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THEORETICAL FOUNDATIONS OF COMPETENCE MANAGEMENT IN THE EDUCATIONAL PROCESS OF A HIGHER SCHOOL

FUNDAMENTOS TEÓRICOS DA GESTÃO DE COMPETÊNCIAS NO PROCESSO EDUCATIVO DE UMA ESCOLA SUPERIOR

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Abstract: This article analyzes the phenomenon of knowledge management in the knowledge society, examines its importance in the university management system and evaluates its impact on the quality of teaching. A theoretical analysis of the essence of knowledge management has been carried out, the features of the processes of transfer and dissemination of knowledge at the present time have been determined, trends in the development of education and their relationship with knowledge management have been considered. The conceptual foundations of knowledge management in higher education are substantiated and the conditions for its implementation in the university are determined. The proposed methodology, which includes an experimental study to test the hypothesis and implement the concept of knowledge management in the educational process of higher education.

Keywords: Higher education. Education system. Higher education. Education system. Communicative competence. Communications.

Resumo: Este artigo analisa o fenómeno da gestão do conhecimento na sociedade do conhecimento, examina a sua importância no sistema de gestão universitária e avalia o seu impacto na qualidade do ensino. Foi efectuada uma análise teórica da essência da gestão do conhecimento, foram determinadas as características dos processos de transferência e difusão do conhecimento na actualidade, foram consideradas as tendências de desenvolvimento do ensino e a sua relação com a gestão do conhecimento. As bases conceptuais da gestão do conhecimento no ensino superior são fundamentadas e as condições para a sua implementação na universidade são determinadas. A metodologia proposta, que inclui um estudo experimental para testar a hipótese e implementar o conceito de gestão do conhecimento no processo educativo do ensino superior.

Palavras-chave: Ensino superior. Sistema educativo. Ensino superior. Sistema educativo. Competência comunicativa. Comunicação.

1. Introduction

For the system of higher and postgraduate education, which is emphasized in the Declaration, learning with the help of information and communication technologies will become increasingly important, creating conditions for the equal acquisition and transfer of knowledge by providing free access to educational resources. These ideas are based on the concept of Open Education, in within the framework of which the search is already underway for appropriate ways that can ensure the transition from the principle of "education for life" to the principle of "education throughout life", which is the most important problem in the knowledge society (Graham, 2018). Meanwhile, the Declaration notes the need to strengthen the attention of educational institutions to the development of social and emotional abilities and skills, individualization of processes related to the acquisition and transfer of knowledge me and personification.

Against the background of the decrease in the importance of acquiring formalized knowledge, the ability to understand complex systems, find, evaluate, organize and creatively use information that meets the needs, generate knowledge based on it, the ability to learn, the ability to learn (Zhang et al, 2021). The role of the student himself in the educational process, as well as understanding the results of this process, is becoming critical, cardinally changes' the student assumes great responsibility and activity in the acquisition and transfer of knowledge in their own educational activities (Graham, 2009; Graham, 2013).

Accordingly, the role of the teacher changes, the function of the translator of information is replaced by the functions of a methodologist, consultant, adviser, mentor:

- in fact, a manager of the educational process, gradually moving into the position of a coach. The expediency of applying management approaches to the educational process is due to the acquisition of knowledge of the status of an economic resource that creates added value and ensures the competitiveness of future specialists (Smith & Hill, 2019).

In the considered context, the educational process is adequate to the process of knowledge management, gradually transforming into self-management of knowledge of a graduate student, creating the prerequisites for implementing the idea of continuity of education through self-education (Kirkwood & Price, 2013).

Thus, knowledge management becomes a decisive factor, the quality of which will determine the quality of education. The problem of acquiring and transferring knowledge is of particular importance for higher professional education, the quality of which is directly

related to the quality of the intellectual potential of the state, determining not only its economic and social development, but also economic and political independence. in policies and procedures (Dang et al., 2016). Standards and guidelines for quality assurance in European higher education, developed by the European Association for Quality Assurance in Higher Education (European Network for Quality Assurance m Higher Education - ENQA) (Bao, 2020). (Kopcha et al., 2016; Subhash & Cudney, 2018).

The global contradiction between changes in the technical, technological and socio-cultural conditions of the current stage of the development of society (the formation of a knowledge society) and minor changes in the educational process of higher education, carried out against the backdrop of various trends that do not affect its fundamental foundations, is manifested through private contradictions between:

• the emergence of new requirements for a university graduate, dictated by the knowledge economy (high intellectual potential based on personal knowledge, the ability for continuous learning and innovation, creative interaction, self-development, freedom of thought, creativity, initiative, etc.), and maintaining the orientation of higher education towards knowledge, skills, skills;

• increasing the importance of communication technologies in the global processes of acquiring and disseminating knowledge, and using them in higher education only as additional means within the framework of the traditional educational process;

• the presence of a huge information resource that can be involved in the educational process, and the predominance of the function of the translator of information in the activities of the teacher;

• increased requirements for the quality of higher professional education and ambiguity in determining its parameters and ways of providing it in a knowledge society (Kim et al., 2013).

Thus, the problem is indicated in the absence of a scientific justification for knowledge management as an innovative theory of the development of the educational process of higher education in a knowledge society (Goudeau et al., 2021).

2. Literature review

The study of the phenomenon of professional competence of the individual is devoted to the work of many scientists who are focused, first of all, on the issues of training educators

- teachers and lecturers of higher educational institutions.

The fundamental foundations of the renewal of the higher education system, the professional training of higher school teachers, the theoretical and methodological foundations of the formation of professionalism, professional culture, professional skill and, in fact, the professional competence of university teachers are revealed in the works of Andrushchenko, Barabanshchikov, Bondar and others (Barabanshchikov, 1981, Bondar, 2000, Andrushchenko, 1996). The study of the psychological and pedagogical components of the teacher's professional competence, which ensure the specialist's ability for personal and professional self-development, self-improvement, determine his acmeological culture, reflected in the works of Bodalov, Vvedenskyi, Kuzmina, etc (Bodalov, 1995, Vvedensky, 2006, Kuzmina, 1990). However, despite the urgent need for modern theory and technologies of formation of teacher's professional competence universities, the problem of managing this process in the implementation of professional training of master's students in pedagogy of a higher school remains understudied both in the theoretical and practical aspects. This is confirmed by the absence of a theoretically defined and methodologically justified system of effective management of the formation of professional competence of master's students in pedagogy of a higher school.

Research hypothesis: knowledge management as an innovative theory of the development of the educational process in a university adequately meets the requirements of the formation of a knowledge society, if the concept of knowledge management in the educational process includes a set of theoretical provisions on the formation of an innovative educational environment of a university, on the organization of the educational process as a process of non-linear interaction of its participants, about activities of the teacher as a manager of the educational process; on the design of a system of self-management of students' knowledge, knowledge management is considered as a subsystem of university management that contributes to the formation of a university by a learning organization, the quality of the educational process is determined by the teacher's ability to organize a synergistic interaction of a student with an information and educational environment to form his personal knowledge as the basis for the formation of professional and personal competence.

The purpose of the article is the scientific substantiation of the conceptual foundations of knowledge management in the educational process of higher education.

The object of the article is knowledge management in higher education.The subject of the research is the methodological and pedagogical foundations of knowledge management in

the educational process of higher education.

3. Materials and methods

Studies of this problem contributed to the development of mechanisms for transferring management activities to the mode of technologization, which ensures its improvement. The following system of methods served to solve the research problems:

a) scientific methods: informal (writing an experiment scenario), diagnostic (questionnaires, testing, polling, interviewing, mono-conference, collective discussion), graphic (decision tree, dichotomous goal division), modeling (descriptive and normative models, imitation), formally - logical (analysis, synthesis, retrospection, abstraction, forecasting);

b) empirical methods (study of school documentation, observations, conversations, precedents, correlation, interpolation and extrapolation, experiment);

c) statistical methods for processing experimental data.

4. Results

In accordance with the logic of ongoing changes, post-industrialism can be divided into two periods:

1) the information society, which is characterized by the accumulation of information, the development and rapid growth of telecommunications and software tools for searching, transmitting and processing information;

2) a knowledge society, which is characterized by the priority of the significance of personal knowledge.

Against the background of the global intellectualization of all spheres of society, information richness and accessibility have reduced the value of information as such. Competitive advantage began to have those organizations that not only have information, but on its basis are able to generate new knowledge and innovation.

Information multiplicity has transformed the socio-cultural environment of modern society, denoted by the concept of "postmodernism", which is characterized by pluralism, heterogeneity, uncertainty, and facetness. The postclassical type of rationality is characterized by the recognition of complex systems as open, self-organizing, self-developing. The choice procedure in conditions of instability becomes familiar, whether the question concerns the material or spiritual and moral aspects of human life. Innovativeness, innovative activity

becomes a characteristic feature of the time, an innovative culture becomes a necessary component in the structure of the general culture of the individual.

The analysis of different opinions on innovations and innovative activities made it possible to define innovation within the framework of this study as an action or the result of an action obtained on the basis of new knowledge or resulting in the emergence of new knowledge. New knowledge can be embodied in new products or services, or it can serve to transform people's mindsets and cultures to meet societal needs while generating added value.

The process of performing this action or obtaining a new result, respectively, is defined by the concept of "innovative activity". The innovative culture of a personality is understood as a set of competencies that ensures the implementation of innovative activities, based on the readiness of the individual to perceive and the ability to generate innovations both in a certain professional environment and in relation to various life situations. An innovative culture is invariably associated with internal self-change and a change in one's behavior and activities (Raven & Park, 2015).

The research made it possible to establish the idea that in the conditions of the uncertainty of the external environment, the knowledge gained in the process of continuous learning and the ability to innovate become the main mechanisms for relieving tension and ensuring stability and competitiveness. This conclusion applies to both the individual and the organization, which is embodied in the emergence of the term "learning organization" Hrastinski (2019).

Thus, the main priority in a society that is literally overwhelmed with information is becoming a unique personal knowledge, a person's ability to generate new knowledge, to learn and generate innovations. Not information, but knowledge "animated" by a person begins to determine the value of a person, the value of an organization, the value of a country, becoming the basis of society - a society of knowledge. Knowledge, having acquired the status of a strategic priority, the main resource, competitive advantage, social value, requires a certain strategy, methodology and management culture. A logical stage in the development of management was the formation of the concept of knowledge management. (Tirziu &).

5. Discussion

In the framework of the study, knowledge management is understood as a purposeful setting of the organization's activities, recognizing knowledge as the main strategic success

factor. The essence of knowledge management is revealed as an activity related to maintaining the stages of the knowledge life cycle within an organization, and as an organization philosophy focused on recognizing the value of people and their personal knowledge. This essence is manifested in the functions of knowledge management (a set of processes and technologies for identifying, creating, distributing, processing, storing and providing knowledge for use) and the formation of an innovative corporate culture in the organization that promotes learning and innovation. During the review, two leading approaches in knowledge management were identified - informational (technological) and personified (intuitive), actualizing work in two different planes, with two different layers of knowledge in the organization (explicit, formalized and hidden), which are in relation to complementarity.

Knowledge management is the creation and maintenance of a system that includes a set of technical means, processes and technologies for the purpose of identifying, creating, distributing, processing, storing and providing explicit knowledge for use within the organization. Activities with explicit knowledge are mostly a technical and technological problem, although the work of a person with information tools and information has many psychological, pedagogical, managerial and qualimetric aspects. In addition, the status of knowledge as an economic resource actualizes the apparatus of mathematical and economic modeling and forecasting.

The personalized approach within the framework of knowledge management aims to "extract", "alienate" implicit knowledge, especially valuable, stored in the minds of employees, formalizing them for the possibility of universal access. Creating an environment in which skill, creativity, mentoring would be valued, knowledge was understood as a value, sharing which a person does not lose, but gains, is a problem of a subtle, mental nature. Its solution entails a whole range of sociological, psychological, pedagogical, qualimetric problems.

Education, one of the most important spheres of society, reflects all the processes taking place in it, especially if these changes relate to knowledge that makes up the meaning of the existence of the education system. Knowledge in the conditions of postclassical reality acquires signs of interdisciplinarity, multidimensionality, dynamism. It becomes a phenomenon that, on the one hand, has the properties of inexhaustibility, infinity, and replicability, and on the other hand, when it is correlated with a specific person, it becomes a completely limited, personal, irreproducible, contextual category. Simultaneously with the growing role of theoretical knowledge, there is a process of convergence of science and practice, leading to a rethinking of the concept and value of knowledge. Knowledge begins to perform a previously uncharacteristic function - it becomes an economic resource, since its

possession, the ability to use it and the speed of this process increase the competitiveness of the organization. In addition, the knowledge-based economy dictates such requirements for the employee as high intellectual potential, freedom of thought, creativity, initiative, the ability to constantly learn and innovate.

The informational approach combines the trends of informatization, mass character, fundamentality, continuity of education and promotes the active use of elements of distance learning, the revision of content and technologies in the practice of higher education. Mastering information technology allows the user to participate in the full life cycle of knowledge. Within the framework of this approach, the formation of students' ability to effectively use the constantly growing array of information resources, to generate new knowledge based on information takes place.

The personalized approach (orientation to personal knowledge) combines the tendencies of humanization of education, orientation to personal development and quality of life. Its implementation is focused on the implicit component of personal knowledge, which performs the function of connectors between logical gaps in explicit knowledge, emerging and honing in activity against the background of the subject's involvement in the cognitive process, forming the integrity and uniqueness of personal knowledge, defining the educational process as a non-linear interaction of its participants.

The selected approaches adopted in knowledge management are consistent with the general directions in the development of the processes of acquiring and transferring knowledge, indicated in the Kronberg Declaration (informatization and personification). The concept of knowledge management focuses on the harmonization, complementarity of these two, often ambiguous, approaches necessary to ensure the individual experience of information and the cultivation of personal knowledge.

Knowledge management in the educational process of a university is a purposeful organization of the educational process based on the principles of general quality management to create conditions for the development of professional and personal competence of graduates, which guarantees their competitiveness in the labor market.

Based on the analysis of pedagogical sources on the research problem, the inevitability of a polyparadigm approach in the implementation of knowledge management in the educational process was revealed; modular learning, contextual learning, the concept of the educational process as a management process, as well as systemic, synergistic, personal-activity, competence-based, acmeological approaches.

Understanding the modern educational process as a process of knowledge management

requires rethinking the very foundations of the concept of "knowledge", organizing the process of acquiring knowledge, the functions of the subjects of the educational process, understanding the results and methods for achieving them.

In the educational process, it is advisable to use the concept of "information" (synonymous with "formalized knowledge") - a set of information that is easily broadcast, recorded on any media. The formation of the implicit component of knowledge signals the completed act of awareness of the received information and its transformation by students through the prism of personal values and goals against the background of personal experience, intuition, reflection, processes of interpersonal verbal communication, in which knowledge is clothed in a verbal-logical formalized form, situations of problematization, environment, imitating professional. Cultural knowledge in this context is a kind of mental formation through which values and beliefs that are significant for the professional community are transmitted.

By “knowledge” is meant personal, personal knowledge, identified as a point of contact between the information space and the personal intellectual space, initialized by the presence of cognitive motivation that arises in the emotional space of the individual.

The concept of personal knowledge is the core of the concept of knowledge management, since it is management at the level of mentality. It is personal knowledge that creates the foundation for the formation of competence - an integrated characteristic of personality qualities that has a procedural orientation, a motivational aspect, based on knowledge, manifested in activity (real or simulated). The personalized approach of knowledge management in the educational process is focused on creating conditions not for “alienation”, but, on the contrary, for the formation of an implicit component, which requires motivated activity.

Based on the classification adopted in knowledge management, a model of educational knowledge is proposed - a complex set of knowledge (indigenous, superficial, deep, innovative, meta-knowledge), non-linearly deepening depending on the level of awareness of the subject area and the nature of the activity in which this system is implemented. The non-linearity of personal knowledge is due to the formation of an implicit component, symbolizing the irreversibility of changes in the student's knowledge system. The non-linearity of the educational process is characterized by the multivariance of the ways of development of each subject participating in it, the generation of new knowledge by each of them. The concept of "new knowledge" in the educational process is interpreted primarily in a subjective sense, knowledge may not be objectively new, but for the student it was the result of his own

discovery.

Thus, the process of interaction between participants in the educational process is also non-linear, because it "changes a person's behavior in the present and future, his attitude and his personality."

The educational process unfolds against the background of the educational environment, the concept of which has changed significantly in the history of the existence of university education. The primitive educational environment, which was formed in medieval universities through lectures as the main sources of knowledge for students, has developed into an information and educational environment, due to new information technologies. In the concept of open education, the information and educational environment is already understood as a software-telecommunication and pedagogical space with common technological means of conducting the educational process, its information support and documentation in the Internet environment. In the conditions of the information educational environment, a new system of interactions "human-information" is emerging, based on the theory of information-exchange processes.

The concept of an innovative educational environment develops the concept of an information educational environment in two aspects. Firstly, (internal aspect), the idea of the complexity of using technical, technological, didactic and organizational innovations in the educational process itself, and secondly, (external aspect), the idea of integrating education, science and production, introducing a focus on interdisciplinarity in the educational process, professional context, familiarization with the life cycle of knowledge and the creation of conditions for the generation of new knowledge and innovation. The information educational environment implements a scattered form of the information process, the innovative educational environment acquires certain settings that systematically organize the educational process.

A variety of information educational environments can be summarized in a multidimensional classification matrix, the most developed in which there will be options for innovative environments. The multidimensionality of the matrix is explained by the possibility of various bases for classifying the value-targeted purpose of the educational environment, the amount of information in the environment, the level of use of the world educational resource, the level of assimilation of information by students (maximum - to the level of personal knowledge), the degree of innovativeness of the educational environment (singularity or complexity of the implementation of innovations) , the degree of practical orientation of the environment, the degree of interdisciplinarity of educational knowledge, the

degree of innovativeness of educational knowledge; the ratio of direct and indirect interaction in the information environment, the degree of orientation towards personal development (self-management, social and personal competence, innovative personality culture, self-management of knowledge), the level of involvement and responsibility of the student for the results.

The multidimensionality of the matrix of information educational environments allows us to assert the relevance of moving away from standardization in the organization of the educational process at the university in the direction of increasing its flexibility in choosing options, which is practically implemented by students when choosing an individual learning path and teachers by developing their own educational technologies. The pole elements of the matrix will be the extreme manifestations of the informational approach (orientation, first of all, to information and actions with it) and the personalized approach (orientation to personal knowledge).

Knowledge management in the educational process of higher education is a way to develop students' knowledge self-management skills as the basis for self-education within the global information space. Self-management of knowledge is a conscious organization of one's own educational activities to develop a system of personal knowledge, which is the basis for professional and personal competence. Self-management of knowledge includes the following stages: self-determination in a certain field of knowledge, planning, reflexive self-organization and self-regulation of the educational trajectory (as the construction of personal knowledge), self-control, self-analysis of the results of educational activities.

In the conceptual model of knowledge management in the educational process, a connection is established with quality management, an orientation towards an innovative educational environment, the implementation of informational and personalized approaches that contribute to the formation of self-management of knowledge, professional and personal competence, innovative personality culture and self-assessment by students of their own educational activities.

The mechanism for the creation and development of educational knowledge is determined by a holistic model of knowledge management based on systemic and synergistic approaches and realizing the idea of lifelong education through the cyclic interaction of the blocks "learning before", "learning in the process", "learning after" and substantiating the importance of taking into account existing experience, as well as reflection in the formation of personal knowledge.

Knowledge management is based on a system-synergetic paradigm that is adequate to

the needs of the individual in situations of informational dynamic chaos. The system-synergetic paradigm focuses on creating conditions for the emergence in the minds of students of dynamic structures of knowledge that can not only be supplemented, but rebuilt and developed (the cyclical nature of centralization-decentralization in the management of the educational process, openness, diversification and integration, the presence of critical situations, self-determination, motivation, socio-psychological and pedagogical resonance, etc.), determines the need for a comprehensive understanding of knowledge in the educational process and the possibility of changing the system properties of the personal sphere of education. The result of achieving this goal for students will be an increase in susceptibility to innovation, the possibility of active, purposeful and free use of information, the actualization of internal forces, abilities and motives, the initiation of their own direction of development.

6. Conclusions

Analysis of the results of the ascertaining experiment and the conceptual ideas of knowledge management made it possible to formulate the conditions for the effective implementation of the concept, which were combined into four groups of requirements:

• regarding the university management system, the presence of a quality management system or its elements in the university, the presence of an expanded system for diagnosing the quality of education, the presence of an information and innovative educational environment in the educational process, the establishment of stable and active relationships with employers, the creation of a culture of a learning organization in the university;

• regarding teachers, the presence of a high level of technological, qualitative, organizational, communicative and methodological competences, the presence of an innovative culture and mobility, high pedagogical and professional skills;

• regarding students, recognition of the value of personal knowledge, increased activity in the educational process and involvement in activities (project, practical, virtual) for generating knowledge, taking responsibility for the results of their own education;

• regarding the actual educational process, the modular construction of courses within the framework of contextual learning, active interaction in the information educational environment, organized according to the principle of learning "through discovery", and direct group interaction, changing the positions of the teacher and students, changing the

organizational foundations of the educational process.

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