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**Educational Studios:
Theory and Practice**
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3. METHODIC AND TECHNOLOGICAL ASPECTS OF TRANSFORMATION OF EDUCATION

3.1. THE ESSENCE AND TECHNOLOGY OF PEDAGOGICAL FORECASTING OF DEVELOPMENT OF INNOVATION PROCESSES IN EDUCATION

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Abstract. *The essence and features of the pedagogical forecasting are revealed in the article. The technology of pedagogical forecasting of educational innovation processes as a set of three blocks (diagnostic, modeling, verification) is proposed. The peculiarities of the realization of the technology of forecasting innovation processes in education at three levels (at the level of general tendency of global innovations – macrolevel, at the regional level –metalevel; at the level of the individual educational institution – micro level) are analyzed; the prospects for the development of innovation processes in the educational system of Ukraine (the humanization of the educational process, the integration the Ukrainian identity of the nation into education, the forming of public spirit in the educational youth of the community;the extending of the culturaleducational function of education; the development and introduction of innovation teaching technologies; the valeologization of the pedagogical process) are defined.*

Key words: *innovation process, education, pedagogical forecasting, forecast, development prospects, technology.*

The state of the system of general education is a sensitive indicator of the processes taking place in the society. Today in Ukraine the process of formation of new paradigms of education that are aimed at entering the world educational space is continuing. This process is accompanied by essential changes in pedagogical theory and practice. The general problems of pedagogical innovation are studied in the works of L. Karamushka, V. Palamarchuk, V. Pinchuk, O. Popova, V. Sergievsky, Y. Taran, B. Chyzhevsky and others. The problem of managing innovation processes is revealed and their introduction into the educational practice is disclosed in the worksof L. Berezivska, L. Danilenko, O. Kozlova. O. Sidorenko, V. Sknar and others. In the studies of modern scholars, such components of pedagogical innovation as pedagogical neologism (the theory of creation of innovations in the system of education); methodology of perception, evaluation and interpretation of the new in sociology, didactics, psychology, management; technology and experience of the practical application of educational innovations are widely found out [1]. At the same time, the attention to solving the problem of pedagogical forecasting, that is of particular importance for the essential increasing of the general methodological, theoretical and practical level of pedagogical innovationis not enough paid. The purpose of the article is to find out the essence of pedagogical forecasting, to formulate the principles and to reveal the technology of forecasting of innovation educational processes, to determine the prospects of the development of innovation processes in the education of Ukraine. Meth-

ods of research: general scientific (analytical, comparative, diachronic); diagnostic (questionnaires, surveys, interviews, pilot studies), observational (observation, retrospective analysis of own pedagogical practice and activities of educational institutions, authorities and scientific and methodological institutions), prognostic (expert assessments, generalization of independent characteristics). Presenting basic material. Solving problems of pedagogical forecasting requires a clear idea of the essence of forecasting at all. In modern scientific literature (I. Bestuzhev-Lada, B. Gershunsky, M. Golubev, V. Mikheev, J. Glass, J. Stanley and others) the considerable attention is paid to the methodological and experimental development of the problems of forecasting various social processes. The creation of a conceptual basis for forecasting allowed us to identify a number of leading concepts in scientific futurology. To date, there is no definite interpretation of the term "forecasting". Yes, under it, it is understanding the type of cognitive activity (M. Davydov, V. Lisichkin); the process containing the moment of modeling (V. Afanasyev, N. Stefanov); determination of signs of the desired result (V. Yakunin); the process of obtaining forward-looking information (Y. Prucha); a socially organized set of scientific researches aimed at obtaining a reliable forward-looking information about the development of appropriate pedagogical objects in order to optimize the content, methods, means and organizational forms of teaching and educational activities (B. Gershunsky); the process of realization of forecasting (V. Vinogradov). In the general sense, under the forecasting, is understood a special scientific study of the prospects of the development of any phenomenon, mainly with quantitative estimates and the definition of certain terms of the change in this phenomenon. Such understanding of this term is proposed by the authors of the Great Encyclopedic Dictionary (1932), and in pedagogical science by M. Golubev, who defines forecasting as "authentically scientifically grounded opinion of the prospect, the possible states of a particular phenomenon in the future and (or) alternative ways and the sides of its implementation" [2, p.8]. In other words, under the forecasting, the authors understand the system of modes and methods of scientific research of objective tendencies, prospects of the development of the phenomenon, process.

The psychological approach to forecasting consists in studying this process as a mental activity, those properties that can affect the success or failure of the forecasting. As the essential signs of forecasting in psychology are standing out: cognitive activity, knowledge of the past, transformation of knowledge, the result of activity. Ancestral in relation to the category of "forecasting" is the term "anticipation", which refers to "the ability (in the widest sense) to act and take certain decisions with a certain temporal-spatial advance in relation to the expected events" [3, p.124]. The concept of "anticipation" includes two important moments for psychological analysis, namely: 1) prediction and expectation of certain events, that is, manifestation of the cognitive function of the psyche; 2) readiness to meet these events and prevent them from acting, that is, manifestation of the regulatory function of the psyche. Pedagogical prognosis as a component of the general concept of "technological forecasting" (for the first time in our country, this term

was considered in detail in the "Workbook on Forecasting" in 1982) derives from the theoretical proposition that forecasting is one of the forms of specification of scientific foresight, and the latter, in its turn, is in a complex relationship with a level-of-government management category, which also has different forms of concretization (goal-setting, planning, pre- and post-plan programming, design current management decisions) [4, p.12]. Pedagogical prognostication as a component of scientific forecasting has the characteristic features of the latter; one of these is that the methodological basis of scientific and pedagogical forecasting is a stochastic approach. According to this approach, the change in the process, the phenomenon with time, it is impossible to predict precisely, they are accidental in nature. The second characteristic feature of pedagogical forecasting is that in its implementation, the transition from the already known to still unknown tendencies in the development of the object (subject) forecasting in the future. The third feature is that the process of pedagogical forecasting cannot be performed without diagnostic data on the status of the object (subject), taking into account the factors of affecting it, etc. [3, p.127].

A specific feature of pedagogical forecasting is pronounced its polyvariant nature, which is conditioned by the dynamism of the development of objects (subjects) of the pedagogical process and the multifactoring of the latter. The result of forecasting is a forecast. Investigation of laws and methods of forecasting helps to determine the meaning of the concept of "prognostic modeling", in which two models are important for us- the model of the phenomenon and the model of forecast as a way of determining the ways of achieving the goals of educational innovation processes. Thus, the ambivalence of the predictivemodeling, in contrast to the prediction of the pedagogical process, allows, in a logical-dialectical basis, to consider the leading problems of predicting goals, results, of the teaching and educational process as a whole. Forecasting of innovative processes in education allows to estimate on the basis of similar processes or existing experience the prospects of development and condition in the future of the investigated phenomenon. Of course, one cannot predict the course of events in all details, but it is possible to determine the prospects for the development of one or another phenomenon in order to make appropriate corrections to our current plans, programs and solutions. The meaning of the forecast is precisely in order to increase systematically the level of planning, modeling, management [5, p.33-34] by continuously "probing" various future options. Taking into account the essential for the process of its parties makes it possible to extrapolate or interpolate the course of the pedagogical process itself. On this basis, we can build a model of the process that determines the options for achieving the goal of the innovation process. The researcher in pedagogical forecasting proceeds also from the real condition and his penetration into the leading tendencies of the process development. It is impossible not to agree with M. Golubev, who emphasizes that the need to present the limits of the modern paradigm, to capture the dysfunction of modern in "disorderly" fluctuations of elements within the system, and on the basis of this "to understand" the situational "chaos" from which the problem is born [2].

When forming a “scenario” on the basis of these data, it is necessary to take into account the background of the forecast, that is, those main factors that not only actively interact and affect the innovation processes, but are developing and changing themselves, in other words, undergo their own evolution. Therefore, the forecast solves two problems that need to be reflected in the “scenario” - the forecast of the innovation process and the forecast of the evolution of the factors that most actively affect it. I. Bestuzhev-Lada [4] proposed a technology (algorithm) for the prediction of the innovation, consisting of seven procedures. The first procedure. Pre-Forecast Orientation. The operations of this procedure allow us to formulate a research program, to clearly orient it on the justification of any innovation in the social sphere. The second procedure. Creating an original model. The actions of this procedure allow us to clarify the parameters of the “innovation field”, to formulate alternative options. The third procedure. Building a model of predictive background. This procedure allows the researcher to “cover” external factors that influence the fate of the innovation. The fourth procedure. Searching development of the parameters of the original model. The meaning of this procedure consists in the direct “weighting” of the consequences of innovation with the definition of problems that inevitably arise with any innovation. The fifth procedure. Normative development of parameters of the original model. Within this procedure, possible solutions to the problems are identified by the predictive search of the ideal (with abstraction from the limitations of the predictive background) and optimal (taking into account such limitations) of the state of the system in which innovation is introduced. The sixth procedure. Verification of the received data. This procedure provides the probability of the developed model by comparing it with other (ideal and real).

The seventh procedure. Development of recommendations for clarification of the proposed innovation on the basis of forecast data. Proceeding from the commonality of the structure of innovative processes in various spheres of human amateur activity, one can speak of a certain affinity of their “algorithms”, which makes it possible to extrapolate the achievements of innovation in social, managerial and other spheres into the educational branch. Proceeding from this state and taking into account the data of our research, we have identified three blocks in the technology of pedagogical forecasting, which provides an opportunity to predict the results and implications of the introduction of innovations in educational practice:

- the first block - diagnostic;
- the second block - modeling;
- the third block - verifying.

The diagnostic block is important as it allows the teacher to solve the questions of the structure and organization of scientific research aimed at determining the effectiveness and perspective of innovation. This block includes the following operations: Operation 1. Analysis of the conceptual apparatus of pedagogical prognostication: the probability of a forecast will depend on the presentation and understanding of the terms used in the pedagogical forecasting process. Op-

eration 2. Definition of the object of forecasting: it is necessary to find out what should be directed as forward-looking activities and whether the selected object is a subject to scientific and pedagogical substantiation. Operation 3. Determination of the purpose and tasks of forecasting: does not allow to determine the ways and methods of obtaining the information, that is necessary for the forecasting, correctly. Operation 4. Diagnosis of the initial state of the object of forecasting and finding out the reasons for such situation: these actions allow to put forward working hypotheses regarding the future results of forecasting, to determine the factors of the forecast background. Operation 5. Processing of the received information about the object of forecasting, its analysis, systematization and classification: this allows us to estimate the probability of predictive data. The modeling block envisages the development of a forecast by means of data synthesis, using the following operations: Operation 6. Modeling in order to obtain information about the possible states of the object in the future (search forecast). Operation 7. Modeling in order to receive information about possible ways and periods of the implementation of the predicted object (normative forecast). Verification block is responsible for refining of the received forecast and it contains two operations: Operation 8. Verification of the probability of the received forecast by comparing the ideal and the real. Operation 9. Development of concrete practical recommendations for refining the formation and implementation of innovations that are based on predictive data. It can be affirmed that mastering the teacher's pedagogical forecasting technology increases the effectiveness of creating and using innovations in professional activities. These operating blocks form a certain cycle. If the goal is not achieved, the innovator-educator must return to the first block and repeat all the operations.

Cyclicity of operational blocks of pedagogical forecasting We believe that forecasting of educational innovation processes should be considered at three levels:

- at the level of general tendencies of global innovations (macro level);
- at the regional level (meta level);
- at the level of the individual educational institution (micro level).

Analysis of the development of modern innovation processes with taking these parameters into account suggests that in the educational space of Ukraine in the next decade, the following tendencies will deepen [6]:

- globalization of education, that reflects the integrity, organized character of the educational system;
- further entry into the world of educational space;
- reorganization of the education with taking into account its ethnic component, focusing on the interests of the region;
- humanization of the educational space, including through the humanization of education, through the practical mastery of humanistic methodology;
- fundamentalization of education and its informatization, that is conditioned by paradigmatic changes of science, its orientation to the transition to the interdisciplinary stage;

- extension of the information field and computerization of education, pedagogical monitoring;
- diversification of the educational system at all levels and at all sections, that is the basis for the manifestation of various innovations;
- integration at all levels and in all components of pedagogical systems;
- commercialization of education, its transformation into the sphere of educational services implementation in accordance with educational needs of the population;
- democratization of education. Conclusions and results of the research.

Prospects for the development of innovation processes are primarily conditioned by the general tendencies that are observed in the modern educational space, connected with globalization, humanization, fundamentalization, informatization of education. The development of innovative processes in educational institutions of Ukraine in the XXI century will be aimed at further humanization of the educational process; the integration the Ukrainian identity of the nation into education; the forming of public spirit in the educational youth of the community; extending of the cultural-educational function of education; development and introduction of new teaching technologies, and above all, informational and personally oriented; creating conditions for maximum selfrealization of the individual as a student / teacher; valeologization of the pedagogical process. The cyclicity of development of innovative processes allows us to assume that further development of innovative processes in the education system of Ukraine will get further developments of the best achievements in local and world theory and practice. Perspective directions for further researches are identified, such as: the definition of the principles of pedagogical forecasting of innovative processes; the definition of the correlation of the effectiveness of the implementation of innovative educational projects and the quality of their predictive justification

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3.2. PEDAGOGICAL CONDITIONS FOR THE FORMATION OF PERSONAL VALUES IN THE INTELLECTUALLY CAPABLE STUDENTS OF THE MAIN SCHOOL (BASED ON THE STUDY OF SOCIAL DISCIPLINES)

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Abstract. *The article analyses the special age and typical features of highly-capable students. The main group of educational values which pupils should learn is determined; there are basic, national, civil, family and personal values. The specifics of the formation of the students' values in the process of studying social disciplines are revealed. The pedagogical conditions for the formation of personal values in intellectually capable students in the process of studying social disciplines (encouraging schoolchildren to form their own valuable judgments; highlighting the roles and values; the formatting of students' critical thinking skills; providing them with personal pedagogical support during the personal values formation and development process; the complex using of two methods of students' interiorization of socially significant values: their representation to teenagers in "complete" form with following assimilation and implementation in practice; the creation of axiological enriched educational environment basing on which highly-capable students are able to define and consolidate their own values.*

Key words: *personal values, intellectually capable students, main school, social disciplines, pedagogical conditions.*

The problem of individual ensuring of interiorization of leading social values has been relevant throughout the entire existence of the mankind. However, this problem has acquired its special importance for the local educational institutions in recent years, due to fundamental changes in the economical, social-political and cultural-valuable spheres of Ukrainian society. It is obvious that the changing its leading substantial priorities raises the need for a profound rethinking of the school education's goal and content, the search for new effective ways of students' personal values formation. It should be mentioned, that this acute