



Leading-Edge Strategies for Enhancing Higher Education Institutions' Management Systems

Jakhongir Shaturaev*

Tashkent State University of Economics, Islam Karimov avenue, 49, 100003 Tashkent, Uzbekistan.

*Correspondence: E-mail: jakhongir.shaturaev@tsue.uz

ABSTRACT

This paper deeply analyses the latest strategies for enhancing the management system of higher education institutions. This study sets out the importance of the management system of higher education institutions (HEIs); (b) states the leading-edge strategies for modernizing the management system of HEIs; (c) calls attention to changing the mindset of the university pedagogical staff and leaders and using broader methods in reforming management system of HEIs; (d) suggests further approaches for superior academic outcomes. This study gathered data through field trip HEIs observations, interviewing HEIs rectors, lecturers, and university staff, and analyzing available data. The qualitative research findings reveal dissatisfaction with the present strategies and leading to poor academic achievements in the HEIs of Uzbekistan. Meanwhile, within the framework of the article, based on the methods of analysis and synthesis, generalization, and deduction, the main features and elements of the university management system, as well as current approaches to the management of a modern university, will be studied. Found data shows that improper infrastructure of government expenditure on education, low salary, and limited quota in pedagogical universities lead to a shortage of teachers and poor academic achievements.

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1. INTRODUCTION

In recent years, the Republic of Uzbekistan's higher education is undergoing a new round of development, largely due to the tasks set by President Shavkat Mirziyoyev and related to increasing the global competitiveness of Uzbek universities. To achieve new goals, new projects stated in the newly signed President's decree on "Improving the higher education in 2030 competence" (Maryanti *et al.*, 2021), a Concept was formed to increase the competitiveness of the leading universities of the Republic of Uzbekistan among the world's leading scientific and educational centers. Uzbek universities must strive. At the same time, the ways and tools to achieve these positions remain completely unclear. Taking into account the considered facts, it seems relevant to study how the current management system of Russian universities should change, taking into account the priorities outlined by the country's top leadership. The management system of higher education institutions in Uzbekistan needs improvement. The current system is outdated and inefficient, leading to a lack of quality education and a decrease in student satisfaction. To improve the management system of higher education institutions in Uzbekistan, there needs to be an increase in resources, better communication between faculty and students, and more efficient use of technology.

Increase in human resources of the most important steps to improve the management system of higher education institutions in Uzbekistan is to increase the resources available to faculty and students (Kholmuminov *et al.*, 2019 ; Odilovich *et al.*, 2021). This includes providing more funding for research projects, increasing the number of faculty members, and providing better access to technology. By increasing the resources available, faculty and students will have more opportunities to explore new ideas and develop innovative solutions to problems. Additionally, more resources will allow faculty and students to collaborate more effectively and create a more engaging learning environment. Moreover, better communication another key factor in improving the management system of higher education institutions in Uzbekistan is to improve communication between faculty and students. This can be done by creating a more open and transparent environment where faculty and students can easily communicate their ideas and concerns. Additionally, faculty should be encouraged to provide feedback on student work and offer guidance on how to improve their performance. Creating an environment where faculty and students can communicate openly, will lead to a better understanding of each other's needs and expectations. Efficient use of technology finally, the management system of higher education institutions in Uzbekistan should be improved by making more efficient use of technology. This includes using online platforms to facilitate communication between faculty and students, as well as using digital tools to streamline administrative tasks. Additionally, technology can be used to create virtual learning environments where students can access course materials and collaborate. Making more efficient use of technology will lead to a more efficient management system that is better able to meet the needs of faculty and students.

2. METHOD

This research article used the qualitative research method to clarify the strategies to improve the management system of higher education institutions. Hence, data for the scientific paper was collected by analyzing available data sources, field observations, and questionnaires. The gathered data was analyzed to draw the final picture of the research paper. The approach is a fundamental component at the core of the HEI activities towards enhancing the management system of higher education institutions, embodied as the general

methodological basis of sharing knowledge management and information performance management system of the pedagogical and administrative staff of HEIs.

3. RESULTS AND DISCUSSION

In general, various types of organizational structures in management theory were considered in the works. Among foreign works, books and articles by Professor G. Mitzberg deserve special attention, who singled out a separate type of structure concerning universities - a professional organization. A professional organization has a small technostructure and a weak middle line because the need for administrative control is negligible. The functioning of a professional organization requires supporting staffs, which are selected to support the activities of expensive professionals (the operating core).

The minimum technostructure in a professional organization provides this type of organization with a high standard of manageability. This configuration is suitable for organizations operating in relatively stable environments. At the same time, the author emphasizes that for organizations operating in conditions of turbulence, which in modern realities may include a university, a different type of configuration (management) is needed - adhocracy.

The main difference between adhocracy and other configurations (including professional ones) lies in the originality of its structure. Firstly, it is rapidly changing, and secondly, it is organic and selectively decentralized. Here, experts in specific functional areas are divided into different multidisciplinary teams, which also include staff and operations staff, as well as various managers who implement innovative projects. **Table 1** presents a comparative description of the two types of organizations (professional and adhocracy). The structure of the university, built according to the adhocracy principle, is shown in **Figure 1**. Continuing the theme of the organizational structures of the university, let us dwell on another important work devoted to the transition of universities to a new management system (Khamitovna, 2022). The researcher in his work emphasizes that in the knowledge economy, universities become tools for economic growth, thereby increasing the competitiveness of higher education institutions (Estrellan & Loja, 2021).

Traditionally, the educational and scientific activities of the university are organized by faculties, each of which has its scientific specialization (Wissema, 1982). However, most scientific research today is interdisciplinary. Groups of scientists carrying out inter- and transdisciplinary scientific research form inter-faculty teams, consisting of representatives of various faculties often from different universities, as well as sometimes from non-university environments. As a result, a matrix organizational structure is formed, which today cannot fully meet the needs of the market. Some researchers drew attention to this fact and proposed a more efficient organizational structure for third-generation universities, where power is in the hands of institutions.

Third-generation universities operate in a highly competitive international market. These are network universities that cooperate with companies in various industries, non-governmental research and design organizations, investors, and professional services firms, as well as with other universities in a know-how carousel model. The purpose of such a university is to capitalize on its know-how in addition to its traditional missions of research and education. Institutes are responsible for master's programs, additional professional education in certain areas, and awarding Ph.D. degrees in any subject area. They also form networks among other such institutions around the world, often participating in international projects. They attract funding from funds and third parties (client companies), and they also cooperate with industrial companies and start-ups, thereby taking responsibility for the

financial situation. The structure of such an institute may include a library and a support office to provide financial, administrative, and IT-support assistance. Education in undergraduate programs remains the prerogative of faculties; they may also be responsible for the teaching of general disciplines in the master's programs offered by the institutes. At the same time, to develop transdisciplinary research, the university management needs to clearly define the portfolio of university activities, since "a modern university is rather not the sum of the individual sciences represented in it, but a set of problem areas considered based on a transdisciplinary approach." Since the innovative and entrepreneurial components are important for modern universities, the author singles out a member of the Board responsible for cooperation with industrial enterprises and the commercialization of know-how. This employee should be provided with a staff defined by four groups of employees who operate in the following areas: marketing, new technologies, work with techno starters, and technopark.

Table 1. Professional and adhocracy configurations.

Comparison options		
Coordination mechanism	Standardization of knowledge and skills (qualifications)	Mutual agreement
The key part of the organization	Operating core	Support staff (in the administrative adhocracy; in the operational adhocracy - along with the operating core)
Basic design parameters	Special training, horizontal specialization, vertical and horizontal decentralization	Interaction tools, organic structure, selective decentralization, horizontal specialization, training, functional and market grouping at the same time
Situational factors	Complex, stable external environment; unregulated, uncomplicated technical system; fashionable.	Complex, dynamic (sometimes unequal) external environment; youth (especially for operational adhocracy); complex and often automated technical system (in an administrative adhocracy)
Structure	- bureaucratic but decentralized; - the creation of sites where professionals work autonomously, and whose activities are controlled by standards and norms; - numerous support staff	- a rapidly changing, organic, selectively decentralized, adhocracy; - experts in specific areas are dispersed among different multidisciplinary teams, including also headquarters and operational staff and managers implementing innovative projects; - coordination through mutual regulation; stimulated by liaison staff, integrating managers and matrix structure
Strategy	Many strategies, often fragmented but promote cohesion among professional workers	- based on learning or the "basic" process; - "arising" mainly in various ascending processes; - rather formed than managed; - characteristic cycles of convergence and divergence at the strategic focus

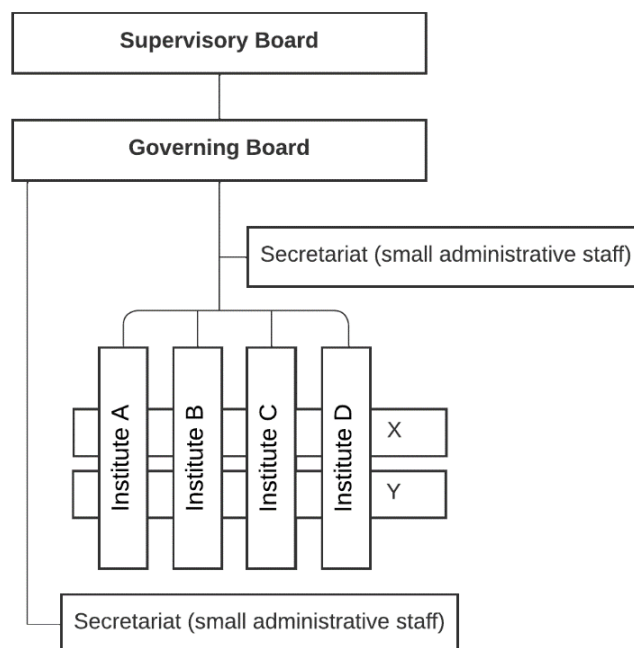


Figure 1. Organizational structure of the third-generation university.

An example of the effective organization of such activities at the university is the Catholic University of Leuven, in Belgium. In this university, since 1972, the Center for Research and Development has been established, which is responsible for the commercialization of the know-how of the university.

Such an approach to the purpose of a higher educational institution will involve strengthening its activities in the direction of educational work, communication with the local community in the form of additional education and career guidance programs, work with schoolchildren and enterprises of the region, its involvement in solving acute social issues, technological and environmental problems (Shaturaev, 2023). In this context, universities and regional governments must constantly collect data on research, companies, and market needs, both locally and nationally.

The third mission is usually interpreted in scientific literature through the prism of three elements: technology transfer, further education, and social involvement. The first position involves the creation of know-how for the needs of the non-academic environment to obtain a social and commercial effect. Further or continuing education is lifelong learning (Shaturaev & Khamitovna, 2023). And social involvement should be manifested in the form of activities aimed at increasing the good of society. At the same time, the author notes that the model for evaluating the effectiveness of the third mission cannot be universal and should vary for different countries or even universities following their specific characteristics and specialization. L. Pastukhova and A. Kaymarazova (Pastukhova et al., 2021) propose to carry out technology transfer through business incubators and specialized working groups.

Following the third mission of the university in the context of social significance suggests that universities should link their socio-economic context with social needs and market requirements. At the same time, as noted in the report "The Role of Universities in Shaping the Evolution of Silicon Valley's Ecosystem of Innovation" the so-called approach involves moving away from the linear transfer of knowledge from research to external users (companies, citizens) to their joint creation (Piqué et al., 2020). That is, solving problems and creating new products is the result of collective creativity. This, in turn, will require an increased degree of university activity in conducting research and negotiations on the specific

needs of regional and Russian companies to further meet them through innovative solutions; professional management of partnerships through the creation of a specialized department for coordinating relations with business partners and the introduction of a CRM system; lining up work with schools in the key of training qualified scientific personnel, increasing the attractiveness of scientific activity and the profession of a scientist; the development of managerial personnel of universities (primarily the vice-rectors corps) not from the position of scientific interests, but in the key of mastering the skills of business administration; creation of interuniversity hubs for the development of know-how and improvement (development of new forms) of their commercialization. As a result of the increased activity of the university and its role in the development of the economic potential of the region is increasing.

Concluding the consideration of various approaches to the management system of a higher educational institution, we present a comparative analysis of the presented approaches (Table 2).

Table 2. Professional and adhocracy configurations.

Comparison			
1. Main idea	In a changing external environment, to create innovations, companies need to introduce a flexible and organic selectively decentralized management system (adhocracy) while maintaining two bureaucratic management structures	The university, along with educational and scientific, has a mission to commercialize know-how	A modern university must realize educational, scientific, and social missions
2. Control units	Formation of interdisciplinary teams of functional experts, consisting of representatives of support staff, operators, and managers working on complex innovative projects	Creation of institutions as the main structure for the commercialization of know-how. The appearance of a vice-rector in the structure of the university, responsible for the commercialization of know-how and interaction with business	
3. Mechanism	Creation of a new coordination mechanism - mutual regulation through a network of coordinators, integrating managers and matrix structures; the development of a complex dynamic environment, including constant changes in specialties and specializations, temporary projects, and grandiose initiatives; application of a self-learning strategy and grassroots initiatives	Universities cooperate with companies from various industries, non-governmental research and design organizations, investors, professional services firms, and other universities on a know-how carousel model, thereby becoming tools for economic growth	Living Labs, Business Incubators, Specialized Working Groups

4. CONCLUSION

The article considered modern approaches to the university system and different points of view on the rules for managing it, in connection with which the following results were obtained:

- (i) The need for the transition of universities to the third generation is due to various factors that occur on a global scale and determine the new role of universities in society. In this regard, the creation of a new modern model of the university is relevant.
- (ii) There is a strong opinion among the authors that the role of the university has expanded and goes far beyond the educational and scientific functions, that is, modern universities should perform not two, but three missions. At the same time, what exactly is the third mission, there is a discrepancy - some authors, following the version of J. Wissema, propose to strengthen the commercial component of universities, emphasizing the significant role of universities in increasing the competitiveness of the territory in which they are located, the other - to concentrate on the social.
- (iii) In both approaches to the three missions of the university, there is a mention of technology transfer as an important task implemented within the framework of the third mission. At the same time, if J. Wissema considers technology transfer as an effective way to commercialize science, then in the second case it is a way to ensure the public good, interact with society, and be involved in the problems of companies and the region as a whole, which, meanwhile, does not exclude the attraction of funds for their implementation, it is the universities that will become the drivers of economic growth.
- (iv) Very few comprehensive developments on the third social mission of the university are currently available. Therefore, it seems obvious that there is a need for a more detailed description of the system of effective tools, expressed in the creation of specific structural units, the stages of their implementation, the criteria for evaluating activities, etc., by analogy with the achievements of the works of J. Wissema and G. Mintzberg.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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