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ОРГАНИЗАЦИОННОЕ ПРОЕКТИРОВАНИЕ СОЦИАЛЬНОЙ МИССИИ УНИВЕРСИТЕТА: ФУНКЦИОНАЛЬНЫЙ ПОДХОД

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Рассматривается теория организационного проектирования применительно к исследованию новых адаптивных свойств университетского образования в условиях COVID-19. Применяется системно-функциональный подход к организационному проектированию миссии университета и изучению структурно-организационных составляющих университетского образования в современных условиях.

Ключевые слова: университет; университетское образование; организация; организационное проектирование; целеполагание; социальные системы; национальная высшая школа; государственная образовательная политика; социально-культурное пространство.

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ORGANISATIONAL DESIGN OF A UNIVERSITY'S SOCIAL MISSION: A FUNCTIONAL APPROACH

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In the article author considers the theory of organisational design in relation to the study of new adaptive properties of university education, altered especially by the conditions of COVID-19. The analysed concerns content of methodological approaches and principles of organisational design of functional structure of university education. Author considers the role of the goal-setting and strategic management stage of the university in modern conditions and compares the system-functional and system-targeted approaches to the organisational design of the university mission. The functional content of the strategy allowing full realisation of competitive advantages of universities in the global market of educational services is considered.

Keywords: social systems; university; university education; organisation; organisational design; goal-setting; strategic management; competitive status of the university; competitive strategy; system of the national higher school.

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Introduction

The modern world-class university has become one of the most important socio-cultural institutions in the life of society and state in the twentieth century, established as a unique educational and research organisation in the history of mankind. University education has had to undergo not only the test of time, but also global risks as a result of the institutional changes that the entire architectonics of higher education under COVID-19 is undergoing today. The threat of the spread of COVID-19 has put the entire education system to the test. The transition to distance forms of learning turned out to be sudden and forced for all levels of education and for all participants in the educational process, regardless of their degree of technical readiness, level of digital literacy and desire. In the language of sociological research methodology, the whole world is in the situation of one of the most large-scale quasi-experiments of abrupt transformation of working and employment conditions, including those in the education system [1].

The accumulated global experience of educational institutions functioning under pandemic conditions, when learning processes were carried out in a «hybrid» mixed format with the use of information technologies, allows specialists in the field of organisational design of higher education institutions worldwide to fundamentally reconsider some managerial approaches. Universities have shown that they are quite capable of exhibiting the adaptive properties and characteristics of a flexible organisational structure in the new era. For example, IDC's report, «Introducing Innovation in UK Universities through Digital Transformation», presents the approaches of UK higher education institutions LSE and Coventry University, which look at the key challenges and success factors of these processes. The re-

port's authors write that the COVID-19 pandemic has ushered in a new era for British universities. The leading institutions in this new era are those investing in digital transformation and digital sustainability.

Among the key success factors cited are the following:

- adapting to hybrid learning;
- investing in data analytics and artificial intelligence;
- making education accessible, equitable and inclusive;
 - creating a flexible and collaborative workplace¹.

Of course, the active introduction of information technology into the pedagogical environment of higher education and into the management system of higher education institutions is transforming the organisational structure of the university community in a certain way. Today, the new conditions require more horizontal links in the decision-making system of centralised management of educational and other supporting processes of the university infrastructure. There is a need for professional approaches to the implementation of decentralised management processes, which are associated primarily with the scientific, innovative or entrepreneurial component in the knowledge economy of the modern university.

The university as a social phenomenon has always been at the crossroads of future trends in the global development of culture and civilisation, which were integrated in the goals and social mission. These goals objectively reflect the new requirements of technological, informational, economic and social, cultural and political processes, changes in the world labour market, markets of intellectual property, technology and innovative production in the new era.

¹Driving innovation in U. K. universities through digital transformation [Electronic resource]. URL: https://www.salesforce.com/uk/form/sfdo/edu/innovation-uk-universities/?_ (date of access: 01.03.2022).

Organisational design methodology

In a study released on 8 September, Deutsche Bank experts actually proclaimed the end of the era of globalisation. Analysts pointed out that a characteristic sign of the new era will be the rise of the Chinese economy over the U.S. It will be accompanied by tensions between China and the United States. World economies should expect: likely economic stagnation for Europe after the coronavirus pandemic continued growth in global debt and the spread of «helicopter money» policies from central banks; rising inflation; increased intergenerational competition and a greater degree of influence from millennials and younger generations; a new technological revolution².

Organisational design theory views the university as a complex organism combining rather heterogeneous types of educational, intellectual, communication, innovation and scientific, socio-economic and entrepreneurial activities. This organism undergoes significant institutional changes in the functioning of the academic environment under the influence of the market component and they are also related to the active participation of universities in international and global research networks. This undoubtedly leads to the expansion of the economic importance of university knowledge and creates conditions for its practical application by transferring it to different industries [2].

Knowledge of the principles of management of «human-dimensional» systems [3] makes it possible to implement an effective management strategy for a modern university, aimed primarily at developing the flexibility of its organisational structure and functional adaptability in the changing external environment. The complexity of challenges and threats, the peculiarities of political and economic determinants, which influence the university community, require that universities quickly develop appropriate organisational decisions on the problems of strategic management of their activity. Strategies are needed to fully ensure the implementation of the competitive advantages of universities in the global market of educational services. That is why the role of goal-setting and strategic management stages in modern higher education institution management is increasing significantly. Revision of methodological approaches and principles of organisational design of the functional structure of university education, taking into account differentiation of these functions, provides university vitality in the new realities of life. Universities in the life of society are the institutional core of the knowledge society, the most important channel of technology transfer. The authors of the concept «Universities 4.0 as Growth Points of Knowledge Economy» E. B. Kuznetsov (Program Director of JSC «Russian

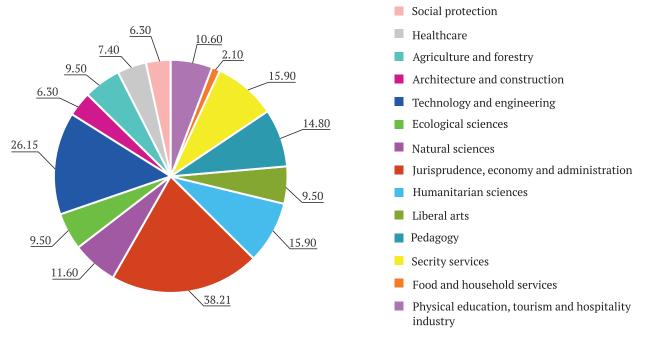
Venture Company») and A. E. Engovatova (head of the Department of Scientific Policy and Organisation of Scientific Research of the Lomonosov Moscow State University) have identified the main trends in the global university environment and among them they highlight the following: university restructuring, the emergence of a market component in national higher education systems, the race for high positions in world university rankings, increasing student mobility and distance education; penetration of higher education system [4].

According to the results of numerous recent reviews and scientific publications, the properties of adaptability and flexibility of the organisational structure of a modern university have become the most discussed topic in the managerial elite of the academic community; different opinions have been expressed by managers, specialists and teaching staff [2; 4-7]. The main conclusion: university education, as an education, primarily focused on science, becomes an important sphere of social and economic development in a highly dynamic process of technological development. As a social institution, university education can provide a strategic advantage for a nation state. That is why a modern university has to implement a competitive strategy of its development in the global and regional market of educational services. Today, the preservation of global stability is associated with the stability of the global system, in which the differentiation and consolidation of the country's place in the educational system is taking place. Educational zones emerge where it is «politically» inexpedient to develop education, because this is the most natural and convenient way to block the development of scientific technologies, and thus the independence of the state as a whole [5].

The analysis of higher education profiles in the Republic of Belarus (figure) unfortunately shows an insufficient percentage of specialties related to the production of means of production (15 %), and at the same time 21 % are higher education institutions training specialists in the field of economics and organisation of production. We can see that in the modern university training of the national higher education system, the training of specialists in services and various humanities fields is still predominant. Technological directions, training specialists in new technologies has rather a point character, and such directions have always been determined by the national interests of the country, the state order on the competent model of a specialist. The national system of higher education through the implementation of social mission of universities should actively participate in solving the problems of nation building, implementing state programs of innovative

²Немецкие аналитики предсказали конец глобализации и начало «эпохи беспорядка» [Электронный ресурс]. URL: https://secretmag.ru/news/nemeckie-analitiki-predskazali-konec-globalizacii-i-nachalo-epokhi-besporyadka.htm (дата обращения: 07.01.2022).

development of the country, industry and social policy in the regions. That is why the expert community of rectors, politicians, managers and specialists is increasingly discussing the problems of interaction between the state and the university: how universities are organised and work in modern conditions and why their missions, structures and funding principles are changing in the modern era [6]?



Distribution of higher institutions in Belarus by profile, %

In his time, T. Parsons noted that sociology deals only with one, predominantly functional aspect of social systems, namely, it studies the structures and processes relevant to the integration of these systems [8]. The American sociologist believed that the main system-forming factors of a social system are its functions related to life-support. These functions can be given to the system from the outside - the environment - and show what role the system plays in relation to it. The renowned classicist in the organisation and management of higher education systems, Burton R. Clarke, also wrote that in modern times, higher education is engaged in mastering new functions. More and more knowledge is attracted, more members of the relevant age groups are being educated in higher education, and education is having an increasingly significant impact on employment patterns and individual life chances [7].

From the perspective of the system-functional approach in the context of new challenges and requirements of the external environment, the process of designing the organisational structure and functions of the university should be seen as a sequence of acts of decision-making on the elemental and structural composition of the organisation. Specialists recommend presenting it as an iterative process that includes the following stages:

- formation of a general structural scheme and its main characteristics the composition stage;
- elaboration of structural subdivisions and main links between them the structuring stage;

• development of quantitative characteristics of the management apparatus, the establishment of its activities – the stage of regulation.

The most critical is the composition stage, as it determines the future direction in which the design of the organisational structure will be carried out. However, this is the least regulated stage, so in its implementation, much depends on the approach that is followed by the designer, from the model laid down in the basis for the construction of the organisation.

In the 1970s, a research group under the direction of Professor B. Z. Milner proposed a system-targeted approach to the formation of organisational structures. In this approach, the university should be viewed as an organisational system and not as a single-purpose organisation, designed to fulfill only one main function – educational services. The basis for the formation of organisational structure here should be the totality of the ultimate goals, to which the entire structured activity of the university is directed.

The ultimate goals are the goals of the highest level of the hierarchy in the structure of the university's goals, they define the content of its mission. There are four groups of such goals – educational, research, social and innovative development. As a result of setting the system of final goals, four organisational blocks oriented to ensure homogeneous groups of goals are identified. On this basis, a «complete organisational objective», i. e. a differentiated and interrelated set of actions required to achieve each major objective, is defined and

the boundary of the organisation is established - a decision is made as to which actions will be performed by the organisation itself and which will be performed outside it. The specific features of the organisation for which the structure is designed are taken into account by means of survey and analysis of the totality of factors determining the content and sequence of functions ensuring the achievement of final objectives, grouping of functions into structural subdivisions as well as the nature of relationship between individual subdivisions. The entire set of factors is described by an applied model [9; 10] that includes such characteristics as external environment, objectives and strategy, production and technological basis, personnel, organisational management structure, management processes, management, behaviour, organisational effectiveness, which in turn are combined into three classes: primary variables, management variables and effectiveness variables.

The application of this approach implies the use of such methods as goal structuring method, expert-analytical method, method of organisational modeling, as well as method of analogies. It should be recalled that the emergence of the system-target approach was largely predetermined by the trend of scientific and production associations that began in the 1960s, when the problem of optimal combination in a single organisational structure of such diverse elements as scientific, design and production organisations appeared. Therefore, the criterion of evaluating the organisational support of the final activity goals was chosen. However, it is necessary to note some ambiguity in this approach. Firstly, when considering the system of the university's ultimate goals at one decomposition level, qualitatively heterogeneous goals are singled out. Thus, educational, research and development, and scientific and technological goals can be classified as «performance goals», as it is possible to assess the performance of the university both in the short and long term based on the degree of their achievement. The same production goal, such as export of educational services, is functional, and it is defined and can only be set for specific periods of time, but its implementation ensures the achievement of the above-mentioned efficiency goals. Secondly, it is very difficult to move from performance goals to functional goals when constructing the goal tree, which can be taken as a basis for the organisational structure. There is virtually no consistent methodology and criteria for allocating functions to achieve the end goals. Experts dealing with this issue have been forced, based on their experience, to follow mainly a function-oriented approach. Therefore, the system-targeted approach develops but does not in any

way exclude the function-oriented approach. The main advantage of the system-targeted approach is the possibility to establish multivariate links between units and to form different types of management structure in accordance with the most important characteristics of the university's organisational environment. Unfortunately, domestic and translated literature does not offer other complete approaches on this issue. Mainly the authors provide recommendations for situational choice among different types of management structures or propose typical structures oriented towards marketing, innovation, development, etc.

In our opinion, it is necessary to agree with the provisions of the system-goal approach concerning the target basis for the formation of the organisational structure of the university and the need to optimise the choice taking into account the system of external and internal factors. However, the goals used or other settings derived from them, should provide the basis for the construction of the functional model of the university and the integration of the system of functions into a single organisational structure. In our opinion, these requirements are best met by such a management category as mission, which specifies how the university intends to achieve its ultimate goals.

The mission is a formal document that articulates the goals and subject matter of the university's activities. In their classic work on the systems approach and strategic planning, American scientists W. King and D. Cleland pointed out that mission formulation is setting boundaries of acceptable choices [11]. A mission should determine directly what the university intends to do in society and, indirectly, what is not in its field of interest. The formulation of the mission is a very responsible moment in university management. which predetermines most of the subsequent decisions. The mission can be the basis on which the layout of the university's functional structure can be carried out. It is also important to take into account the university's development strategy, which provides a link between current activities and future development goals, and the scope of activities, which affects the degree of completeness of the functions. In order to implement its own mission, for example, the widely discussed University 4.0 model can operate in four relatively independent spheres of activities: teaching, scientific research, economic development of entrepreneurial activity and creating the technological foundations for a new branch of production. Each of these spheres of activity is characterised by its own objectives, management principles, methods of resource allocation and control, criteria for assessing the achievement of the objectives.

Conclusion

At present, new high-tech industries around the world are experiencing a significant reduction in the life cycles of technologies and products against the back-

drop of intense competition in their respective markets. As a consequence, there is a situation where it becomes necessary to ensure competitive advantage in several

areas of social organisational system simultaneously. Each area of activity has its own individual set of functions. For example, when forming the organisational structure of a university, the designer has to make a choice – which of the system functions the university as an educational and scientific organisation will perform independently, which will be entrusted to partners in the future, and which results will be acquired and integrated into the university infrastructure. It is now becoming clear that in addition to the two traditional missions that the university carries out - educational and scientific – a third role related to participation in the development of the space of the region in which it is located plays a significant role. In this context, it is of great importance to analyse the problems of the university's interaction with key stakeholders in both internal and external environment [12]. Under the conditions of competition in the field of technological leadership, the educational institution itself should perform those functions, which are crucial for achieving competitive advantages in the global higher education industry, to the fullest extent possible. A dynamic characteristic of the competitive status of a university as an organisational system is the competitive strategy, which is an element of the overall strategy of the university and reflects how it intends to use its strategic potential to achieve market advantages over competitors in the market of higher education services. The choice of the type of competitive strategy is influenced by a large number of external and internal factors, including the availability of appropriate strategic potential.

Three generalised types of university competitive strategy can be distinguished:

- a strategy focused on a specific segment of the educational market;
 - a strategy focused on the specialist model;
- a strategy focused on a set of scientific or innovative educational technologies. In the first type of

competitive strategy, the university seeks to meet the specific demands of its staff potential customers to the greatest extent possible.

By focusing on a certain competitive specialist model in a certain industry, the university aims to gain a competitive advantage by optimising the best set of professional competencies. Technological orientation implies that the focus is on the best and most cost-effective performance of individual functions. Of course, a real competitive strategy of a university should be comprehensive. However, as a rule, one of the types is predominant, according to which the decomposition of organisational structure at the upper management level is made.

The potential of the national system of university education in the Republic of Belarus is to a certain extent reflected in the positioning of Belarusian universities in the groups of various international rankings (see appendix). The general picture suggests that there is a wide range of complex activities to enhance the contribution of national universities in the intellectual and cultural capital of modern Belarusian society and to train highly professional staff for innovative development of the regional economy and the Belarusian state as a whole.

Today the social mission of university education in the national system of higher education is to promote technological independence of the country through training highly professional staff with world-class competencies and high civic responsibility. The creation of national knowledge-intensive products and their transfer to high-tech sectors of not only domestic but also foreign economies is extremely important for the Belarusian economy and production today. Based on previous experience, the national system of higher education of the Republic of Belarus, with a high degree of inter-university integration into the system of nation building, can cope with this task quite successfully.

Appendix

Positions of Belarusian universities in the rating system

Name of the rating system	Name of the institution	Position in the rating
ARWU and GRAS Physics	Belarusian State University	201-300
QS	Belarusian State University Belarusian National Technical University Belarusian State University of Informatics and Radioelectronics	295 751–800 1001–1200
THE	Belarusian State University	1201
U. S. News	Belarusian State University	499 (in Europe)
CWUR	Belarusian State University	781
MosIUR	Belarusian State University Belarusian National Technical University Belarusian State Medical University Yanka Kupala State University of Grodno	301-305 1401-1500 - -

Ending appendix

Name of the rating system	Name of the institution	Position in the rating
RUR	Belarusian State University	551
SIR	Belarusian State University Belarusian National Technical University Belarusian State Medical University Belarusian State University of Informatics and Radioelectronics	551 821 854 866
URAP	Belarusian State University	1784
WRWU	Belarusian State University	767
QS EECA	Belarusian State University Belarusian National Technical University Belarusian State University of Informatics and Radioelectronics Yanka Kupala State University of Grodno Belarusian State Technological University Francisk Scorina Gomel State University Vitebsk State University	22 82 129 199 201–210 251–300 251–300

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