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THE IMPORTANCE OF THE INFORMATION-COGNITIVE APPROACH IN THE DEVELOPMENT OF PEDAGOGICAL ABILITY IN HIGHER EDUCATION

Ernazarov Zoxid Nazarovich
Deputy Dean for Academic Affairs, Faculty of Philology, Karshi State University, Doctor of Philosophy in Pedagogical Sciences (PhD), Uzbekistan

ABOUT ARTICLE

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Abstract: This article analyzes the general (inferential) knowledge acquired in the process of socio-pedagogical analysis - the achievement of educational quality (process and result) as a way to coordinate the interests of all educational agents as a basis for managing development. These mechanisms are defined by different levels of higher education management theories, which gain innovation in the context of the development of "new stewardship". Also presented are the tasks of the diversity and variability of Higher Education, its dynamics and activity, systematization of this data set, their grouping, analysis, constant monitoring, correction of its state.

INTRODUCTION

The starting point and foundation of management is information—multidirectional information flows that determine the regulatory influence and response of higher education (structures, educational processes, and situations). As higher education fully corresponds to the characteristics of a complex organizational-technical active system, it allows operations in "operational, informational, functional-informational, and cognitive management spaces" using normative, computer, heuristic, and organizational technologies.

LITERATURE REVIEW

The origin of the information-cognitive approach within the integration of information and perception has been identified in psychology by researchers like R.L. Solso, B.M. Velichkovsky, Neisser, and others, as a development of the theory of perception. This approach considers the perception process in terms of "receiving, storing, and processing information" while recognizing its subjective nature, influenced by stimulus-response dynamics.

This approach is often limited by the subjective nature of perception, which can vary significantly when observed by another individual. Thus, the challenge lies in the variability of the subjective image of any object, process, or phenomenon.

RESEARCH METHODOLOGY

The unique features of managing the development of higher education can be characterized by the following principles:

Variability in structure and functions:

The structure (qualitative composition) and functions of higher education may vary. For example, in a social context, achieving a competitive qualification level for each student and equipping them with characteristics of an active, socially adapted member of society may hold more importance. In a personal context, the opposite may be true. This variability is influenced not only by time (for organizational-technical systems) but also by the type of management, external changes in the environment, and the state's policy toward the education system.

Mismatch of the objective's matrix with changing conditions:

This reflects the multifaceted nature of educational relationships within the agent (subject-subject) framework and the variable goals arising from the position of each agent in higher education as an active system element.

Insufficient qualitative and quantitative description of higher education laws:

A lack of complete information about internal and external conditions required to perform functions and align goals and management methods reduces the developmental potential of the higher education system.

ANALYSIS AND RESULTS

Using the achievements of the information approach in the management of complex dynamic systems, it is possible to obtain an information description of higher education (at any level) - structure and relationships. However, the analyzed possibilities of using the information approach in educational management show their narrowness in relation to the tasks set for managing the development of higher education. Here, the set of all types of information (organizational, management, educational) should not only be organized in a certain way, but also reviewed (grouped and synthesized), meeting the current needs of the practice of managing the development of higher education in order to support management decisions. It is also important to take into account the specific features of educational management - the diversity of development options for events, the high variability of situations, the cyclical nature of all educational processes and their time limitations. Achieving the quality of education (as a vector of development) determines the need for constant monitoring and analysis of the state of educational activities (at the level of the situation, educational process, structure, or higher education as a whole), which increases the flow of information and makes the issue of processing it for management purposes relevant.

One of the most promising directions of modern management thinking is the knowledge-based approach to solving problems. This view implied the need to "connect" to the information that defines the context for working with the set of data on the state of educational activity, "knowledge", or rather, the possibilities of a cognitive approach that focuses on the processes of its representation, storage, processing, interpretation and production of new knowledge.

The apparent connection between the two categories of management - “information” and “perception” (image, knowledge) - requires disclosure, since it also uses “tacit knowledge in the form of human experience” inherent in the management of social systems.

At the same time, the solution of the problems of managing the development of higher education is largely associated with the same cyclical mechanism of obtaining and processing information at the level of the development management object - data search, grouping, analysis, knowledge-based “picture” of the situation, diagnosis, search for knowledge-based ways to solve the problem, and the formulation of a management decision.

The supposed subjectivity of information perception and its transformation into knowledge about the laws of higher education activities (structures, educational processes and situations) is expected to be reduced in the following ways:

- the use of stable pedagogical laws and relationships in the process of making management decisions (dependent on learners and teachers, their interaction as individual agents of education - representatives of the community capable of reflecting the individual characteristics of the group of agents);
- formalization of the characteristics of educational activities through qualimetric methods that determine the qualitative and quantitative representation of data, their scaling and interpretation;
- involvement of all agents of higher education in management (implementation of educational activities and responsibility for their effectiveness) by coordinating their interests in the field of achieving the quality of education;
- use of the achievements of information and communication technologies and information systems in assessing the state of educational activities (at the level of higher education in general, structures, educational processes and situations), which contribute to the automation of the process, calculation of the accuracy of data, their grouping and quantitative analysis.

Thus, the subjectivity of perception has a positive effect on the management of the development of higher education, allowing to take into account the complexity and specificity of the analyzed object of development management and the behavior of system agents, which justifies the use of an information-cognitive approach to the formation of new mechanisms for supporting management decisions that provide the possibility of dynamic response. The information atomism of higher education is formed from the intersection of the information potential of the system (the total flow of information) and the information currently perceived by the user (manager); It is this intersection that ultimately forms organizational and pedagogical knowledge that serves to increase the effectiveness of managing the development of higher education.

The integration of information and cognitive approaches is aimed at increasing the adequacy, accuracy and scope of impressions through the constant assimilation of new knowledge and patterns through the processing of information about the state of higher education:

- within the framework of pedagogical interactions "student - teacher", "student group - teacher", "student - educational environment";
- between processes supporting educational activities within an educational organization, for example, educational and methodological support and training, advanced training and educational and methodological support of teachers, etc.;
- between the interactions of educational agents within one educational organization, cluster, city, region;
- between higher education institutions in the higher education system.

CONCLUSIONS AND RECOMMENDATIONS

Thus, the interaction of “information” and “cognition” can be determined from the point of view of reducing entropy due to the existing information resource of higher education:

- information, like any resource, must be “extracted” and then used;
- information can only function as a resource if it is possible to process, systematize, generalize, and accumulate;
- information as a resource is not only inexhaustible, but also has a tendency to significantly increase in cognitive, substantive, technological, and procedural aspects over time;
- information as a resource is the basis of knowledge and goes through the process of its production;
- information as a resource requires the organization of transmission flows (connections);
- information as a source gives rise to new types of processes and activities in all systems.

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