

видуализация профессионального образования и обучения на основе цифровых технологий позволяет обеспечить органичный переход к мультипрофессионализму – постиндустриальной модели профессионализма, когда профессия перестает быть стандартизированным набором трудовых функций и действий, востребованных знаний, умений и навыков, – и становится динамичным персонализированным набором компетенций. Цифровизация – один из способов сделать образование одинаково качественным для всех. С «цифрой» проще и быстро сформировать персонализированный подход к ученикам, легче внедрить дифференцированное обучение, которое учитывает потребности каждого ученика.

Ключевые слова: цифровизация; образование; коммуникация; новая парадигма; цифровая педагогика; коммуникационная культура; Big Data; модель SAMR.

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INNOVATION AND CHANGES IN EDUCATION MANAGEMENT

Abstract

This article examines the relevance of modernization of today's education, in particular, the reform of activities in the management of educational organizations. Modernization of management of educational organizations involves the introduction of innovative approaches in the management of educational organizations. It was revealed that one of the priority areas that characterize the activities of modern educational institutions is the transformation of its management cycle. As one of the effective management methods, in contrast to the existing traditional vertical command-administrative system, is considered a horizontal-cyclical organizational structure (HCOS). This transformation has aimed to the implementation of decentralized coordination of the actions of the relevant organizational units (the formed departments) in the process of performing common tasks. The presented work will investigate the implementation of HCOS on the example of the Institute of Natural sciences and geography of the Abai Kazakh National Pedagogical University.

Keywords: education management; innovation; management cycle; horizontal-cyclical organizational structure; Abai University.

Introduction. In modern society, the development of any nation, its viability and security is based primarily on the level of education of its citizens. Consequently, one of the priority areas of modern social policy in Kazakhstan is the modernization of all levels of education. The modernization of education involves the initiation of innovative approaches in the management of an educational organization. The creation and implementation of innovative ideas is a key organizational effort aimed at achieving excellent results and ensuring a competitive advantage [1]. This

process is possible due to the readiness of heads of higher education organizations to innovative management methods, because the effectiveness of the innovations, being introduced, depends on the competence and determination of education managers.

Main body. Innovation is considered to be the main driver of progress and prosperity [2]. Management innovation can be characterized as the invention and implementation of a management practice, structure, method or process that is new to the highest level of development in a specific field and that is

carried out to help in achieving the goals of the organization [3]. Compared to other types of innovation, management innovation has the unique ability to drive radical and sustainable change in terms of competitive advantage [4]. This kind of innovation also characterizes any program, product or technique which represents a significant departure from the state of the art of management at the time it first appears and which affects the nature, location, quality, or quantity of information that is available in the decision-making process [5, P.86]. V.V. Korovin clarifies management innovation as a result of the development and implementation of new principles, methods and management structures that change the internal environment of the enterprise and correspond to external changes [6]. Thus, innovation in management means having and practicing management skills, determination and courage to take responsibility for implemented changes that drive progress and productivity. Nevertheless, openness to change through management initiatives allows for organizational learning, leading to an increase in organizational knowledge and the development of core organizational competencies [7].

It should be noted that the process of managing educational institutions itself has a certain cyclical character. The management cycle is a closed sequence of the main types of management activities: analysis, management decision making, goal setting, work planning and forecasting results, organization of execution and control [8].

Materials and research methods. *An innovative method of managing an educational institution on the example of Abai KazNPU.* Thus, it can be noted that the development and implementation of innovations in the management of education is necessary, since the new powers acquired within the framework of the education reform contribute to the expansion of mechanisms for their effective application [9].

One of the distinguishing features in the innovative approach to the management of the institutions of Abai KazNPU is the transition from a vertical command-administrative system to a horizontal-cyclical organizational management structure (HCOS).

The previously existing vertical organizational structure of management of an educational institution presupposed the presence of a certain hierarchy, when lower levels of management are subordinate to higher ones. Such a system is characterized by a high degree of centralization of decision-making, in which all other heads of departments and employees are directly subordinate [10].

The horizontal-cyclical organizational structure in the management of an educational institution is aimed at the implementation of decentralized coordination of the actions of the relevant organizational units (formed departments) of various functional units in the process of performing common tasks [10].

According to this organizational structure, has been formed the Council of Responsible Representatives (CRR), which consist six departments (figure 1) and each of them includes several employees responsible for the selected areas of work.

Discussions. Advantages and Disadvantages of HCOS Implementation. The advantages of HCOS are as follows: firstly, the ability to respond flexibly and quickly to any changes in the conditions of conducting its activities and the development of adaptive leadership. Secondly, the horizontal organizational structure of management, regardless of its form, is characterized by the decentralized nature of decision-making through their transfer to groups, which include specialists from various departments, which was described above. Third, HCOS allows more decisions to be made, as well as quick coordination of these decisions with functional units. And finally, in contrast to the vertical management structure, in which each department operates according to established standards (coordination of their activities is difficult), the horizontal organizational management structure is based on process management and is aimed at avoiding cross-functional barriers [10].

As for disadvantages, first of all, under HCOS, CRR decision-makers at lower levels of management may make less thoughtful and

effective decisions, as opposed to decisions made by experienced senior managers. At the same time, the time spent on communication and decision-making increases. This is due to the need to coordinate all actions between different departments of the enterprise. Second, HCOS may have another disadvantage – an

increased likelihood of escalating conflicts. Employees of different departments and divisions have different visions of problems and different preferences, so the main part of the decision-making process in a horizontal type of management is aimed at resolving conflicts [10].

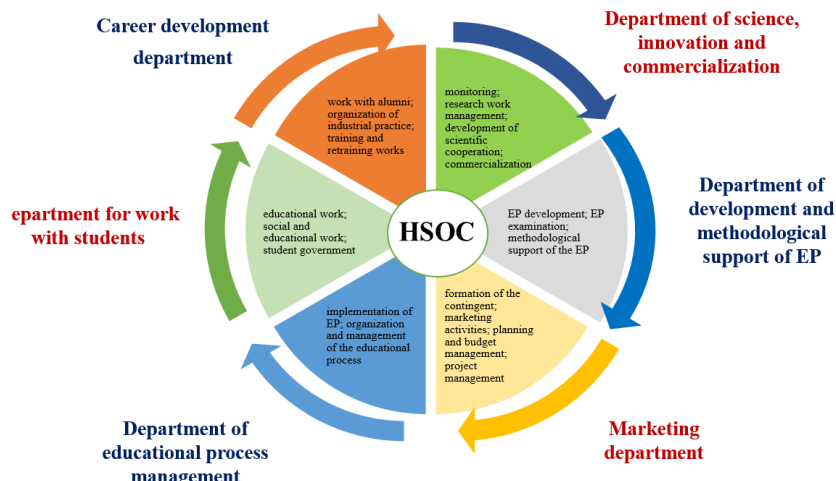


Figure 1. Departments of the Institute of natural science and geography according to HCOS

Thus, it can be seen that this process has both positive and negative consequences. However, its positive trends at times prevail over negative ones.

Based on the accumulated information on innovative methods in the management of educational institutions and analyzing the process of the university's transition to a new method of management, a survey was formed to identify the degree of effectiveness of the HCOS on the example of the Institute of natural science and geography (INSG) of Abai University.

Results and discussion. Socio-educational reality requires finding the right answers regarding the choice of an effective form of education management, which affects the quality of education [11]. Proceeding from this, the goal in this work is to determine the effectiveness of the innovative method introduced into education at the level of management of institutions (in particular, INSG) of the Abai KazNPU.

In this work, we used a survey based on semi-structured interviews using Google forms. As a result, a questionnaire was developed, consisting of 7 items with multiple choice of answers. This questionnaire was applied to the staff of the CRR of the Institute of natural science and geography, occupying different positions in the educational process management system at the institute.

Presentation and interpretation of results. The first item of the questionnaire was aimed at determining the age characteristics of the respondents who are direct participants in innovative activities in the field of education management. As can be seen from table 1, the council of responsible representatives includes persons in the age category from 30 to 60 years old, for whom the following characteristics are inherent: flexibility and mobility, great activity and commitment, rich experience and knowledge of how to achieve the desired result.

All of these factors are key to making effective decisions in organizing the work of departments.

The second point of the survey was aimed at identifying the degree of optimization of the horizontal-cyclical organizational structure for the management system of the institute. The analysis of the results shows that the majority of respondents, 58.3%, assess the optimization, but at the same time they note the need to work on some of its aspects. 37.5% of the respondents

consider the HCOS to be fully optimized for the management system of the institute, and only 4.2% believe that this management structure does not differ from the classical (vertical command-administrative) management system. Based on the results of this item, we can conclude that 95.8% of respondents consider the implemented innovative method in education management to be successful.

Table 1

Age features of respondents

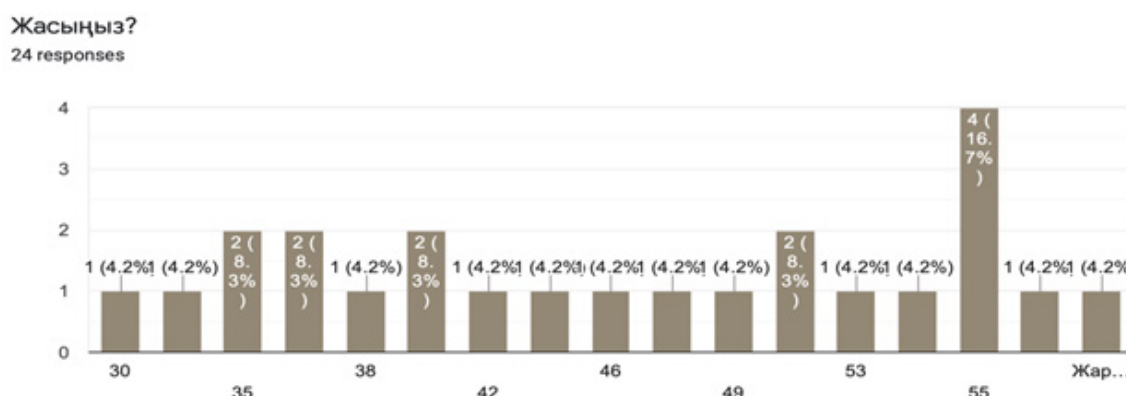


Table 2

Degree of optimization of the HCOS for the management of the institute

Item	№	%
Fully optimized	9	37.5
Optimized, but some aspects still need work	14	58.3
Does not differ from the classical control system	1	4.2
Total	24	100

Analyzing the benefits that HCOS can provide, the following survey items (3, 4, 5) were designed to determine the degree of accuracy of the data on its positive aspects.

As can be seen from Table 3, the management structure of the horizontal cycle allows making a larger number of decisions, while quickly coordinating these decisions with functional departments, and the organization's activities are optimized to solve many problems simultaneously, since each department has specialists in functional areas (50%). However, this can negatively affect the quick decision-

making in case of absence of the necessary specialists (45.8%). And only 1 respondent (4.2%) notes that decision-making belongs only to functional blocks. Comparing the results obtained, we can come to the conclusion that, in general, GSPC allows making more decisions, as well as solving many tasks simultaneously. The disagreement of one respondent should be attributed to a lack of understanding of the goals of the institution's transition to horizontal management.

According to the centralized answers presented in table 4, with the possibility

of successfully using HCOS in organizing the educational process, in particular when organizing short-term events in the educational process, as well as the ability to quickly make and agree on decisions are agree 62.5% of respondents, and 33.5% do not agree with this stream of results as a positive aspect. Possible

explanations can be found in the lack of motivation of the employees of the departments and a lack of understanding of the main goals of the transition to horizontal cyclical management. And only 4.2% did not give a specific answer, due to the incomprehensibility of the asked question.

Table 3

The ability to solve multiple tasks simultaneously

Item	№	%
Completely agree	12	50
Agree, but the team will take a long time to make a decision due to the lack of necessary specialists	11	45.8
Disagree, decision making belongs only to functional departments	1	4.2
Total	24	100

Table 4

Possibility of quick application of solutions

Item	Disagree	Completely agree	Other (the question is not clear)	Total
Positive aspect of a horizontally cyclical organizational structure: the possibility of successful use in the organization of the educational process, in particular while organizing short-term events in the educational process, as well as the ability to quickly make and coordinate decisions.	8 33.3%	15 62.5%	1 4.2%	22 100%

One of the advantages (table 5) of HCOS is associated with the possibility of increasing the time for making management decisions, which is associated with the fact that each department works according to established standards. Therefore, using one more point, we tried to investigate the effectiveness of this advantage in the case of the INSG. As a result, it was found that the highest percentage, 70.8% of respondents, agree with this statement. 25% of the respondents disagree with this aspect and only 4.2% did not give a specific answer due to a lack of understanding of the essence of the question.

HCOS has its own key characteristics that positively or negatively influence the course of work. The next two items of the questionnaire

highlight aspects related to such characteristics of HCOS as increased likelihood of inconsistency and decentralized decision-making, a strict approach to personal management and a clear division of functions in the service unit.

Results. According to the results presented in table 6, 45.8% of respondents note that under HCOS it is possible to generate contradictions and decentralized decision-making. 50% of respondents point out the opposite. The explanation for these conflicting answers can be found in the heart of the question, which includes both the positive and negative aspects of GVC. Thus, the answers received can be interpreted as follows: horizontal management is characterized by a decentralized approach to decision-making, and can allow the possibility of generating contradictions.

Table 5

Increased time for making management decisions

Item	Disagree	Completely agree	Other (the question is not clear)	Total
In HCOS each department works according to established standards and the time for making managerial decisions increases	6 25%	17 70.8%	1 4.2%	24 100%

Table 6

Characteristics of HCOS: the likelihood of inconsistencies and a decentralized approach

Item	Disagree	Completely agree	Other (the question is not clear)	Total
The characteristics of a horizontally cyclical organizational structure include an increased likelihood of contradictions and a decentralized nature of decision-making	12 50%	11 45.8%	1 4.2%	24 100%

The last point of the survey (table 7) was aimed at identifying the degree of accuracy of such characteristics of HCOS as a strict approach to personal management and a clear separation of

functions in the service division. At the same time, this statement is fully supported by 75% of our respondents, while 25% disagreed.

Table 7

Characteristics of HCOS: strict approach to personal management and clear division of functions in the service unit

Item	№	%
Disagree	18	75
Completely agree	6	25
Total	24	100

These results allow us to conclude that a strict approach to personal management can lead to the generation of contradictions in decision-making, since employees of different departments have different visions of problems and different preferences.

Conclusion. The results of the study on the implementation of a horizontal-cyclical organizational structure indicate that:

– this form of management is quite optimized for the management system of the institute

(37.5%), although work is required on some of its aspects (58.3%);

– the horizontal cycle management structure allows making more decisions, while quickly coordinating these decisions with functional divisions, and the organization's activities are optimized to solve many problems simultaneously, because each team has specialists in functional areas (50%). However, such an alignment can negatively affect the

quick decision-making in the absence of the necessary specialists (45.8%);

– the HCOS can be successfully used when organizing short-term events in the educational process, and also allows to quickly make and agree decisions (62.5%), but sometimes, in some cases, this statement may not be its positive characteristic (33.5%);

– HCOS makes it possible to increase the time for making management decisions, which is associated with the fact that each department works according to established standards (70%), although this factor may not affect to the time for making decisions (25%);

– horizontal-cyclical management is characterized by a decentralized approach in decision-making, while it can allow the possibility of generating contradictions;

– this form of management is partly

manifested in a strict approach to personal management and in a clear division of functions in the service division (75%).

As the survey results have shown, the horizontal-cyclical organizational structure of management in most cases is more successful than the vertical one. Thus, the analysis and interpretation of the data show that innovation in education management can be the right solution for the modern educational system. Management innovation has a positive effect on the development of dynamic abilities of an organization [12]. Considering this, it is expected that the positive effects produced by the intention to introduce innovations at the level of university management, in particular, the institute, will become significant for the quality of didactic action.

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Білім беру менеджменті саласындағы инновациялар мен өзгерістер

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Аңдатпа

Бұл мақалада заманауи білім беруді модернизациялаудың өзектілігі, атап айтқанда, білім беру мекемелерін басқару саласындағы қызметті реформалау қарастырылады. Білім беру ұйымдарын басқаруды жаңарту білім беру ұйымдарын басқаруда инновациялық тәсілдерді енгізуді көздейді. Қазіргі заманғы білім беру мекемелерінің қызметін сипаттайтын басым бағыттардың бірі оның басқару циклін өзгерту екендігі анықталды. Басқарудың тиімді әдістерінің бірі ретінде қолданыстағы дәстүрлі тік командалық-әкімшілік жүйеден айырмашылығы бар көлденең-циклдік ұйымдық құрылым (КЦҰК) қарастырылады. Бұл трансформация өзінің мақсаты ретінде жалпы міндеттерді орындау процесінде тиісті ұйымдық бөлімшелердің (қалыптасқан бөлімдердің) іс-әрекеттерін орталықтандырылмаған үйлестіруді жүзеге асырады. Ұсынылған жұмыс КЦҰК-ты енгізу Абай атындағы Қазақ ұлттық педагогикалық университетінің Жаратылыстану және география институты мысалында енгізуді зерттейді.

Түйін сөздер: білім беру менеджменті; инновация; басқару циклі; көлденең-циклдік ұйымдық құрылым; Абай атындағы ҚазҰПУ.

Инновации и изменения в сфере менеджмента образования

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Аннотация

В данной статье рассматривается актуальность модернизации современного образования, в частности, реформирование деятельности в менеджменте образовательными учреждениями. Модернизация управления организациями образования предполагает внедрение инновационных методов в менеджменте организацией образования. Выявлено, что одним из приоритетных направлений, характеризующий деятельность современных образовательных учреждений является преобразование его управленческого цикла. В качестве одного из эффективных методов управления, в противовес сложившейся традиционной вертикальной командно-административной системы, рассматривается горизонтально-циклическая организационная структура (ГЦОС). Данное преобразование имеет своей целью осуществление децентрализованной координации действий соответствующих организационных единиц (сформированных отделов) в процессе выполнения общих задач. В представленной работе будет исследоваться внедрение ГЦОС на примере института Естествознания и географии Казахского Национального педагогического университета имени Абая.

Ключевые слова: менеджмент образования; инновация; управленческий цикл; горизонтально-циклическая организационная структура; КазНПУ имени Абая.

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