical expert, who relies only on his previous experience and who focuses only on requirements of a technical task while in the process of object design, to understand virtual problems of the future. Changes in the area of exploitation conditions may result in an obviously obsolete technical object, if the nearest perspective of its implementation and possible alternative options of problem-solving have not been considered.

According to I.V. Bestuzhev-Lada, prognosis in a wider meaning of this notion is development of prognosis, and it refers to a special scientific analysis of certain perspectives of some object's development in its narrow sense [1].

Prognosis problematics includes studying the characteristics of prognosis as a specific scientific research, principles of making prognosis with optimal combination of different prognosis methods and assessment methods of prognosis validity [2].

Philosophical understanding [3] of prognosis implies that research of the future technical objects rather than those in existence is of priority since the ideal image of the future objects is being developed. Such a method of reality perception can be called «advanced reflection».

Many psychologists suggest that the advanced reflection of forthcoming events, environments, actions of other people in future situations as well as their own activities takes place in different forms, such as presentiment, foresight, guessing and predicting. Anticipation is the mostly general notion of advanced reflection that includes all forms of it. In psychology anticipation is viewed as an ability of a human being to act and to make different decisions in respect of expected future events. The decisions are made in a proactive way and with a certain temporal and spatial aptitude [4].

L.A. Regush emphasizes that prognosis is, first of all, a cognitive activity of a human being. Secondly, prognosis results in understanding the future under certain circumstances including prognosis basics development; the basics transformation and their correlation with the certain data of the object being forecast; ways of obtaining knowledge about the future. Thirdly, the prognosis result is very specific. It implies the reflection of the future while taking into account the probability of its coming into reality and different temporal perspectives [5]. Thus, the essential specificity of prognosis consists of generic features of a human being, i.e. the cognitive activity, species features, i.e. previous experience and its evolution, and the result of activity, i.e. prognosis of the future that has the probability character.

Relatively slow rates of society development throughout centuries provided a steady pace of education and training of experts required by the society. Customs and traditions in education were formed in the education system. The rapid growth of industries, the regularly increasing pace of development and improvement of industrial production, niche specialization in the area of production of goods and services created conditions for widening the range of qualifications and their quick replacement. This requires the improvement of the educational structure, training and retraining.

To sum up, ethical matters for technical experts require high prognostics competence, highly-developed prognostic mental abilities allowing to objectively perceive the perspectives of technical systems' development and possibilities of effective interaction of a human being with these systems.

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