Modern Aspects of Managing the Institutional Environment of Higher Education

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Abstract. Modernization of higher education as the next stage of its reform, taking place in changed social conditions when it is necessary to ensure the quality of education based on preserving its fundamentality and compliance with modern trends in the development of society and the national economy in the transition from University 1.0 through University 2.0 to University 3.0, reinforces the significance of university identity. The goal is determined by the actualization of the assessment of the current state of university management in the formation of effective models with due regard for the common sociocultural approach to the management process in the field of higher education of the Republic of Belarus and the Russian Federation and cognitive features of the development of educational systems in the post-Soviet space in the conditions of digitalization Economies 4.0. The material for the study was based on the official documents of the Governments of the Republic of Belarus and the Russian Federation, as well as theoretical and empirical research methods of comparative analysis and interpretation of research literature on management issues in higher education were used. The identity of the university development in neighboring countries with further transformation to the University 3.0, which allows ensuring the competitiveness of the university from knowledge generation to its transfer, and the creation of cluster formations, has been noted. The main criteria of the institutional environment for university management have been formalized: the choice of management strategy, the massivization of higher education, the bureaucratization of managerial decisions, budgeting restriction, academic mobility, formalization of rating indicators, interdisciplinarity, and commercialization of scientific results. The effectiveness of marketing communications is determined primarily by the choice of the subject structure from a rigid set of nuclear programs to an open curriculum, as well as the branding of universities. The role of teaching staff in the management process has been highlighted. The research work presents a comprehensive study of the institutional approach in the educational environment of higher education and the structuring of problematic aspects in the management of modern educational institutions in the post-Soviet space: in the Republic of Belarus and the Russian Federation. Under existing conditions, the university management requires the preservation of value-oriented approach, considering the influence of the objective factors of the external and internal environment.

1. Introduction
An effective national system of higher education makes it possible to ensure national security and competitiveness of the State’s economic system under the transition of the economies of developed
nations into the sixth technological paradigm. Learning from the experience of foreign higher education systems shows that the concept of “knowledge management”, which appeared at the turn of the 1990s, defines the trajectory of the development of higher education. The basic principles of the State policy in the field of education of the Republic of Belarus and the Russian Federation are identical and they ensure: on the one hand, the unity of the educational space in the territory of sovereign States, on the other hand, the development of an integrated process with the educational systems of higher education in both countries, as well as other States. The issues of the entry and development of the Bologna Process are being actively investigated by scientists from different countries. The transformation of higher education, in accordance with the Bologna Process, has led to the entry of higher education systems in Belarus and the Russian Federation in the so-called European Higher Education Area (EHEA—a term that has been actively used since 2010). The EHEA strategy is aimed at balancing the differences in institutional, national, and European policies as a result of cooperation based on partnership, with the prevalence of academic values within the context of tolerance and further recognition of qualifications [1, 2].

The introduction of the Bologna Process in the Russian Federation takes place on the traditional system of higher education by modernizing it and introducing a new system: commercialization in the form of educational services and budgeting reduction, competence-based approach through indicators and descriptors with a certain emasculation of the value of basic educational subjects. A number of researchers note that “the Western model of education implements individualism and the priority of self-fulfillment, focused on personal benefits and success” and “through the marketing of new aspects of oneself” [3, 4].

Analysis of expert opinions on the implementation of European principles of education in the Republic of Belarus shows that along with the optimistic approach of the Ministry of Education to implement the provisions of the Road Map into national legislation, there is a non-transparency in the process of forming a legislative framework for implementing its provisions by the Belarusian side [5].

At the same time, a simple borrowing of a certain model of higher education or its constituent parts (according to the Bologna Process) does not mean an automatic increase in the efficiency of management of higher education institutions (hereinafter referred to as the universities) in the post-Soviet space and necessitates assessing the identity of the university’s development in the external environment with flowing global and national educational processes and individualization of the university.

The main task is to study the current state of a university management in the formation of effective models, taking into account the common sociocultural approach to the management process in higher education of Belarus and the Russian Federation and the cognitive features of educational systems in the post-Soviet space as a result of the development of the Bologna Process in higher education in the conditions of digitalization. At the same time, optimization of management processes in the university environment is currently required in terms of identity and preservation of the universities’ self-sufficiency in order to ensure its competitiveness in the educational market.

2. Materials and methods

The material for the study was based on the official documents of the Governments of the Republic of Belarus and the Russian Federation, the research literature, as well as theoretical and empirical research methods of comparative analysis and interpretation of research literature on management issues in higher education were used. The conceptual framework in the field of education is enshrined in relevant laws: the Federal Law of the Russian Federation On Education and the Education Code of the Republic of Belarus. So, Art. 23 of the RF Federal Law defines for educational organizations of higher education educational and scientific activities as the main goal; Art. 33 of the Code of the Republic of Belarus establishes “the integration of the educational process with scientific and (or) creative, research activities”.

Findings. Currently, modern higher education institutions in the territory of neighboring countries: the Republic of Belarus (RB) and the Russian Federation (RF), carrying out the generation of know-
Modernization of higher education as the next stage of its reform takes place in changed social conditions when it is necessary to ensure the quality of education on the basis of preserving its fundamental nature and compliance with the current and future needs of the individual, society, and the State. The modern approach to reforming the higher education system is the need to transform university management in view of the inconsistency between the emerging new forms and the content of the management model that has developed over the decades [6].

Higher education institutions (HEIs) face significant problems of adaptation to the changing socioeconomic environment in the conditions of digitalization. The level of the educational system management is not implemented as a specific activity characterized by its own organizations, mechanisms, and processes. The need to improve the performance of universities turns them to adopt a new managerial paradigm, to diagnose organizational culture, and to realize the need for measures to change it, adequate to changes in the external environment [7].

There is an active transformation from the University 1.0 (the university’s mission is education) through University 2.0 (education and research) to University 3.0 (education, research, and commercialization of knowledge) with a focus on entrepreneurship and the formation of new approaches to the management of scientific and innovative development of universities abroad. The emergence of higher education system 3.0 is associated with the development of multi-campus universities in the United States [8, 9]. In Western Europe, the USA and a number of other countries, universities along with educational activities are engaged in research activities, being generators and sources of the latest scientific knowledge [10].

Since 2014, the National Technology Initiative (NTI) has been identified as one of the priorities of the Russian state policy. The development of research and educational centers will allow universities to become repeaters of practice-oriented educational process and research. The development project of the Novosibirsk State University, presented at the Ecosystems of Innovation: Universities and Scientific Organizations forum as part of the University for the National Technology Initiative competition, is shown as the Russian model for implementing the concept of University 3.0.

The launch by the Ministry of Education of the Republic of Belarus of a pilot project “On Improving the Activities of Higher Education Institutions Based on the University 3.0 Model” in 2018 will allow implementing a “full innovation cycle from generation to knowledge transfer” [11], which requires the use of improved management methods for organizing and marketing, management mechanisms and tools to ensure the organizational and resource sustainability of universities [12].

Accordingly, the consolidation of education, science, and entrepreneurship at the sites of universities as a new type of a university—University 3.0 in the context of new industrialization will allow universities to become the center for creating new technological industries and markets.

For the formation of the institutional environment of University 3.0, the application of a systems approach to university management, “in which diverse integrity is considered as a set of components with output (goal), input (resources), interrelation with exogenous environment, and feedback” [13], plays a significant role for effective and efficient functioning of an educational organization [14], that determines the need for a formalized approach to the classification of educational institutions of higher education, for example, in the context of missions: educational, research, and technological.

The concept of long-term socioeconomic development of Russia for the period up to 2020 provides for the formation of research and educational centers integrating advanced scientific research and educational programs [15]. Thus, the formation of the Medical Research and Education Cluster “Translational Medicine” in St. Petersburg by the decision of the Scientific Council of the Ministry of Health of the Russian Federation, headed by the FSBI “Almazov National Medical Research Centre” together with universities (Lesgaft National State University of Physical Education, Sport, and Health; Peter the Great St. Petersburg Polytechnic University (SPbPU); ITMO University; FSBI Saint Petersburg State Chemical Pharmaceutical Academy (SPCPA) of the Ministry of Health of the Russian Federation; Saint Petersburg Electrotechnical University “LETI”), small innovative companies, and business
partners contributes to a qualitative leap in training and the introduction of scientific research into health care practice. The unification within the framework of the Omsk Vocational Pedagogical Cluster of the Ministry of Education of Omsk Region of Omsk State Pedagogical University, Dostoevsky Omsk State University, Siberian State Automobile And Highway University (SIBADI), Omsk Humanitarian Academy, Omsk Teacher Training College No. 1, Omsk Music Pedagogical College, Siberian Vocational College, Omsk State College of Professional Technologies, and Omsk State College of Industrial Construction and Transport Technologies allows to consolidate the training of qualified personnel in secondary and higher pedagogical education using the breakthrough technologies of each cluster member.

The concept of development of pedagogical education for 2015–2020 in the Republic of Belarus also determines the transition to a cluster model of development to ensure the integration of the educational system, science, and practice. In 2019, as part of cluster development, the Intellectual Technologies in Sports Research and Education Cluster was formed on the basis of the Belarusian State University of Physical Education and the Belarusian National Technical University to provide high-quality training for high-level athletes in accordance with modern technologies.

Management of educational organizations/institutions in the Republic of Belarus and the Russian Federation is carried out based on a combination of the unity of command and collegiality principles. The installation of the management of a classical university in the external environment looks quite traditional: rector, director/dean, and head of the department. The government agencies, business community, academics, faculty members (academic staff), and students interact in this context.

In the current circumstances, the management of universities under the parallel processes: the massivization of higher education and the global knowledge economy requires the formation of new approaches. The economic component—the change in the universities' budgeting—can be identified as an intermediate link. The university management strategy is determined by the scale and diversity of their activities. One of the well-known comparative grades of universities seems to be the division into world, regional, and mass universities.

It has been established that the number of students at universities is the most important condition for ensuring the effectiveness of universities, possessing greater financial resources, raising the prestige, and brand awareness of universities.

One of the signs of a modern educational environment in conditions of limited budgeting, expansion of top universities, accessibility of education abroad, the development of digitization, and distance education are migration processes. High academic mobility of future students leads to their outflow and the increased competition of educational institutions in a geographic environment, in contrast to foreign educational institutions, where competition develops in an academic environment. At the same time, it can be noted limited funding, an insufficient level of English (or other foreign languages), as well as difficulties in finding comparable to a two-level system of foreign educational programs and partner universities, the lack of regulatory documentation and regulatory periods of stay outside the resident university as an obstacle to student mobility [16].

Massivization, the cooling prestige and importance of higher education, the increasing influence of external stakeholders, along with changes in the university financing system and increased requirements for transparency of the higher education system, lead to the centralization of power in universities and weakening academic freedom [17].

In the universities themselves, the following procedural directions begin to develop in parallel:

– strengthening the bureaucratic core through a system of formalized assignments made to the academic environment with “prevailing views on universities as a business with assets and budget, which requires strict planning, control, constant structural changes, in accordance with the requirements of the external environment, and mobilization of all legal sources of funding” [18];

– basic processes through the actual educational process of teaching students and the research process (research).

In recent years, the strengthening of the first direction under the formalization of rating criteria for evaluating the activities of universities has been observed.
The establishment of standardized criteria for the quality of education for value-oriented organizations (which include universities), in contrast to goal-oriented organizations, where the quality of the result is determined by the quality of processes, does not always coincide in the time space, because in education and research work, the quality of the result manifests itself after a certain period of time as a public assessment of this result. The results of the quality management system introduction in universities depend on the internal environment of the university and can be both successful and unsuccessful, or differ in the formal application of the TQM principles \[19,20\].

The implementation by the universities of strictly controlled rating indicators (unification of the results of activities) in terms of increasing publication activity requires dispersing the activities of academic staff (AS). At the starting point, the research principle assumes a good creative beginning, active discussions and exchange of opinions and research results with scientists, researchers at various symposia, conferences, conducting joint research activities, and access to the business community. Conducting a global transformation by management teams without being connected AS to this process may lead to formalization when performing regulated indicators.

The biggest problems arise in the niche of medium-sized universities, which primarily focus on the educational process (the University 1.0 model). The research process is not fully formalized; research is engaged in a narrow circle of explorers; most of them are not well informed about the main trends in the scientific community, which raise doubts about the relevance of their research. Huge problems arise with their lack of sufficient foreign language skills. Most often, universities form one guiding trajectory for the development of a scientific school; the research topic is appointed by the head, and it is not projected by the researchers themselves; laboratory and material and technical base for research is insufficient. For the formation of the mobility of knowledge and the emergence of new approaches, it is necessary to invite AS from other educational and research institutions, to actively attract talented post-graduate students to research projects. For the development of science and the commercialization of scientific results within the framework of universities, the consolidation of various research formats (R&D) is important:

- mastering the results of someone else’s research and their implementation on their sites;
- support and development of own research, studies of affiliated scientists;
- active participation in research grants and publications, including the international databases of the Web of Science Core Collection and Scopus, focusing on journals included in Q1-Q2 (the first and second quartile in the subject category Web of Science) or in the 99-61 percentile Scopus.

In this case, it is necessary to present the R&D results as intangible assets in the form of innovations in education, economics, and management (IEEM) for the possibility of providing services to third parties and generating income from the commercialization of intellectual property [21], the subject of cooperation with domestic and foreign partners [22].

Average (in terms of being in the middle niche, and not on the quality of education) universities are engaged in both the educational process and research, which does not allow them to be classified as purely educational or purely research universities. Accordingly, it is advisable to create a format of research institutes within an educational institution in the current conditions.

At the same time, the strategy of free education is actively promoted in the educational environment. Under these conditions, a university should determine its areas of development (by analogy with foreign universities) and build proposals in the form of:

- nuclear educational program with a rigid set of courses of subjects;
- distribution requirements (free choice of subject courses in each of the disciplinary sections);
- open curriculum (free choice of courses of subjects without restrictions).

Under these conditions, non-formalized approaches are required to regulate the competence approach in educational programs, taking into account professional standards and cross-cultural competence.

For universities, there is a need for the ability to popularize the subjects of courses and building the process of working with the AS in a “floating” load and relative uncertainty. Within the established set of subjects and the not always high status of general educational subjects, the presence of the so-called...
educational pipe does not allow both the AS and students to change the focus of the educational process.

- The professions market is actively changing in an economy 4.0; there is a rebranding of professions, which requires timely transformation in the curricula of training areas. Furthermore, the requirements on the part of employers are growing; on the one hand, they need specialists of a wide profile, on the other hand, focused, highly qualified specialists. At the same time, both students and employers note dissatisfaction with the quality of the practices in some cases, which, in general, “corresponds to the monitoring data of leading universities” [23].

On the contrary, the common model of the global research allows you to actively participate in the acquisition, dissemination, and use of knowledge through practice-oriented activities [24]. In recent years, the formation of the trend of higher education orientation towards the needs of the national economy and its practical orientation is increasing in the Republic of Belarus.

Currently, educational programs are actively implemented in the educational services market using e-learning and distance learning programs. On the one hand, Russian and Belarusian universities should not stay away from global trends, and they should choose their niche within the competitive environment. On the other hand, the implementation of training in the online environment reveals a number of problems: the lack of students’ willingness to organize themselves for the study of subject courses; possible load reduction for AS; for a university-developer—financial costs for the development and promotion of a course at the initial stage, then it is possible to obtain additional funding through the distribution of courses, going beyond the limits of the university, possessing information about students from other universities, increasing your identity; for the university-consumer of someone’s online courses—transfer of a part of students to universities that transform these courses; course content may not coincide with its own work programs; there is a partial loss of control over the educational process and a cash outflow from the university, which, with changes in funding, can lead to financial deterioration. In this situation, a traditional university loses its value as a repository of knowledge, and the quality of the online education received (including partial) is determined by the university that developed the courses. A positive point is the expansion of the target audience by attracting low-motivated students in connection with access to the massive knowledge. The choice will be determined by the students, provided that they choose the courses themselves—based on the uniqueness or the cost of the course.

Issues of improving the quality of education and organization of the educational process at the university are important. For example, narrow discipline with the selection of a medium-level AS leads to stagnation of the educational process. More research is carried out in the context of interdisciplinarity, and the interdisciplinarity itself should be present in a postgraduate training program. This requires the involvement of AS, working in different directions, different departments; it is possible to create interdisciplinary institutes/faculties.

From the point of view of university management, it is necessary to take into account that different concepts of different AS subcultures coexist in the university environment, introducing their distinctive features into the educational environment:

- the activity of employees is determined by the dominant subculture (dominant of the top echelon);
- the activity of employees is determined by a stable subculture opposing another subculture (antagonism);
- the employees’ activities are located at the intersection of different subcultures (symbiosis).

Involving not only leaders of formalized structures in university management, but also AS, within certain limits, contributes to the transition to flexible context management and the promotion of universities in the external environment.

In the context of the globalization of the educational market, in order to be not just a conductor of knowledge, the so-called agent, but to become an actor, it is necessary to pay attention to identifying the university, the uniqueness of its brand, and focus on achieving measurable results. As university identifiers, there may be: the number of foreign students (while the AS should be prepared for the pres-
Since the presence of speakers of a foreign language in their classes, that is, to acquire skills in this language), the number of courses taught in a foreign language, the reputational component of the chosen direction. The university’s high rating is also necessary to attract the best applicants, which allows providing high financial resources in the future.

Nevertheless, there are differences in the applied adaptive strategies for top universities, universities of the second (most popular) and third echelon. For a mid-level university, it is possible to combine elements of “intelligence” strategies for searching for new opportunities, while relying on an analytical strategy (we keep our order, but we experiment). At the same time, the presence of the most common “defense” strategy at universities is possible: for example, to advance 1-2 directions in order to increase the effectiveness of the basic direction or in accordance with the requirements of professional standards.

For effective positioning, a university needs via external (through the perception of the mission, values, and its vision) and internal (through the university’s identity and brand communications) factors to carry out marketing communications and highlight its uniqueness in terms of various formats: core program, choice of specializations, formation of an elite education zone for the best students, promotion of a monolithic brand or through the “house of brands” as a market approach, through the branded structural units—the so-called umbrella brand. Focusing on the attractiveness for its target audience: applicants, students, employers, government agencies, investors—will create and maintain a memorable vision and brand of the university, forming its image. A number of research works are devoted to the issues of creating a positive image through the use of technology and marketing tools [25-28]. Branding or repositioning technologies make it possible to reach the target audiences of the distinctive character of the value of a university, its products and make them understandable and recognizable, and maintain and improve competitive positions. Moreover, a positive image and brand provides a number of other competitive advantages:

- the formation of a loyal attitude of the target audience both to the university itself and to its products and services;
- creating barriers for competitors in labor markets and for other educational organizations;
- competitiveness;
- cooperation with domestic and foreign organizations;
- investment attractiveness to employers.

In the process of positioning, an educational organization should bring its main idea—uniqueness—as a reflection of its value, mission, and perspective view. That’s what such well-known brands in the field of higher education, like Harvard, Oxford, Cambridge, Humboldt, Sorbonne, and others, do. They focus on the history, achievements of graduates, high qualifications of the lecturers, freedom and democracy in the processes of learning and research, and decision-making. A special role is played by marketing communications with target groups (advertising, PR, use of mass media, modern means of communication, among which Internet communications and direct marketing play a special role). The main goal of branding is to individualize a university or educational service in the market and help consumers identify it as something different, better, special, unique, and inimitable. For this, it is desirable that the consumer wants to purchase it again and again and have the opportunity for it (to be available) [29].

3. Results and discussion

Combining the values of traditional basic education, the Bologna Process, the intensification of research activities, and the formalization of managerial decisions determine the trend of repositioning modern educational institutions of higher education and the strengthening of inter-university competition, along with the building the cluster formations.

4. Conclusion

The use of a systems approach to university management allows for a comprehensive study of the institutional approach to the educational environment: the similarity of the development direction of
educational processes of higher education in the Republic of Belarus and the Russian Federation has been established; in the context of new industrialization, university models are being transformed by consolidating educational, research, and technological processes from University 1.0 through University 2.0 to University 3.0 and the formation of a cluster approach; the importance of universities’ identity in their niche is increasing; in the institutional environment, the processes are as follows: the massivization of higher education, the academic mobility of students, the formalization of the results of the publication activity of academic staff and the educational process. Under existing conditions, the university management requires the preservation of value-orientation, without excluding the possibility of the influence of goal-setting factors.

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