

## **IMPORTANT FORMS AND TECHNOLOGIES FOR THE DEVELOPMENT OF INFORMATION COMPETENCE OF LEADERSHIP OF HIGHER EDUCATION INSTITUTIONS**

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### **Abstract**

This article is about theoretical analysis and practical study of the activities of higher education institutions showed that in the consistent study, analysis and evaluation of innovative management of higher education institutions, it is reasonable to take the criteria. Also the concept of "electronic monitoring" in the development of information competence of leadership of higher educational institutions can be clarified electronic monitoring of the process of development of information competence of leadership of higher educational institutions - the functional capacity of ICT by introducing leadership to methods of developing information competence monitoring and evaluating the dynamic growth of the innovation management decision-making process based on.

**Keywords:** innovative approach, innovative management, higher education, pedagogy, psychology, sociology, electronic diagnosis, electronic monitoring

The formation of an innovative educational environment in the world requires the priority of the principles of innovative approach in the management of higher educational institutions. Therefore, the innovative approach is recognized as an important factor in the development of higher educational institutions in accordance with the ongoing social, economic and cultural changes in society, improving the quality of education, training qualified, highly competitive personnel. Therefore, new trends in innovative management of higher educational institutions in the United States, Great Britain, Germany, France, Japan, South Korea, Canada, Singapore, Turkey, Russia - venture financing, benchmarking, franchising, outsourcing (including IT-outsourcing; out + source), crowdsourcing (crowd + source), branding, philanthropic activity.

At the same time, it is important to form a methodological support that will serve as a basis for scientific and pedagogical activities in finding solutions to the problems investigated in pedagogical, psychological and sociological research.

This aspect of the issue is also addressed in the development of information competence of the leadership of higher educational institutions.

The effectiveness of research in the pedagogical direction is important in choosing the optimal form and technology of activities aimed at finding a positive solution to the problem under investigation. The research focused on the selection of forms and technologies that are effective in the development of information competence of leadership of higher educational establishments.

According to the results of theoretical and practical analysis, the direction, purpose, objectives, nature and content of the process of developing information competence of leadership of higher educational institutions will allow to achieve the expected results in the following forms of activities aimed at solving the research problem:

1. Electronic diagnosis;
2. Online training;
3. Online consultation;
4. Electronic monitoring.

The features of the above-mentioned modern forms of activities aimed at developing the information competence of the leadership of higher education institutions and their practical description will further be analyzed.

I. Electronic diagnosis. Lexically, "diagnostikos" ("diagnostikos") translates from the Greek as "method of identification", and theoretically "the process of identifying and evaluating the characteristics and status of the person involved in the targeted research in the form of interpretation of the results and their generalization" [4]; the process of understanding the nature of events based on the necessary indicators and assessing their state in specific situations [5, 5]. Diagnostics has been used in many spheres of medicine, psychology (to determine the specificity of a person's psyche), industry (e.g., car condition diagnostics), ICT (diagnostics of the technical, technological, and functional state of a computer device).

M.A. Innazarov believes that pedagogical diagnosis helps to correct the pedagogical process. With the help of diagnosis, the real indicators defining

diagnostics object, immediate information on changing traditions can be inferred successfully. According to the author, pedagogical diagnosis determines certain subjective factors, in particular, the specific quality of the teacher, his professional qualifications, competence, level of mastery, level of experience [6, 39].

The research conducted by V. Uruskoy states that diagnosis in the pedagogical system is carried out for two purposes: first, to study the difficulties of professional activity as a method of studying the professional level of the teacher, a system of tools, to understand the need to find effective ways to overcome them; secondly, to identify the strengths of the teacher according to the individual method of organizing pedagogical activities, to identify specific ways and means of their strengthening and development [11]. In our view, diagnostics in pedagogical research is used to identify and assess the current level of underlying condition of the problem under study.

Electronic diagnostics, aimed at developing the information competence of the leadership of higher education institutions, was formed in the following stages:

Phase 1. The purpose of creating an electronic diagnosis was formed (the purpose: to identify diagnostic methods that allow to identify and assess the existing level of information competence of the leadership of higher educational institutions).

Phase 2. Formation of a set of diagnostic methods that are effective in identifying and assessing the existing level of information competence of the leadership of higher education institutions.

Phase 3. To acquaint the leadership of higher education institutions with diagnostic methods that are effective in their independent determination and assessment of the level of personal information competence.

Phase 4. Formation of skills for independent determination and assessment of the level of personal information competence in the management of higher education institutions on the basis of online training.

Phase 5. To achieve independent determination and assessment of the level of personal information competence by the leadership of higher education institutions.

Phase 6. Provide necessary methodological assistance in ensuring the independent determination and assessment of the level of personal information competence by the management of higher education institutions on the basis of online consultation.

Phase 7. Analysis of the independent determination and assessment of the level of personal information competence by the management of higher education institutions on the basis of electronic monitoring.

II. Online training. Literally, "training" is derived from the English word "train" and means a systematic (interdependent) system of exercises. As a matter of fact, training can be divided in two groups, defined as educational and psychological training [9]. Educational trainings serve to "impart new knowledge, form new skills necessary for education" [9].

The training, organized to develop the information competence of the leadership of higher education institutions, was called "Innovative management methods." The purpose of the online training was to identify and develop the information competence of the leadership of higher education institutions by introducing them to methods that are effective in developing the qualities of competence.

The following tasks were solved in the organization of online training:

1. To acquaint the leadership of higher educational institutions with the methods that are effective in developing their qualities of information competence.

2. Involvement of leadership of higher education institutions in working with methods that are effective in the development of information competence through training exercises.

3. Development the skills of self-analysis and evaluation by the leadership of higher educational institutions using methods that are effective in the development of information competence.

The online training was organized in the following stages:

- Phase 1. To provide brief information to the leadership of higher educational institutions about methods as well as their practical significance, that are effective in developing their qualities of information competence.

Phase 2. Involvement of leadership of higher educational institutions in working with methods that are effective in the development of information competence through training exercises:

2.1. Working with the "basket method".

2.2. Working with the method of "typology".

2.3. Working with the method of "Tree of goals" ("Predictive graphics").

2.4. Working with the method of "Morphological box" ("Morphological analysis").

2.5. Working with the method of "decision-making technology" ("Decision-making tree").

2.6. Working with the method of "clarifying questions".

Phase 3. Determining and evaluating the skills of self-analysis and evaluation of leadership of higher educational institutions using methods that are effective in the development of information competence through practical assignments.

III. Online consultation. In the field of pedagogy and psychology, the concept of "consultation" is often used in the Russian alternative in the form of "consultation". In the "Explanatory Dictionary of the Uzbek language" the Latin concept of "consultation" is defined as follows: the advice of an expert or a knowledgeable, competent person on a matter [10, 402]. Counseling is usually organized in the process of face-to-face communication between two or more individuals.

Online consultation is carried out between two or more people through ICT, using special programs. Accordingly, the concept of "online consultation" can be defined as: the consultation of a specialist on a particular issue through ICT with the help of special programs. On the basis of this type of advice, existing problems or tasks are solved quickly, as well as their solution is analyzed in a short time [3; 87].

The advantage of this type of counseling is determined by following: it saves time of process participants; independent study of the submitted material; improvement of methods used in the organization of activities; the level of mastery

also strengthens the existing knowledge, skills, abilities; encourages self-development; it strengthens responsibility and discipline [8, 10].

Online consultation for the development of information competence of leadership of higher educational institutions - practical and methodological assistance provided through ICT through special programs to positively address the issues faced by leadership in the process of innovative management of higher educational institutions.

IV. Electronic monitoring. Lexically, “monitoring” (“monitor” + ing (suffix of action name) means “observation”). Theoretically, this concept: 1) constantly monitors any process to determine its compliance with the expected result or initial assumption to go; 2) to observe, record, evaluate and determine the state of a particular event or process (e.g., the implementation of an adopted law) [10, 613-614]. If this definition is applied to the interpretation of the research problem, then it covers the following content: Monitoring the process of development of information competence of leadership of higher education institutions - monitoring the dynamic growth of innovation management decision-making process by introducing leadership to methods of developing information competence and evaluation.

T.T. Shoymardonov, while theoretically describing the concept of "electronic monitoring" in the example of professional development and professional activity of teachers, focuses on the use of ICT. The concept is defined by the author as follows: systematic diagnosis of qualitative and quantitative characteristics of the effectiveness of educational processes, including the objectives, content, forms, methods, didactic and technical means of teaching using modern ICT tools [12, 12].

Accordingly, the concept of "electronic monitoring" in the development of information competence of leadership of higher educational institutions can be clarified as follows: Electronic monitoring of the process of development of information competence of leadership of higher educational institutions - the functional capacity of ICT by introducing leadership to methods of developing

information competence monitoring and evaluating the dynamic growth of the innovation management decision-making process based on.

According to T.T. Shoymardonov, with the help of electronic monitoring the following is achieved: collection of reliable and objective information about the object of monitoring; formation of an appropriate database systematic analysis and evaluation of the obtained data; providing information to the relevant education authorities; preparation of proposals on the organization of activities in the monitored area [12, 13].

Identification and assessment of the current situation in the field of "Innovative management of educational institutions", "Implementation of educational innovations", "Assessment of the quality of education based on innovative activities of higher education institutions" and "Digitization of the higher education system" with the help of electronic monitoring opportunity arises.

During the study, attention was also paid to identifying tools to ensure effectiveness in the development of information competence of managers of higher education institutions. Initially, the concept of tools that can be used in diagnosis was clarified on the example of work done on topics close to the research problem.

In the research of M.E. Inkov it is shown that the means (equipment) used in diagnostics are: diagnostic methods; in-depth (etymological) diagnostic tools; methods used in complex level (typological) assessment [7, 11]. Researcher M.A. Innazarov believes that the following tools and equipment that help to increase the effectiveness of the diagnostic process on the example of the activities of teachers in retraining and advanced training courses are of particular importance: portfolio; tests; results of entrance and exit tests organized by directions; questionnaires; student achievement (test, essay, project, etc.); information on the quality of the dissertation and its effective defense [6, 43-44].

The following were used as effective tools in the process of developing the information competence of the leadership of higher educational institutions, and their effectiveness was confirmed by scientific and pedagogical experience: "Diagnostic map"; Model "Innovative management of educational institutions";

"Strategy for assessing the quality of education based on innovative activities of higher education institutions"; "Strategy for digitization of higher education".

Attention was paid to the substantiation of technology that is effective in solving scientific and pedagogical problems, as well as in the development of information competence of leadership of higher educational institutions. As a result of this attention, a technology called "Manager-control" was developed.

The main purpose of the technology "Manager-control" is to determine the knowledge, skills and practical experience of leadership of higher educational institutions in the organization of innovative management on the basis of clear criteria and indicators.

The application of the technology provides for the solution of the following tasks:

1. Development of "Manager-control" defining criteria and level indicators that will allow to consistently study, analyze and evaluate the innovative management of higher educational institutions.

2. Equipping the leadership of higher educational institutions with "Manager-control".

3. To create an opportunity for leadership of higher educational institutions to consistently assess the current state of management activities, innovative management of higher education institutions with the help of "Manager-control".

Theoretical analysis and practical study of the activities of higher education institutions showed that in the consistent study, analysis and evaluation of innovative management of higher education institutions, it is reasonable to take the following as criteria: application of educational innovations in educational activities; substantiation of pedagogical innovations as a result of scientific activities; innovative approach to the organization of financial activities (extra-budgetary funding); methodical developments of educational character, marketing of social and pedagogical projects of educational character are set for the year; possession of innovative, creative pedagogical staff; digitalization of management of higher education institutions.

Based on these criteria, it is reasonable to assess the innovative management of higher education institutions using the following level indicators: primary level; practical level; efficiency level.

Based on the above criteria and level indicators, "Manager-controlling" has the following visual form (Table 1):

**Table 1**

**The structure of "manager-controller"**

№	Criteria	Level indicators		
		Primary	Practical	Efficiency
1	Application of educational innovations in educational activities			
2	Substantiation of pedagogical innovations as a result of scientific activities			
3	Innovative approach to the organization of financial activities (extra-budgetary funding)			
4	Methodological development of educational nature and marketing of social and pedagogical projects of educational nature			

5	We have innovative, creative pedagogical staff			
6	Digitalization of management of higher education institutions			

The study also identified the basis for the above-mentioned indicators (Table 2):

**Table 2**

**Circumstances determining the level of "manager-controller"**

№	Criteria	Level indicators		
		Primary	Practical	Efficiency
1.	Application of educational innovations in educational activities	Number of innovations introduced by departments and chairs, pcs.		
		4 pcs	8 pcs	More than 10 pcs
2.	Substantiation of pedagogical innovations as a result of scientific activities	As a result of scientific research number of innovations based, pcs		
		4 pcs	8 pcs	More than 10 pcs
3.	Innovative approach to the organization of financial activities (extra-budgetary funding)	Amount of additional funds earned by departments and chairs, mln / soum		
		5-8	10-12	More than 15
4.	Methodological development of educational nature and	Methodological developments and projects put up for sale by departments and chairs, pcs		

	marketing of social and pedagogical projects of educational nature	4 pcs	8 pcs	More than 10 pcs
5.	Existence of innovative, creative pedagogical staff	Innovative, creative pedagogical staff of departments and divisions, percent		
		Up to 30 percent	Up to 50 percent	Above 75 percent
6.	Digitalization of management of higher education institutions	all directions in the activities of higher education institutions utilizing ICT, percent		
		Up to 30 percent	Up to 50 percent	Above 75 percent

organizational forms (electronic diagnostics; online training; online consultation; electronic monitoring), methods ("Basket method"; "Typology"; "Objective tree" ("Predictive graphics"), effective in the development of information competence of leadership of higher educational institutions; "Morphological box" ("Morphological analysis"), "Defining questions", "Decision-making technology" ("Decision-making tree"), tools ("Diagnostic map", "Innovative management of educational institution" model, "Higher education institutions" "Strategy for assessing the quality of education on the basis of innovative activities", "Strategy for digitalization of the higher education system") and "Manager-control" technology.

One of the structural foundations of scientific and pedagogical research is research methods, and it is important to choose them correctly and rationally. Therefore, research methods not only ensure the correct organizational and methodological organization of activities, but also serve to achieve the intended purpose and find a solution to the research problem.

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