Development of Students' Self-Educational Activities in The Conditions of Education Informatization

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Abstract This article is written with the aim of developing self-educational activities of students in the conditions of informatization of education. The following main objectives of the study are identified in the article: to determine the degree of elaboration of the problem and to identify the socio-historical prerequisites for the development of students' self-educational activities in the context of computerization of education; to reveal the content of the fundamental concepts of research: "self-educational activity", "innovative self-educational environment", "automated educational complexes"; determine the conditions and boundaries of pedagogical expediency of using information technology tools, as well as identify patterns and the degree of their influence on the success of the development of students' self-educational activities; theoretically substantiate a motivational-activity approach that determines the development strategy of students' self-educational activities in the context of education informatization; to develop and theoretically substantiate the pedagogical concept of the development of self-educational activities of students in the conditions of informatization of education; to develop a model, identify patterns and justify the technology for the development of self-educational activities of students in the conditions of informatization of education; to identify and justify the possibilities of the innovative self-educational environment of the university to create optimal conditions for the development of self-educational activities of students.

Keywords: self-education, informatization, university students, innovative self-educational environment, self-educational activity.

i. INTRODUCTION

The relevance of the study is due to social, economic and technological transformations taking place in the world community. The rapid processes of world integration, globalization and informatization entail significant changes in all areas of modern society, while the role of human capital as the main factor in the successful development of the state is growing.

The ongoing changes in the system of higher professional education are aimed at resolving the contradiction between the existing range of educational services provided and the society's need for mobile, competitive specialists of a

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new formation, which makes such professionally important personality traits as independence and the ability for continuous self-education [20].

ii. MATHERIALS AND METHODS

At the same time, an analysis of these studies shows that they are not oriented towards a theoretical and methodological substantiation of conceptual approaches to applying the potential of information technology tools for the development of self-educational activities of students of higher educational institutions as a personally and professionally significant quality of a future specialist in the modern information society [19].

Modern innovative trends in the modernization of Russian education, based on the introduction of information technologies, make it possible to reconsider the role of self-educational activities at the present stage of development of society and to prioritize the need for a theoretical justification of the phenomenon of self-educational activities, as well as the development of theoretical and methodological foundations for its development in the context of informatization of education.

Thus, we can fix the following contradictions:

- between socio-economic and technological transformations, reflecting the transition to the information society, and insufficient representation in the pedagogical science of the theoretical foundations for the realization of the developing capabilities of information technologies, providing a solution to new educational problems in the context of informatization of education;

- between the growing need of the modern information society for mobile, proactive, creatively thinking specialists who are ready for continuous self-education throughout their lives, and the inability of the traditional education system to satisfy this need in the context of education informatization;

-between the need to develop self-educational activities as a professionally significant quality of personality of a future specialist and the lack of theoretical and methodological substantiation of the process of development of students' self-educational activities in the context of informatization of education;

- between the presence of potential opportunities for personality-oriented learning, activity and informational approaches in the field of organizing the educational process, ensuring the creation of conditions for the development of intellectual capabilities of students, the formation of their independence and insufficient use of this potential in solving problems of developing students' self-educational activities in the context of education informatization;

- between the presence of certain experience in the implementation of approaches that ensure the development of self-educational activities, the optimal use of information technology in education and the lack of a scientifically based system for their integration in the interests of forming graduates of high schools the need for self-development and self-realization, the necessary knowledge about the forms and methods of self-education and skills self-educational activities.

The search for ways to solve these contradictions identified the research problem. In theoretical terms, this is the problem of developing and substantiating conceptual provisions that ensure the effectiveness of the process of development of self-educational activities in the context of informatization of education; in practical terms, the problem of scientific and methodological support for the process of implementing information technologies in the educational process of a university in order to ensure the necessary conditions for the successful development of an individual in the process of self-educational activity.

This understanding of the research problem, its theoretical and practical significance, the lack of scientific development in pedagogical science led to the choice of the research topic: "The pedagogical concept of the development of students' self-educational activities in the context of education informatization".

Literature Review. Issues of using innovative technologies in the educational process have been reflected in the works of the following scientists: V.P. Bespalko [5], [6], M.M. Levina [13], V.I. Zagvyazinsky [21], M. V. Clarin [12],

N.N.Azizhodzhaeva [3], M. Aripov [2], U. Begimkulov [4], N.E. Shurkova [16]. A. Abdukadirov [1], R.G. Isyanov [9], J.G. Yuldashev [10], R.Ishmuhamedov [8], M.Tojiev [18], N.R.Rustamova [14], [15], U.K.Tolipov, M.Usmonboeva [17].

Theory and discussion. The purpose of the study is to develop a methodology for the development of self-educational activities of students in the conditions of informatization of education.

Object of study: the educational process of the university in the conditions of informatization of education.

Subject of research: development of self-educational activities of students in the conditions of informatization of education.

Leading research idea. Informatization of education, based on the principles of the integration of pedagogical and information technologies, ensures the creation of the necessary conditions for the successful development of personality in the process of self-educational activity based on the construction of individual educational trajectories, taking into account the characteristics, capabilities and needs of each individual.

Research hypothesis. The development of students' self-educational activities in the conditions of informatization of education will be successful if:

1. The educational process of the university is designed on the basis of a motivational-activity approach aimed at the phased promotion of students from the object of pedagogical influence to the subject of joint educational activity, while this creates a life position in which the motive of the activity coincides with the purpose of this activity.

2. The use of information technology in the educational process of the university transforms the structure and content of education, allows for the selection of an individual learning path that contributes to the disclosure and development of the capabilities of each individual, the creation of favorable conditions for the successful development of self-educational activities.

3. A model for the development of students' self-educational activities in the context of education informatization, taking into account the individual capabilities and needs of each individual, allows us to consider the process under study as an integral and orderly system of principles, forms, methods and means of organizing the educational process, ensuring the transformation of the principle of learning into a conscious and motivated development process personality, the search for individual ways of self-education and self-development.

4. Automated training complexes provide the implementation of personality-oriented teaching methods based on adaptive algorithms for constructing the sequence of studying educational material, independently choosing the level of complexity of educational tasks, organizing self-monitoring, self-assessment and interpretation of the results.

5. The innovative self-educational environment of the university is designed as an open expert system that allows in the learning process to cover all areas of students 'activities and to ensure the integration of pedagogical and information technologies, united by a single concept, goals and objectives of the educational process organization in the interests of forming graduates' needs for self-development and self-realization, knowledge necessary for this about the forms and methods of self-education and the skills of organizing self-educational activities.

The heuristic nature of the hypothesis formulated lies in the fact that it allows you to comprehensively consider the process of development of self-educational activities from the perspective of implementing innovative programs to modernize the education of Russia, based on the implementation of information technologies.

In accordance with the goal and the hypothesis put forward, the following main objectives of the study are defined:

1. To determine the degree of elaboration of the problem and identify the socio-historical prerequisites for the development of self-educational activities of students in the conditions of informatization of education.

2. To reveal the content of the fundamental concepts of the study: "self-educational activity", "innovative self-educational environment", "automated educational complexes".

3. To determine the conditions and boundaries of the pedagogical expediency of using information technology tools, as well as to identify patterns and the degree of their influence on the success of the development of students' self-educational activities.

4. Theoretically substantiate the motivational-activity approach that determines the development strategy of self-educational activities of students in the conditions of informatization of education.

5. To develop and theoretically substantiate the pedagogical concept of the development of self-educational activities of students in the conditions of informatization of education.

6. Develop a model, identify patterns and justify the technology for the development of self-educational activities of students in the context of informatization of education.

7. To identify and justify the possibilities of the innovative self-educational environment of the university to create optimal conditions for the development of self-educational activities of students.

8. To develop and theoretically substantiate the criteria and indicators with which you can determine the success of the process of development of self-educational activities of students in the conditions of informatization of education.

The methodological basis of the study. The complexity, diversity and versatility of the phenomenon under study requires reliance on a system of approaches focused on the unity of personality, activity, society and cognition, allowing us to present various facts, patterns and dependencies of the development of students' self-educational activities in the context of informatization of education in the form of a holistic theory. The methodological guidelines of the study are:

- a systematic approach involving the systematic development of self-educational activities in the context of computerization of education;

- an activity approach, on the methodological basis of which the fundamental principles of subjective-activity, problem-activity, communication-activity, organizational-activity approaches are formulated, which imply individualization of education, provision of freedom of choice, self-expression by students of their personality and allow to determine the personality as a motivational-semantic structure, and consider learning from the perspective of a particular example of the motivational process;

- theories of motivation theory of motivation;

- information and technological approaches, allowing to consider the informatization of education as a pedagogical phenomenon, to study the features of the organization of the cognition process in the context of the use of electronic educational resources.

The theoretical basis of the study is:

The theoretical foundations of higher professional education;

The modern theory of self-education;

- the theory of self-organization and self-development;

- conceptual provisions of the theory of development of self-education skills;

- the theory of the development of the personality as a subject of activity, self-development of the personality;

- the concept of personality-oriented pedagogy;

- the theoretical provisions of the concept of motivation for educational activities;

- theoretical provisions of the concept of the relationship of professional motivation and the process of becoming an individual of university graduates;

- the theory of individual readiness for professional activities;

- theory and practice of continuing education;
- the theory of the introduction of information technology in the educational process;
- theory and methodology of informatization of educational activities;
- the theory of design and implementation of electronic learning tools.

iii. EXPERIMENTAL RESULTS

To solve the problems and achieve the goals set during the study, a set of interconnected and complementary research methods was applied, which include: theoretical (a meaningful analysis of modern philosophical, psychological, pedagogical literature, teaching aids, methodological recommendations, the legislative base of Russia and advanced foreign countries, which reflects the main problems of the study, as well as generalization, systematization, classification and comparison); empirical (testing, observation, questioning, conversation, interviewing); statistical (collection, statistical summary and processing, generalization and interpretation of information); prognostic (modeling, scenario building); experimental (experimental work, conducting experimental classes, expert assessments).

The empirical basis of the study. Pilot work was carried out on the basis of Gulistan State University. In total, 402 students participated in the experimental work. The research base allowed to cover students enrolled in undergraduate, specialty and graduate programs.

Based on the goals, objectives and theoretical and methodological foundations, the logic of scientific research is determined. This period included four stages of research and experimental work.

The first stage is ascertaining. The stage was devoted to a theoretical study of the problem of the development of self-educational activities of students in the conditions of informatization of education, creative cognitive activity, the study of scientific, philosophical, psychological and pedagogical literature, the generalization of foreign and domestic experience of higher education on a chosen problem. In the same period, the methodological base of the study was determined, the relevance of the chosen direction was substantiated, and the theoretical and socio-historical prerequisites for students' self-educational activities were identified. Considerable time at this stage was devoted to analyzing the experience of implementing information technologies in various universities, identifying the theoretical aspects of the development of self-educational activities in modern higher education.

The second stage is modeling. He was devoted to the development of the main provisions of the concept on the basis of the motivational-activity approach, the refinement of the conceptual apparatus. In the same period, the strategy, models and methods of the experiment were developed, the boundaries and experimental base of the study, the selection of experimental and control groups were determined. The development of the mathematical apparatus of automated training complexes has been completed, and "information filling" of the algorithms has been completed. Methodological recommendations and materials were introduced into the educational process that ensure the effective implementation of the developed conceptual provisions and automated training complexes. Based on the results of the stage, conditions have been formed that ensure the efficient conduct of the forming stage.

The third stage - the formative one included the stage of implementing innovative methods for introducing developed models into the educational process of universities, implementing theoretical and practical provisions of the concept, approaches and ideas; the reliability of the results and conclusions obtained during the control sections was checked. Authors' scientific and methodological recommendations were developed and put into practice, methodological seminars were held with the teaching staff of universities. Correction of the theoretical provisions of the concept. Much attention was paid to testing the developed models using automated training systems and the methodology for independently determining the difficulty levels of tasks. An explanatory part of the dissertation research was drawn up.

The fourth stage is the control. The stage is devoted to the description of the obtained research results, while

8116

theoretical and practical conclusions are formulated.

iv.   CONCLUSION

The study presents the results of a theoretical study on the problem of the development of students' self-educational activities in the context of education informatization. The main and most important results of the work we carry include the following provisions.

In modern conditions of global technological transformations of the world community, the need for society objectively arises for highly qualified, mobile, competitive specialists of a new formation, aimed at continuous self-education and self-development throughout life.

The analysis of the main directions of modernization of the education system allowed us to determine not the theoretical awareness of students, but their experience in solving problems arising in learning and achieving their goals, as a priority in training specialists, which, in turn, requires individual education to implement and take into account individual features of each student, purposeful formation of the need for self-education.

An analysis of the current state of pedagogical theory on the problem of the development of students' self-educational activities in the context of education informatization indicates the objective need to review and clarify certain priorities in the education system related to the implementation of personality-oriented methods, since self-educational activity should be considered from the perspective of its development focus personality.

The main priority in the organization of the educational process is the creation of the necessary conditions conducive to the formation by each student in the course of his studies at the university of his own ways of mastering the acquired knowledge, skills and competencies, which in the future are able to provide an individual style of self-education and self-development of the personality throughout of life.

In the course of the study, socio-historical prerequisites were determined that predetermined the main strategic directions of the organization of the educational process of the university in the interests of solving the tasks set in the study. These include philosophical and methodological sociocultural, psychological, pedagogical and informational.

As a result of the search for optimal solutions to the main research problem, it was found that the use of classical pedagogical technologies in combination with modern information technologies, united by a single concept, can significantly increase the efficiency of the tasks.

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