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FROM THE MODEL TO THE TECHNOLOGY OF TRAINING OF HIGHLY SKILLED MEDICAL SPECIALISTS

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Abstract

The article presents the experience of using the post-nonclassical model of self-realization of an individual when creating a coherent system of quality management for the preparation of competitive specialists in medicine. There was grounded the necessity of psychological support of self-organization, self-actualization and self-development of the researcher of scientific knowledge as well as in the creation of psychodimensional and human- adequate conditions of personal and professional self-improvement. Our investigation has shown that by focusing on the formation of innovative research components in the personality structure of a modern specialist, we increase the overall level of personal and professional competencies. The development of self-management abilities, the formation of a positive-differentiated attitude to new information and creative self-change, the development of skills of meaningful and intensive search for a new information space and initiative-transforming behavior in a specially organized innovation research activity under the conditions of teaching and upbringing, contribute to increasing the potential for personal self-realization of the researcher, the level of competence and maturity as well as improving the quality of the higher vocational education in general. When creating a quality management system for the organization of educational work at a medical university, it is important to take

into account the nature of the relationship between the individual and the activity (structure, dynamics and level of their coherence), the specificity of the process of self-realization of the personality (form, phase and stage) as well as potential opportunities for its implementation both in the person himself, and the specificity of the educational space of the university.

The presented results of the study of individual psychological characteristics of students' personal self-realization and medical graduate students reveal the specificity of the application of technologies of educational coaching “Shlyah to Harmoniy Zhyttya” (A Way to Life Harmony) and “From Dream to Success” in the activities of the Psychological Service of the Medical University.

Key words: post-nonclassical model of self-realization, technology of educational coaching, psychological reserve, potential for self-realization of the researcher's personality, open nonlinear self-organizing system / environment.

Background. The development of nanotechnology is distinguished by a qualitative shift in the way of producing scientific knowledge and its practical application in the professional activity, and modern techno-genesis not only allowed human practice to penetrate into all levels of the material world from quarks to quasars, but also became a powerful factor of global evolution. Despite the fact that nanodesign and nanotechnology base themselves on self-organization processes at the nanoscale level, technological innovations serve as controlling parameters of the macro-movement of civilization on the whole, determining the dynamics of evolutionary / involutionary processes in the human society and the direction of development of modern man. The main resources are information and technology, but not capital, as before, and high-speed transformation processes of the information society impose certain requirements on the personality of the modern professional and his competence.

The place and role of education in human life is reconsidered, and the traditional principles of “the formation of professional knowledge and skills” serve as a supplement to the principles of “humanization” and “humanitarization” of education as a condition for its psychomonomy and human adequacy, ensuring an adequate potential for the socialization of specialists and improving the quality of life in general. The fundamental point is that humanization and humanitarization is not limited to the teaching of humanitarian disciplines, but is realized in the direction of providing a certain quality of education in general, which becomes a source of self-realization of the personality and a resource of success for the modern professional. The definition is not so much of the basic mechanisms and

psychological conditions of the educational process and the development of practical recommendations for its optimization and intensification, rather than the definition of the basic tendencies of self-organization, self-improvement and creative self-realization of an educated person throughout life as a condition for the effective functioning of educational institutions. This requires the clustering of the educational environment and its transformation into a psychodimentional and human-adequate space, the creation of new models and technologies of pedagogical management and educational coaching [5].

The aim of this article is to present the experience of applying the post-nonclassical model of self-realization of the individual in the study of the personal and professional potential of the personality of the researchers of scientific knowledge (students and postgraduate students) and to create educational coaching, based on the analysis of the results, aimed at improving the quality of training of medical specialists in Odessa National Medical University.

The main part. The urgency of the psychological support of the educational process is conditioned by the new social requirements, the corresponding strategic changes in the development of the Ukrainian education in the context of the European integration, taking into account the worldwide trends in the creation of a unified system of quality standards for products and services. According to the Law of Ukraine "On the National Program for Adaptation of the Legislation of Ukraine to the Legislation of the European Union" (of 18.03.2004, No. 1629-IV), health and life protection of people are defined as a priority area, and the Ministry of Health of Ukraine initiated the adjustment to the international requirements ISO 9001: 2008 and 9001: 2015 of the quality management systems of health organizations, including medical education.

In accordance with the law of Ukraine, education is the basis of intellectual, spiritual, physical and cultural development of the individual, its successful socialization, and economic well-being, guarantee of the development of a society united by common values and culture, and the state. At the same time, the goal of modern education is the comprehensive development of man as a person and the highest value of society, talents, intellectual, creative and physical abilities, the formation of values and the necessary competencies for successful self-realization, the education of responsible citizens capable of conscious public choice and the direction of their activities for the benefit of other people and society, enrichment of the intellectual, economic, creative, cultural potential of the Ukrainian people on this basis, increase in the educational level of citizens to achieve sustainable development of Ukraine and its European choice. [13]

The search for new ways and approaches in modern science has led to an increase in the interest of scientists in analyzing the processes of scientific creativity, awakened the desire to penetrate into their own scientific laboratory, to understand the personality of the researcher, to identify those qualities, which make a person capable of resolutely transforming established concepts and principles as well as to productive research and innovation.

Methodologically reconsidering the problem of self-realization of personality in the context of those changes in scientific knowledge that are characteristic of the late 20th- early 21st centuries ("Theory of changes" of I. Prigozhin, "synergetics" by H. Khaken, "regimens with exacerbation" of S. P. Kurdyumov, "psychosynergetics" of I. V. Ershova-Babenko, etc.), we made an attempt to create a post-nonclassical model of self-realization of personality [6]. We would like to recall that technology (from ancient Greek, τέχνη - art, skill, λόγος – "word", "thought", "meaning", "concept") is a set of methods and tools to achieve the desired result; in a broad sense, it is the application of scientific knowledge to solve practical problems; respectively, it is necessary to analyze the feasibility of the practical application of the model created to improve the quality of medical education.

Modern science has undergone significant changes over the last decades not only in the field of innovative technologies, but also in new methodological approaches to the formation of the concept of research search. Against the background of the crisis of classical rationality, there is an awareness of the limitations of established methods of cognition, there is updating of the methodology of cognition of the complex systems – open, nonlinear, self-organizing. Already at the end of the twentieth century, it was realized that the "part-whole" dichotomy does not allow one to study man as an open, non-linear, self-organizing system. It is also a period of renewal of methods of cognition, search for new approaches to modeling taking into account their human-adequacy and psychodimention [2; 3], since the model allows to understand with sufficient correctness the reality accessible to perception, having overcome the discrepancies between the methods of cognition and interpretation. The emergence of a new tool for post-non-classical science allowed to overcome contradictions in existing approaches and to study this problem in the context of self-organization of complex open self-developing systems [18].

Let us remind that the main consideration in the post-nonclassical model of personal self-realization is focused on studying the structure and dynamics of the "convergence" of complex open non-linear self-organizing systems/ environments "man-profession" in the multidimensional and multilevel psychological space of self-realization of the researcher's personality [6]. Self-realization of the personality of the researcher as an open non-linear self-

organizing system appears as a problem of harmonizing the phases of regulation and chaotization, as the process of establishing the limits of potential actualization (value orientations and a certain level of self-actualization of the personality) and their change (innovative activity and creativity), which assumes the transformation of the system organization of the personality as a whole and crisis [8]. At the same time, the maturity of the personality of the researcher is considered in the context of analysis of the target and cyclic determinants characterizing its orientation and the level of "complexity" of the spatial-temporal self-organization of the personality as an open nonlinear system / environment.

The study included students (192 people) and first-year postgraduates (29 people) from Odessa National Medical University who were involved in innovative research activities in specially organized conditions using Professor I. V. Ershova-Babenko's "Removal of excess" technique. We used such methods as: observation (meetings 2 times a week during the year), a conversation as well as the techniques: 1) Self-actualization test (SAT) by Yu. E. Aleshina, L. Ya. Gozman et al. [14], 2) The questionnaire for determining the dominant instinct of V. I. Garbuzov [12], 3) The questionnaire of professional preferences (QPP) of J. Holland [4], 4) The test "The ability of self-management", developed under the leadership of N. M. Peysakhov [12], 5) Individual-typological questionnaire (ITQ) of L. N. Sobchik [17], 6) Methods for assessing the manifestations of innovative potential of the personality by Yu. A. Vlasenko [1]. For the mathematical processing of the results obtained, a computer version of the statistical program SPSS v.21.64 was used.

The study of the specificity of different levels of relationships in the personality structure of a professional showed that the respondents of the research type of personality who perceived innovation research as a source of personal and professional development had the most pronounced interrelations between the indicators characterizing the possibility of discovering a new information space and an integral indicator of orientation, type of professional personality in general [7]. It was found that the growth of the indicators of the innovative potential of the personality is accompanied by changes in the indicators of both formal dynamic and socially imperative levels of self-organization, in particular, accompanied by an increase in extroversion and spontaneity indicators, and only in this group there were significant interrelations between the integrated indicator of innovation potential personality and its individual-typological features [ibid.]. The study of the specificity of innovative interaction with the world at different levels allows us to conclude that for the subjects whose research component does not dominate in the professional personality structure, the emotional-cognitive type of realization of various innovative opportunities is the most

characteristic: they only vividly show their attitude to changes and spend a lot time for comprehending new information and various innovative opportunities [7]. At the same time, despite the availability of various opportunities for innovative interaction with the world at different levels (natural, social, cultural as well as organizing their own lives in general), respondents who do not perceive innovative research as a condition for personal and professional development are not inclined to act independently and productively in innovative situations and are not ready to self-realization of the innovative potential of the individual when organizing life as a whole. Subjects of the research type of personality are practitioners-cognitivists who are not inclined to emotional reactions to a new situation (information), but in the innovative situations they act with an orientation to the information available as a dominant, evaluating the results of their activity.

The results obtained also confirmed that in the professional activity there is not only a specific functional and constitutional change in the "general psychological structure" of the personality [16], but also a coherent connection of open non-linear self-organizing systems of different levels of complexity and different origins: "creative individuality-research activity" manifested in selective mobilization and readiness for productive activities, a new type of professional is gradually forming - personality - researcher of information resources [7; 9]. As an indication of the level of "convergence" of these systems, following S. L. Rubinshtein, one can consider the direction of the individual, which always expresses a more or less conscious connection and "the relationship between the external and internal" [15]. The analysis of the results of an empirical study of the specificity of professional preferences made it possible to distinguish the following subgroups of medical postgraduate students: "researcher – practitioner" (3%), "teacher-researcher" (17%), "supervisor" (12%), "administrator" with an expressed component in the personality structure of the professional (12%) and the "administrator" with a nonresearch type of professional preferences (12%) [10]. There were also revealed motives for enrolling in postgraduate studies: for 97% of subjects, postgraduate study is a change in the status and career opportunities of a medical specialist (obtaining a scientific degree, teaching at a university, the prospect of becoming a leader of scientific projects or a team), while for only 3 % of subjects this stage of life is associated with a conscious and purposeful change in professional identity, the personality development of the researcher and self-realization of the medical scientist.

Comparative analysis of the same personality characteristics showed that postgraduates with a developed research type of professional personality compared to postgraduate students in whose structure of personality the research component is not

dominant, such indicators as creativity, self-respect (correlations at the level of p <0.01%) are more expressed; and they are also more value orientated with the self-actualizing personality, spontaneity of self-expression, extraversion, a positive-differentiated type of attitude to the new information and changes, more opportunities for self-realization of the individual's innovative potential at the highest level of human-world interaction - in organizing his life as a whole (the importance of correlation relationships is p <0.05%) [9]. The analysis of the results obtained also makes it possible to ascertain the ability of postgraduate students of the research type of the professional personality in the creative productive super-adaptive self-realization of personality (according to E. V. Galazhinsky) in the space of professional life, the signs of which are absent in postgraduate medical students in whom research does not dominate and is not integrated in the personality structure, and the level of “skill” in the formation of a subject of scientific research, only postgraduates of medical research type can be unambiguously correlate with professional identity [ibid]. This fact is evidence of impossibility to predict the readiness of the personality of postgraduate medical students for productive innovation and research activities, correlating with the possibility of self-determination with the stage of the formation of subjects of scientific research activity, “skill” only on the basis of “postgraduate student” (according to I. V. Balimova), without taking into account the specificity of self-organization of the professional personality, professional preferences and individual-psychological features of self-organization, without determining the level of integration research component in its structure and analysis of specificity of human innovative interaction with the world at different levels, the type / level of self-realization as a whole. The results obtained allow to characterize the postgraduate medical students, in whom the research component dominates in the structure of personality, as mature, socially active and capable of self-realization of the innovative potential in the self-organization of life as a whole, striving for creative activity that share the meta-values of the self-actualizing personality. They have formed a complex characteristic of the creative personality, which promotes spontaneous self-expression and over-normative over-adaptive creative self-realization with a characteristic positive-differentiated attitude to new information and changes in life as a whole.

The results confirm the need to reconsider the goals and objectives of postgraduate and doctoral studies as well as the specificity of the organization of the process of training of scientific personnel, taking into account the individual psychological features of the personality of researchers and their potential for self-realization; in particular, the allocation of such areas as: the training of researchers- practitioners, teachers -researchers and leaders of

research projects and / or teams [10]. This necessity is also due to the fact that the dominance of certain professional preferences in the structure of the professional personality and the necessity to perform professional functions that are not congruent to it increases the person's sensitivity to the crisis and the risk of personal and professional destruction. Thus, the growth of an intrapersonal conflict and a reduction in stress resistance is facilitated by the need to include various components in the personality structure of the professional with different degrees of incongruence, for example, research practice (research type), classroom activities (social type), registration of results, note-taking or filling in a register, writing reports, etc. (conventional type), which confirms the presence of signs of disadaptation and crisis in 100% of respondents. At the same time, the study of the specificity of self-realization of the innovative potential of the individual with varying degrees of sensitivity to the crisis allowed to consider instability and crisis as necessary conditions for the creativity and innovative activity of the personality of the personality of the researcher of scientific knowledge, while the level of self-realization and value orientations of the self-realizing personality is the condition for its stability [8]. A person with pronounced research attitudes and a developed type of a personality-researcher of scientific knowledge can be called mature, realistic and capable of productive innovative interaction with the world and creative self-change preserving one's own integrity, free from neurotic symptoms [7; 8; 11].

The analysis of the results of theoretical and empirical investigations on the possibilities of using the post-nonclassical model of self-realization of personality in the conditions of the medical university allowed to develop two models of educational coaching: 1) the linear model “A Way to Life Harmone”, which focuses on the creation of certain conditions (the formation of knowledge, training, skills, abilities, etc.) that provide quantitative and qualitative specificity of self-organization and self-realization of the personality and 2) nonlinear mode “From a dream to success” (to achieve success through the synergetic effects of nonlinear synthesis), testing of which took place at the 12th International Scientific-Practical Conference “Prigozhinskie readings” (September 17, 2015, January 25, 2016 and May 26, 2016) [5]. These technologies were used in the activities of the Psychological Service of Odessa National Medical University (act of implementation of 23.06.2016), and adapted to the specificity of the teaching and educational work of the International Humanities University (Act of Implementation of 20.04.2017.) And Odessa Higher Vocational School of Automobile Transport (Act of implementation № 313 of 06.09.2016).

If the self-realization of the professional personality in the model “A Way to Life Harmony” appears as a “product” of the organization of the psychological space of being and becoming due to the presence of “external” favorable environmental conditions or “internal” opportunities (strong motivation, ability, etc.) to conscious productive innovative activity, i.e. self-realization is carried out within the psychosynergetic model “whole- in- the whole”, or “environment in the environment” (I. V. Ershova-Babenko). In the alphologic model "From dream to success", a personality acts as an open non-linear disequilibrium system / environment that is capable of self-organization and conscious productive innovation-research interaction with the world at different levels, and self-realization is carried out due to the quality of man's connections with the world and self-actualization of the qualities of a person of the synergistic level, for example, the psychological reserve of self-realization of the researcher's personality; while the level of self-realization is influenced by the type / level of implementation of different innovative opportunities, the form of self-organization of the individual as a whole, in particular, the availability / absence of reserve self-transcendence resources and the potential self-actualization reserve characterizing the level of coherence of cumulative and dissipative processes, “internal-external” and “subjective –objective” components of the psychological space of his being and becoming, the intensity of co-evolution “whole-with-integrity” in a particular activity, including their nonlinearity and disequilibrium. The personality of a professional appears no longer as an “unaccounted-for product” of professional activity and socialization, but as an active subject of interconnections of non-linear systems / environments of different origins: "personality-profession", which under certain conditions becomes a source of new potential opportunities and resources of a person and profession as “whole-in-the whole” / “environment-in-the-environment”, source of human activity is the fundamental needs of the individual in self-actualization and self-transcendence, and the mechanism of self-improvement and the manifestation of “human in man” is meaningful productive innovation and research activity.

Conclusions. In order to improve the quality of training highly qualified medical specialists capable of professional and personal self-improvement and ready for conscious productive professional activity, Odessa National Medical University provides psychological support for the self-realization of the personality of students and post-graduate students, raising the level of their innovative research capacity and social adaptability. It is about two areas of educational coaching: 1) the traditional model (“coach” - from the English word trainer), in which the personality is viewed as an open non-linear but organized system, the development of which depends on the availability of appropriate conditions and certain

qualities of the individual; the formation of which is carried out, mainly, thanks to the efforts of the coach to form them; 2) in the alphological model (“couch” - from the English word sofa), a person appears as a complex open nonlinear self-organizing system / environment that is able to create independently conditions for its own vital activity and self-improvement; and the main functions of the coach are to prognose the possibilities of purposeful constructive transformations and to prevent the disadaptation of the professional's personality, to provide opportunities for conscious and productive creative self-change in activities, to maintain adequate potentiality and human-adequate efforts in self-actualization (“Success at any cost!”).

A promising direction is rethinking of the problem of the subject formation in innovation and research activity in the university and the classification of the stages of professionalization of medical specialists as to studying the problem of self-organization. The creation of models and methods for assessing the maturity of the personality of the researcher of scientific knowledge, his readiness for productive innovation and research activity and the availability of creative over-standard self-realization capabilities becomes significant.

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