

Controlling of Strategic Organizational Changes at the University

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Abstract. Since modern organizations are characterized by a variety of goals, the definition of the effectiveness of organizational changes can be specified as a degree of results achievement (under the conditions that these results are adequate to the established and intended goals of organizational changes and the changes themselves meet certain needs of stakeholders and create conditions for constant development of an organization). This research is based on general scientific research methods: system analysis methods, scientific abstraction and generalization, comparative and categorical analysis, empirical description methods, as well as behavioral, systematic, process specifying scientific methodological approaches of the theory of management. The authors classified strategic interests of the main stakeholders in universities activities in Russian Federation; the element base and the system of interactions between them was performed in the model of interests coordination during the changes implementation process in the system of higher education and control methods when making changes were analyzed. In conclusion various forms of controlling were suggested and this variation was derived from various university stakeholders' interests.

Key words: strategic changes, organizational changes, universities, stakeholders, methods of controlling

1 Introduction

In accordance with the systems theory, the content of the results evaluation system can be formed by identifying its elements and determining links between them [1]. Obviously, the need to assess the effectiveness of organizational changes in the management process arises at least twice: at the stage of implementing organizational changes and after their completion.

An important component of this mechanism is the outline of the control system at the implementation level, consistently covering all stages of the management cycle, starting from the stage of formulation of goals and strategic planning, and ending with the stage of results evaluation and development of future recommendations. The most important functions are the control of the achievement of the set goals, the identification of deviations from the plan, the analysis of causes of these deviations and participation in the development of corrective actions. The ability of an organization to achieve its goals depends on the degree of mutual

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integration and coordination of all elements of the considered complex mechanism of change management at the university.

The higher education is a specific economic activity studied recently more thoroughly [2, 3] and aimed at the realization of economic interests of a wide range of contact audiences. These interests determine, directly or indirectly, objectives, content and results of activities of higher education institutions. Therefore, it is necessary to assess the degree of acceptability of results of ongoing organizational changes not only from the standpoint of the organization itself, but also from the standpoint of those contact audiences whose interests led to the implementation of these changes, as well as all others whose interests may potentially be affected.

Effective implementation of changes was described in a number of works [4] in the system of higher education should take into account the mechanism of interests harmonization by carrying out changes in the higher education. Mainly the aspects of interests coordination for various types of organizations were studied by a number of researchers [4-7]. If the control over the effectiveness of changes is based on indicators that assess the potential of the university in its readiness for changes and improvement of its competitiveness in the inter-university space as well as among students, it largely involves the participation of contact audiences at the stage of developing strategic and current plans, as well as in the development of targets and the vision of the university and is mandatory for the effective functioning of the educational institution. The impact of changes is controlled at the micro level (university level), and in the system of the external environment of the university (that rigidly fixes the degree of freedom by decision-making of all participants of market interactions) and is reflected at the meso-and macro-level.

2 Research methodology

The purpose of the study is structuring the changes in higher education into detailed typology, considering new trends in the development of higher education in the Russian Federation and in the world. The typology and substantiation of the element base and system interactions in the model of interests' coordination while implementing the changes are theoretical and based on such methods as scientific abstraction and generalization, comparative and categorical analysis.

The applied part of the research was in identification of strategic "Gap map" between the marketed system of higher education products and services and the interests of the main contact audiences. Identifying gaps in needs and the interests of key stakeholders regarding the development, provision, obtaining and using higher education was performed on the basis of empirical description methods, as well as behavioral and systematic approaches and results in analytical modules studies formed at this stage. Results obtained in the framework of the presented research modules are necessary basis for obtaining further logically linked scientific and practical results: these modules allow create a management decision support system for implementation of changes in the system of higher education carried out in order to increase its sustainability and competitiveness.

3 Results

During the first research phase the authors analyzed the dual character of educational services of higher education, and highlighted a few factors requiring consideration when assessing the efficiency and effectiveness of investment in higher education – both public and private:

- the result is formed both at the micro and macro levels, and the result at the micro level differs quantitatively and qualitatively from the sum of the results obtained at the micro

level, which is determined by the dual nature of the service itself, as well as the existence of external effects;

- the result should be evaluated not only in the coordinates of an economic, but also social effect;
- the result is formed on a very long horizon.

These factors should be considered when assessing the effectiveness and efficiency of measures related to organizational changes in the higher education system (systemic changes) and in the activities of individual higher education institutions (substantive changes).

Let us consider some specific features of the choice of ways to harmonize interests in the system of higher education. To do this, a matrix of ways to coordinate interests should be built, one axis of which represents the realization degree of universities' interests, the other - the realization degree of stakeholders' interests. Since the choice of a method for the coordination of interests is determined by the degree of dependence of the interacting subjects on each other, it is necessary to identify groups of universities' stakeholders by the degree of their interdependence. As a basis for such a selection can serve as a model of Aubrey L. Mendelow [8-10], where two criteria are used:

- "power": the degree of influence (high/low) on the activities of the university ("power" characterizes the ability of a stakeholder to get the desired result from the university on the basis of instruments of coercion, financial tools or emotional resources);
- "interest": the level of interest (high/low) in the results of the university activities (the interest characterizes needs of stakeholders and their dependence on the results of the university activities, as well as the desire of stakeholders to influence the university).

The Power-interest grid of Aubrey L. Mendelow allows us to distinguish four groups of stakeholders:

- group I: stakeholders with a high degree of influence and low interest;
- group II: stakeholders with a high degree of influence and high interest;
- group III: stakeholders with low level of influence and low interest;
- group IV: stakeholders with low level of influence and high interest.

Consider the distribution of stakeholders in the higher education system according to these groups:

The first group of stakeholders includes:

- the state, which is the founder (for the majority of Russian (state) universities) and the Supervisory authority (for all universities), and accordingly, has a strong impact on the activities of higher education institutions (through mechanisms of budget funding, licensing and accreditation procedures); at the same time, the level of state interest in universities should be considered as low, since the state is interested only in compliance with the law and does not depend on the results of their activities;
- state and non-state funds supporting scientific, technical and innovation activities: they have a strong impact on the activities of universities through financial instruments (grant support system) and are not directly interested in the results of their activities.

The second group of stakeholders includes:

- households (applicants and their parents): they have a strong influence on the activities of universities on the basis of financial instruments (fees for educational services, which becomes the main source of funds for universities in the conditions of reduction of budget funding from the state) and at the same time they are highly dependent on the results of educational activities of universities (interested in high quality of the educational process);
- employers: they have a strong influence on the activities of universities through financial instruments (fees for educational services, R&D results) and emotional resources (employment of university graduates), they are also strongly dependent on the results of

university activities (interested in the quality of educational services, R&D, highly qualified specialists);

- partner universities: they influence the activities of universities mainly through financial instruments and emotional resources (as part of the implementation of joint educational, innovative and other projects), they are strongly dependent on the results of this interaction (it should be noted that strong influence and high interest are observed, as a rule, only in the sphere of network interaction between universities);
- universities-competitors: they have a strong impact on the activities of universities on the basis of financial instruments (competition for budget funding, household funds, employers) and thus they are interested in the negative results of other educational institutions (unlike other groups of stakeholders universities-competitors are not interested in the results of university activities, but in their absence);
- the university management: it has a strong influence on the activities of the university through the instruments of coercion (it forms the management policy) and has a high interest in the results of university activities (increase in budget and extra-budgetary funding, compliance with the legislation, the business reputation of the university).

The third group of stakeholders includes mass media, public organizations, professional communities, regional innovation infrastructure (business incubators, etc.), university graduates, secondary schools. These groups of stakeholders are characterized by a low level of influence (mainly through emotional resources) and low interest (they do not depend directly on the activities of universities).

The fourth group of stakeholders should include employees of the university (teaching staff and other categories of employees) who have a high interest in the results of the university activities (they are interested in decent pay and working conditions, stable functioning of the educational organization), but have little leverage over the university.

Thus, based on the Mendelow's model, we can identify the most important stakeholder groups (groups II, I and IV), which shall be agreed in the first place.

The development of modern management concepts such as value-based management (VBM), M. Porter's [11] Value Chain Analysis, supply chain management (SCM) and further - entrepreneurial networks has moved away from the post-war approach to the organization as a closed system. The operation of an open system involves its interaction with the external environment; it is not required from a closed system. In the classical and post-war scientific management, organizations were usually considered as closed systems, which allowed to simplify the problem and effectively use the methods of quantitative analysis (there were no external influences). It is obvious that in reality every organization is an open system, and ignoring environmental factors can be one of the reasons for its failure. This approach formed the basis of the strategic management of the organization.

In this case, in order to assess the success of organizational changes, it should be taken into account that the management of organizational changes as a process of purposeful impact on the activities of the organization is carried out for results that the organization achieves in the external environment and to achieve which it mobilizes certain resources. Since the results of the organization's activities exist only outside its borders, in the external environment, therefore, it is the reaction of the external environment that should be considered as the basis for the final assessment of the effectiveness of organizational changes. Obviously, those organizational changes should be considered as more successful and effective ones that lead to an improvement in the position of the organization in its operation environment.

However, the task monitoring the effectiveness is carried out primarily at the micro level, i.e. monitoring the effectiveness of changes is implemented mainly at the university level. The service of providing higher education is a paid service according to the legislation of the Russian Federation. There are fundamental differences in the mechanism of providing

services in the higher education system: public interests are realized through the use of the budget financing system (currently in the Russian Federation the mechanisms of state assignment and subsidies are used, the transition to the state order is discussed), private - through the mechanism of contractual financing at the expenses of individuals and legal entities. These services, provided within the framework of the state assignment on a competitive basis, are "free" for a particular consumer who does not pay for them directly, but, nevertheless, they are paid to the producer at the expense of the budget. However, the declared amount of state guarantees for higher education opportunities in a direction and level of training may deviate from the volume of demand both in one and the other direction [12]. Thus, the university itself is primarily interested in the formation of an effective system of higher education from the point of view of the rational use of both allocated budget and "contractual" resources.

Control is a legal category (activity of specially created regulatory bodies to monitor compliance with the legislation by all economic entities) and managerial category (an integral element of management at both macro-and micro-levels in order to ensure the expediency and efficiency of operations). Accordingly, there are different control forms, depending on the grounds on which it can be carried out. For the purpose of this study, the authors considered the existing forms of control from the standpoint of the implementation of the interests of different stakeholders groups and their interest level in the results of university activities and the influence degree on the interests of the universities themselves.

Table 1. The classification of controlling forms in accordance to stakeholders' interests grid

Controlling forms		Stakeholders with high level of interdependence	Stakeholders with middle level of interdependence	Stakeholders with low level of interdependence
Terms of changes	strategic	University authorities	State State and non-profit funds	Media Public organizations Professional associations
	tactical	Households Employers Partner universities Competitor universities	-	Regional innovation infrastructure Graduates Schools
	operational	-	Employees	
Way	financial	University authorities	State State and non-profit funds	
	administrative	University authorities	State State and non-profit funds	
Functional subsystems	Innovative and entrepreneurial activities	Partner universities Competitor universities	Employees	Media Public organizations Professional associations Graduates Schools
	R&D	Employers Partner universities	State State and non-profit funds	Regional innovative infrastructure
	The process of giving the educational services	Households Employers	State State and non-profit funds	Schools

Scale of control	total	University authorities	State	Media Public organizations Professional associations Graduates Schools
	colegial	Employers Partner universities Competitor universities	State and non-profit funds	-
	individual	Households	Employees	-
Terms of controlling procedures	preliminary	Households Employers University authorities	State and non-profit funds Employees	Media Public organizations Professional associations Schools
	current	Partner universities Competitor universities University authorities	Employees	Media Public organizations Professional associations Regional innovation infrastructure
	final	Households Employers University authorities	State and non-profit funds	Media Public organizations Professional associations Graduates Schools
Directions of organizational sphere	external	Households Employers Partner universities Competitor universities University authorities	State and non-profit funds	Media Public organizations Professional associations Graduates Schools Regional innovation infrastructure
	internal	University authorities	Employees	-
Method of obtaining and processing information	statistical	Households Employers Partner universities Competitor universities University authorities	State and non-profit funds	Media Public organizations Professional associations Schools Regional innovation infrastructure
	calculated and analytical	University authorities	Employees	Graduates
	registration	-	State	-

Source: Authors.

4 Discussion

The transition from the conceptual level description of the assessment system of the organizational changes effectiveness to the physical level involves the formation of a set of indicators that are a means of measuring the achieved results [13]

Reducing the indicators of sustainable development of a university only to a financial and economic assessment is impossible due to, first, the dual nature of educational services producing external effects of both a private (for third parties) and public (for society as a whole) nature. Secondly, as have already been noted, the result of the activities of higher educational institutions is formed both at the micro and macro levels, where the result both quantitatively and qualitatively differs from the sum of the results obtained at the micro level and is subject to assessment in coordinates not only economic but also social effect.

5 Conclusion

As a result of the study, the HE changes typology was developed, taking into account new development trends of HE in the Russian Federation and in the world, based on the identification of many interconnected systemic and substantial changes and sources of their occurrence both at the level of individual universities, and the entire system of higher education. The continuous nature of changes in higher education requires developing fundamentally new approaches to monitoring and evaluating expected results of these changes. These results should consider bridging the gaps between needs (expectations) of interest groups of higher education system and university ability to satisfy these needs by providing educational services, research work, graduate training.

Based on the distribution of university contact audiences by the degree and nature of influence, the level and nature of interests the matrix was built. It shows the ways to coordinate the interests of the university and its stakeholders, which allowed to draw conclusions about the distribution of interest coordination methods among stakeholder groups. Formed approach to these choice helps to align the interests of the university with stakeholders taking into account the degree of their interdependence, the market influence and administrative mechanisms for the process of reconciling the interests.

Depending on the degree of universities adaptability to changing conditions of functioning, which is determined by such characteristics as necessity, ability, readiness for changes under the influence of a variety of objective and subjective factors, organizational changes can have different levels. The nature of change causes determines their different focus. Ultimately, this leads to a different content of organizational changes, which requires differentiated approach to managing them.

When planning changes in the university, it is necessary to take into account that the effectiveness of these changes is not only the achievement of the target indicators of the quality of educational services and the number of scientific developments (expressed in financial and quality indicators), it is the possibility of creating innovations, and the effectiveness of communication with contact audiences.

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