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ORGANIZATIONAL POTENTIAL OF SCIENTIFIC WORK IN THE SYSTEM OF NEUROMANAGEMENT BY THE EXAMPLE OF HIGHER EDUCATION

Abstract

Neuromanagement of higher education is an effective tool for the development of higher education, professional identification of specialist, increase of the professional authority and prestige of modern scientific and research work. The target point of neuromanagement system is competitiveness of the modern university graduate whose competence meets the requirements of the global market. The development criterion is an organizational potential of the scientific work laid into the basis of the image formation of the educational organization as a regional technopolis which guarantees the students confidence and success in the progression on individual and coordinated in the working groups educational trajectories.

Key words: development potential, organization, higher education, neuromanagement, scientific work, intellectualization, technopolis

Current development stage of the Russian system of education is marked by an active phase of reforms and modernization and characterized by its connection with people, their profession, incomes and new opportunities. Legal documents and acts, speeches and programs of the Government and authorized ministries as well as addresses of the President V. V. Putin outline the key idea of the human capital development, i.e. the necessity to form a new economy for educated and responsible people in each of their hypostases – professionals, entrepreneurs or consumers. Recent documents in educational development were determined on the implementation of the educational strategy based on the project-oriented approach, modern teaching staff, innovative educational technologies, work with intersubject educational programs and global standards. Permanent actualization of this process is also synchronized in time with the beginning of the national system of qualifications' modernization. The possibility of organization and management of training quality development at various educational levels and in different areas of educational programs has been already defined in recent documents of the Federal Institute for Educational Development, Ministry of Labor and Social Protection of the Russian Federation, Agency for Strategic Initiatives, National Agency for the Development of Qualifications and National Technological Initiative.

Here, the experts identify a number of difficulties: firstly, it is a mismatch of professional activities and their areas; secondly, the priorities of the integrative approach allowing considering a few rather original activities of various vocational standards; thirdly, the importance of a unified approach to the allocation and description of job functions, the need for the comparison of current levels of qualifications within the scope of a particular profession; fourthly, the development of standards for rearrangement and separation; fifthly, the connection of teaching and research in higher education into one type of activity at the level of vocational

standards – their classification into separate documents and as a consequence the need to achieve a common understanding of the higher vocational education standards and characteristics of the teaching staff.

Network approach has become a prerequisite for defining the system of change management in higher education as neuromanagement theory and practice. Studying of networks starts gaining popularity in the mid-1990s when many scientific fields begin to describe both new and previously studied phenomena with network terminology. Thus, microbiology began to study the cell as an information network; computer science – neutron network having the properties of self-organization and self-learning; ecology – environmental network organization; sociology – network as a form of social organization; economy – manufacturing network and network technology (Smorgunov, 2001).

The bases of global competition were agreed during the All-Russian public forum “Education: A Look to the Future, EDUCAMP – 2011”. It was stated that success of the national system of qualifications is determined by its ability to network organization. The structure of neuromanagement system is described in one of the recent author’s publications (Nikolaevskaya, 2014). Neuromanagement direction refers to the non-industrialized stage where its objectives are associated with the organizational potential development and include intellectualization and organization of knowledge, creation of new experience (specific application, technology, distribution). The most active elements in this case are the willingness and ability of employees and infrastructure of the enterprise, social, civil and public order, identified needs, educational level and degree of the network and specific conditions of the concrete cluster of real economy. The outcomes of the extraction process of new knowledge from the possibilities of the new medium, creation and promotion of the usage experience at the new market seem significant. Foreign higher education reform experience demonstrates scientific consistency and practical conclusiveness of the offered concept (Bulavinova, 2014), empirical analysis of the Spanish experience of university and industry cooperation on the basis of marketing relationships is considered particularly interesting within global format (Kuz’mina, 2014).

The analysis of these works allowed to conclude that the formation of the links between universities and real sector companies is complicated by such factors as the lack of entrepreneurial stimulus for universities, a limited character of their efforts in the organization and promotion of interactions, the problems of “difference in professional language” and generation gap, the lack of time for building efficient communication channels, dissatisfaction with the outcomes of inter-sector interactions, unobviousness of new opportunities and prospects.

Russian experience in the field is reflected in the research devoted to the international experience in the development and management of higher education system. The project “Efficient University: Reloaded” was done at MGIMO and revealed the main reasons for the failure of such initiatives: 32% – poor introduction management, 20% – communication problems, 17% – complexity and novelty of the objective, i.e. about 70% of the reasons are connected with the lack of coordination in the balanced implementation system and consequently the corresponding quality of the result as well as inability to generate, develop and prove useful connections.

Acute changes management. On the one hand these are visible “restrictions of external activity” when decisions and actions may not always be approved by the surrounding community as the “subject’s interests usually finish beyond his/her borders”. On the other hand it is connected with the urgent need for modernization changes and struggle with the unwillingness and unpreparedness to promote them in this respect.

As for the changes there is a rule “10/80/10” in changes management. It means that 10% of employees will actively support the change, 80% will not show proper interest to participate and will “keep silent” and 10% will actively deal with the change. 10% of the resisting employees are the major threat to the implementation of changes as they may have a negative effect on 80% of indifferent employees in the organization and “drag them over” to their side thereby adding to the mass of dissatisfied with future changes. In the global world it is easily moved to the Pareto principle. Both working hypothesis were confirmed as a result of five-year empirical research of 2654 graduates at the Faculty of Economics and Entrepreneurship. To comply with the parity of partner relationship management it seems reasonable to recall the words of Nassim Taleb – “Ancient knew perfectly well that the only way to understand the events is to cause them”.

Development of entrepreneurship activity. Currently the share of small and medium-sized business in Russia’s GDP is about 20% while in the US this figure is 50%, in China it is more than 60% and in the European countries – 65-70%. According to EY “Business barometer” research on the development of entrepreneurship education (conducted in 20 countries, G20) Russia is on 14th place among 20 countries (for comparison: South Africa – 11, United States – 3, France – 1).

This development trend and successful world practice demonstrates the need for the growth of small and medium-sized business in Russia. In the Global Entrepreneurship Monitor it was stated that when considering the possibility of creating their own business Russians see two main groups of problems – a lack of knowledge and competences and fear of failure. According to the World Congress of Entrepreneurs and Director of the Center for Entrepreneurship at the Graduate School of Management of Saint-Petersburg State University Galina Shirokova only 9,4% intend to start their own business immediately after graduation and 52,7% are considering doing so in 5 years after university graduation. Moreover, research outcomes of the Center for Russian Entrepreneurship prove the fact that entrepreneurial activity is directly related to the entrepreneurial education. Four levels of training and business development were identified within estimation of 32 higher education institutions in 2013. 60% of universities do not offer any courses in entrepreneurship. 17% of them provide separate courses in entrepreneurship and innovation management. 23% of universities have special departments and entrepreneurship centers. And only 7,6% of them propose a strategy for the development of entrepreneurial education with a full cycle of supporting initiatives in the form of business incubators, technology parks and grants. Indicated tendencies in the development of entrepreneurial education and entrepreneurial activity also correlate with the international program of educational quality assessment that provided the methodology for the identification and classification of competencies being in demand by employers and formed at the university. These are

the following groups of vocational competences: instrumental, interpersonal and systemic.

Vectors of vocationally oriented development. Both for the employers and for all professional and academic community the following questions remain acute: “Which competences are the most important for a particular trajectory of professional growth?”, “How fast is it possible to generate such students’ abilities with high motivation?”, “How can educational organizations form such a language that will be identically perceived and understood by all parties of the educational process and at the same time provide modern university graduates with the possibility to work efficiently and qualitatively in the real economy with a high degree of success, confidence and assurance?”.

The system of qualifications’ assessment in all vocational types is oriented at the evaluation of informational, motivational and operational competences:

- informational – transfer of vocational and scientific knowledge usually from different subject areas, updating of skills and knowledge in a new and unfamiliar situation, implementation of universal methods of activity;
- operational – traditional assessment system of knowledge, abilities, experience and skills after training provides an opportunity to estimate the level of graduate’s education, but not the level (degree) of his/her readiness for professional work, i.e. the focus is transferred to the manifestation dynamics of learning outcomes (operationality);
- motivational – increase of students’ motivation and their dedication to the activity, willingness to create conditions for presentation and disclosure of readiness to apply knowledge and carry out vocational activities at a high level of motivation.

In the system of neuromanagement the latter group of competences is supplemented with the “image” one’s differentiated according to the development vectors: competence, professional standard, style, completed and current projects of different types (“hangout”, “mechanization”, “internal entrepreneurship”, “management quality”) and organizational research culture (organization depending on the purposes, values, needs, interactions). The system of neuromanagement both at the business and educational organization focuses on the transition periods where it is very important to keep faith to the traditions and create opportunities for a smooth, non-destructive assimilation of developing innovations. With the help of the science-based necessity, validity and reliability of the indicated changing delta it is possible to justify the applied and fundamental character of the mastered activity with regard to the development of science, engineering, technology and economics.

Thus, defining educational system as a system open to the dialogue and development in line with neuromanagement complements its traditional content:

- firstly, in relation to the time aspect, learning is seen as a lifelong process including the search for universal and transparent professional competences and consequently the formation of universal educational actions that presuppose not only the foresight of competing events’ development but also change management in the global format that may be characterized as constant and long-term;
- secondly, in relation to the openness degree, invitation of additional participants of the educational process and stakeholders to co-participation and active use of system innovations involves not only the increase in the number of the

subjects of educational activities but also in the coordination and balancing of their interests, norms, practices and recognized professional standards (formal learning, informal learning, self-learning, group learning, professional community learning, network learning). In addition, it is important to find such words that are equally understood both in the professional environment and among non-specialists;

- thirdly, in relation to the priority development, in all legislative and regulatory acts the human factor possessing efficient practice-based, technological and timely development tools is proclaimed as a priority for realization of the national educational potential that would ensure the international quality standard of education and hence the increased requirements to the quality of the educational process and teaching theory and practice outcomes;

- fourthly, integrative evolutionary transformations related to the value-motivational purposes, implementation of efficient contracts and renewal, public and professional accreditation and certification of educational programs (learning outcomes);

- fifthly, success in ensuring of proper educational quality provided today is guaranteed both by organizations and teachers especially within implementation of network interaction. Competence-based education with a feedback in relation to the tempo of promoting the trajectory of educational program assimilation strengthens the integrative tendencies in the educational process that in addition to the project-oriented approach in realization of educational programs are directly and in many ways connected with the work of experts, consistency of their actions, constant partnership, complementarity of participants and stakeholders as well as free movement of best practices. The lack of ability to do everything at once and well at the highest professional level involves drawing up a realistic schedule for the mastering of competences' matrix and the balance of forces, deadlines and priorities.

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