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Research Article

EVOLUTION OF GNOSEOLOGICAL CONCEPTS OF HIGHER EDUCATION AND ITS DIGITAL TRANSFORMATION

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ABSTRACT

This article presents the processes of changing the epistemological concept of higher education in the course of their historical, sociocultural development from Platonic ideas to a modern emphasis on critical thinking and technology. Universities, as sources of higher education, as well as their conceptual foundations, have gone through a number of stages of development, from schools of theology and "liberal arts" in the Middle Ages, centers of humanization and rationalization of knowledge in the 18- 19 centuries, centers of scientific research and training of professional personnel in the 19 -20 centuries, to institutions of mass higher education aimed at saturating the labor market. Based on this, the stages of the evolution of universities are considered based on their leading activities in the context of modern changes, the fundamental differences between their target and content settings, as well as development prospects in the context of the digitalization of knowledge.

KEYWORDS

Higher education concept, university model, third generation university, digitalization, digital technologies, artificial intelligence.

INTRODUCTION

The purpose of this work is to analyze the evolution of ideas about the content and methodology of higher education, as well as to identify the main trends in the development of

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modern higher education, its functions, values and strategic goals under the influence of the processes of digitalization and pragmatization of knowledge.

Methods. Theoretical socio-philosophical analysis of modern research, based on systemic and socio-cultural approaches, in order to identify the most general patterns of development of higher education in modern conditions.

RESULTS AND DISCUSSION

Epistemological concepts of higher education have changed depending on the historical, political, social, and cultural development of humanity. Universities, as sources of higher education, as well as their conceptual foundations, went through a number of stages of development, from schools of theology and "liberal arts" in the Middle Ages, centers of humanization and rationalization of knowledge in the 18th and 19th centuries, centers of scientific research and training of professional personnel in the 19th -20 centuries, to institutions of mass higher education aimed at saturating the labor market .

J. Wissema in his work "University of the Third Generation" , depending on the conceptual model, content and target orientation of education, gave the following historical classification of institutions of higher education - the university of the Middle Ages (university of the first generation), engaged in creative reproduction and a limited general cultural tendency of generalized knowledge from various fields of science from the previous generation to the next, the " Humbolt University" (second generation), where reproduction was replaced by empirical knowledge of reality and the development of new areas of knowledge, the "entrepreneurial university" (university 3.0) and the fourth generation university, due to the digitalization of knowledge.

However, it must be recognized that strictly classifying universities into individual models, based on the history and process of their development, as well as the activities carried out, is problematic . The fact is that the definition, distribution and differentiation of the fundamental aspects of the conceptual modeling of universities are very heterogeneous in the scientific community and in studies on the development of education vary from identical to opposite . The leading feature of the classification of the evolutionary transformation of higher education is the methods of providing educational services and their main goal, as well as the level of technologization of teaching methods and higher education itself .

In this situation, it makes sense to consider the most general relevant elements characteristic of a particular university at a certain stage of its development, based on the methods of socio-philosophical analysis.

The medieval university, which grew out of the fragments of ancient education, was engaged in a creative understanding of the ideas of Greek philosophy and knowledge of the inner harmony

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of the individual. Over time, the ideas of religious teaching and Christian philosophy, aimed at understanding the true essence of faith, and its impact on the education, upbringing and spirituality of the individual, began to dominate . The organic relationship with the education of the past period determined the content and structural proximity of medieval education in the ancient understanding of philosophy and the entire spectrum of sciences that are its integral components (the so-called "seven liberal arts"); they were divided into two groups: 1 - oratory and applied sciences about familiar existence, 2 - geometry, arithmetic and general scientific disciplines, including art in its broad sense . By the 12th century, these disciplines took shape as the initial stage of university (in the more or less modern understanding of this term) education, and over time, not only religious literature, but also preserved fragments or translations of ancient philosophical and artistic works became sources of education, as it was assumed that this will allow the student to master a certain amount of knowledge necessary for a classically educated person .

Universities of this type include the Bologna, Paris, and Oxford universities that first emerged in large cities, as well as the Padua , Naples , Cambridge, and Siena universities that arose a little later.

It should also be noted the utilitarian reasons for the emergence of universities, because with the growth of urbanization, the need for people of intellectual labor increased, providing for the various needs of city residents due to the complication of their economic and production relations. At the same time, the growth of the educated stratum of urban society contributed to the concentration of intellectuals and the complication of their educational and industrial interaction, which prompted the higher school of that time to expand and deepen educational activities. Hence the priority function of the medieval university was the preservation, generalization and transmission of education.

Over time, accumulating existing knowledge, universities begin to become more complex due to the emergence of laboratories and their own scientific theories. Thus, priority moves from simple retransmission of knowledge to scientific research, empirical knowledge, not just the study of reality, but its reconstruction, modeling and design. These processes are also associated with the development of economic relations, the complication of production, for which engineering knowledge becomes necessary, rationalization of resource development and their subsequent processing. The " Humboldt University" , a university of the Enlightenment, emerges.

Now the fundamental task of higher education becomes the transfer of knowledge that is obtained and verified by heuristic, empirical methods; there is a need not only to know the achievements of classical science, but to be able to substantiate them on the basis of hypothetico-deductive thinking . The university begins to have a research character.

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In turn, the " Humboldt University," as J. Wissema wrote in his works , over time is forced to adapt to the growth of interdisciplinary research, which significantly increases costs, the sudden increase in the number of students and their educational needs , globalization and, as a consequence, inclusion in the system market relations requiring optimization of financial and economic activities, entrepreneurship, cooperation with other participants in the educational services market .

These factors undoubtedly affect the transformation of the university concept.

The development of production activities, increasing the variety of products and services provided, the expansion and growth of the economic importance of private property determine the need for qualified entrepreneurs, managers, and office personnel with a wide range of financial, economic, managerial and psychological knowledge. At the same time, the leading activity of higher education is the activation of creative and innovative activities, humanitarian and sociocultural design. The industrialization of knowledge has led to the emergence of the postmodern university, university 3.0 .

Universities of this type are subject to transformation both on the basis of exogenous reasons, such as the influence of market relations and the transition from education to the provision of educational services, digitalization and globalization (B. Clark), and on the basis of endogenous factors - the need for financial independence in organizing educational and research activities , entrepreneurial activity using the innovative potential of faculty and students (Y. Wissema).

The inclusion of universities in market relations leads to competition for funding and investment in scientific, research, economic activities and equipment with modern laboratory and technical equipment, financial interest and well-being of teachers, which ultimately leads to the displacement of uncompetitive institutions from the market .

Some researchers, speaking about third generation universities, use the term "entrepreneurial" , for example B. Clark; At the same time, when talking about entrepreneurial activity, the idea of creating innovations in the structure and processes of education, thanks to which universities adapt to a changing market, comes to the fore. And indeed, the desire to expand sources of funding - budgetary, competitive, subsidized, grant and sponsorship - transforms the educational and infrastructure strategy of universities, and, ultimately, adapts state policy in the field of supporting higher education to their needs .

At the same time, it is important to understand that all of the above changes most often begin with the structural divisions of the university, which are usually more mobile in initiatives and have the ability to establish innovative educational programs that meet the needs of business and the public, and only then, based on the specific achievements of individual

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departments or faculties, they receive access to sources of extra-budgetary funding, a transformation of the university itself inevitably occurs.

At this stage, many foreign universities are characterized by precisely this model, when institutions of higher education, in addition to scientific and educational activities, are also engaged in entrepreneurial activities, creating new educational products, startups, creating and expanding the educational market area around themselves, so that teachers and students can not only receive knowledge or conduct research in a specific area of knowledge, but also developed entrepreneurial skills and turned ideas into profitable businesses. That is, the strategic model of such a university is to recognize the creative potential of a student or teacher so that in the future he can connect his life with the area in which he will be the strongest and most competitive . In this situation, the priority becomes the commercialization of mental potential and its implementation, in the commercial sense of the word, based on the needs of the local, regional or state market, turning the human capital of higher education into a fundamental resource for its development.

It should be noted that globalization processes, digitalization and pragmatization of knowledge bring their own adjustments to the concepts of third generation universities . Initially, the rethinking of the tasks of higher education was caused by the differentiation of target orientation and tools of pedagogical science . This has led to changes in the functions of participants in the educational process; the student turns from a passive recipient of knowledge into an active co-researcher with the competencies to independently search, analyze and assimilate knowledge; this, in turn, changes the structure and methodology of teaching. A university that aspires to modernity should not be limited to the actual functions of teaching, mechanical transfer of knowledge, skills and abilities, but also to develop business thinking, digital and entrepreneurial competencies in students. Without interrupting the development of academic literacy in the field of fundamental sciences, higher education, at the same time, must respond to the demands of the labor market in innovative personnel, generating advanced ideas and technologies, becoming a progressive cluster in the economy of a region or country.

Conceptually, a modern university can be represented as an "ecosystem of innovation, which, together with educational and research functions, implements the function of technology transfer and delivery to end users .

Particular attention when transforming the concept of universities under the influence of digitalization deserves the fact that intangible assets of the university are beginning to acquire greater value, and a gradual shift towards virtualization of educational, research and entrepreneurial processes.

The processes described above give reason to predict the formation of a new model of higher education, which will become sources of cognitive technologies with the ability to capitalize their

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own knowledge . Nowadays, the capabilities of cybernetic programs and systems in teaching have already become obvious, the introduction of artificial intelligence in production, education, and the service sector, all this leads to the hybridization of cognitive-creative processes, the development of cooperation and co-creation of universities at different levels of trust and participation . Digitalization of higher education activities can be considered the next stage in the evolutionary development of universities .

The process is natural . in which globalization processes initiate the development of entrepreneurial activities of universities, but at the same time, the university, transforming into an element of the digital economy, itself acts as the engine of globalization, realizing the market needs for innovative ideas, technologies and services more successfully than enterprises in the real sector . The multidirectional, meta-subject nature of the research and innovation activities of universities makes it possible to accumulate intellectual potential and successfully commercialize it . Thus, Russian researcher E.V. Neborsky defines this phenomenon as a " biodigital university" and considers it as "a promising model of universities that combine physical and virtual space, developing on digital platforms ."

The new formation of the university is based on the constant search for solutions to current economic issues aimed at expanding, deepening and massifying the use of the capabilities of cybernetic technologies, exploring new markets for investment and financing, striving for technical leadership . Another feature of a digital university is its ability not only to compete in the labor market, but to act as an employer itself. In this status, higher education acquires special importance in the public sector of the economy and the development of production, as an additional tool for industrial development .

Thus, a modern entrepreneurial university is a complex conglomerate of functions that are integrated or transformed depending on the changing demand in the labor market, knowledge or innovative production on a local, regional scale, while experiencing significant influence from global trends in the globalization of the educational space .

An undoubted factor in the evolution of higher education concepts is its intensive digitalization, which contributes to the emergence of a cross-border scientific, educational, research space based on modern information and communication technologies, distance learning programs, and intensification of the process of cognition itself .

Particularly active mass computerization and digitization of all kinds of processes in various fields has begun recently under the pressure of not only intra-system factors, but also the external environment - the pandemic, blockchain , the growth in the number of information knowledge and its databases.

Digital transformation of education is a change in planned educational results, content of education, methodology, structure and organizational forms of the educational process, as well as assessment

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of achieved results in a rapidly developing digital environment to fundamentally improve the cognitive results of each student. For the first time, digital technologies make it possible to ensure the individualization of the educational trajectory for each student, the methods and pace of mastering educational material, and make it possible to optimize cognitive and all other related organizational processes to a much greater extent.

When talking about digitalization, we mean the following interacting processes:

a) development of digital space and infrastructure; b) introduction of digital tools into sources, tools, services, and assessment of the educational process; c) development of models of cybernetic training and organization of the educational process with elements of artificial intelligence.

The digital space of higher education is an electronic educational environment in a combination of information and communication technologies

and tools that optimize the organization and management of the educational process. The advanced achievements of foreign universities clearly demonstrate how effective the processes of informatization of education can be: cataloging all resources (formation of databases) of universities, creating electronic document management, creating a "knowledge map" of departments, monitoring the progress of students and the effectiveness of department teachers, building individual learning paths for students and their employment , automation of the knowledge management process and its transfer.

Another factor that determines the importance and necessity of creating a holistic educational environment is confirmed by the needs and interests of the students themselves, because the majority of the modern generation is an active user of certain digital technologies, for some this is the only opportunity for socialization.

The accumulation and improvement of digital learning tools, cognitive services, and cybernetic modeling of the educational process is based on global trends, transforming higher education into an open, dynamic, interactive system, providing ample opportunities for creativity, non-standard formats and approaches to teaching - even lessons in virtual reality.

Thus, the future of higher education lies with innovative universities that are actively involved in the commercialization of knowledge based on information technology, because artificial intelligence, the digital environment and online learning are the future that will determine the vector of development of world education for many years.

REFERENCES

1. Barabanova M.I. University 2.0: modern technologies in higher education // Information technologies in economics, management and education: collection of

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scientific papers / Federal Agency for Education. St. Petersburg, 2010. P. 50.

2. Bezpalova A. G. Information and communication technologies as a vector for the development of universities in the context of digitalization of the educational process // In the collection: Market infrastructure: problems and prospects. Scientific notes. Rostov -on-Don, 2020. pp. 35-39.
3. Vissema J. G. Third generation university. Moscow: Publishing house "Olympus-Business", 2016. 432 p. URL: https://biznes-knigi.com/avtor-yohan- vissema/6760-universitet-tretego-pokoleniya-yohan-vissema/read/page-4.html
4. Glukhov V.V., Vasetskaya N.O. The role of universities in the development of innovation clusters // In the collection: Digital economy and Industry 4.0: trends 2025. Collection of proceedings of a scientific and practical conference with international participation. Edited by A.V. Babkina. 2019. P. 508-
5. Golyshkova I. N. Analysis of the key components of the "digital university" model // E-Management. 2020.№3. URL: https://cyberleninka.ru/article/n/analiz-klyuchevyh-sostavlyayuschih-modeli-tsifrovoy-universitet (access date: 06.24.2021).
6. Grudzinsky A. O. University as an entrepreneurial organization // Sociological studies. 2013. No. 4. P. 113.
7. Ermolenko V.V., Lanskaya D.V., Ostapenko E.V. Mechanisms for transforming the competitive advantages of the university's innovation ecosystem into the competitiveness of small innovative enterprises // Scientific Bulletin of the Southern Institute of Management. 2018. No. 2 (22). P.5-12.
8. Zhuk O. Entrepreneurial transformation of universities in the conditions of the fourth industrial revolution // Journal of the Belarusian State University. Journalism. Pedagogy. 2019. No. 1. P. 108-116.
9. Clark B. R. Creation of entrepreneurial universities: organizational directions of transformation / trans. from English A. Smirnova. M.: Publishing house. House of State un-ta. Higher School of Economics, 2011. 240 p.
10. Kuznetsov E. B., Engovatova A. A. "Universities 4.0": growth points of the knowledge economy in Russia // Innovations. 2016. No. 5. P. 3-9.
11. Kuzminov Ya. On the Development of Higher Education in the Conditions of Digitalization // Rector of the University. 2019. No. 9. P. 22.
12. Ladyzhets N. S. Modern trends in the development of Western and domestic universities // Bulletin of the Udmurt University. Series Philosophy. Psychology. Pedagogy. 2015. T. 25. No. 4. P. 21-24.
13. Loseva O. V., Leontyeva V. B. Formation of a system of indicators that influence the cost of performing research at a university // Models, systems, networks in economics, technology, nature and society. 2018. No. 2 (26). pp. 48-58.
14. Mandel B.V. Innovative technologies of pedagogical activity: textbook. - Mode

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OCLC – 1368736135

15. Moiseev P. S., Yakunina I. N. Digitalization of university activities as a strategic direction for the development of a modern university // In the collection: Digital technologies in the economic sphere: opportunities and prospects. collection of scientific articles. Tambov, 2017. pp. 149-155.
16. Neborsky E. V. Transformation of development strategies of universities abroad in the context of global risks: dis . ... dr. ped. Sciences: 13.00.01. Moscow, 2018. 396 p. URL : http :// dlib . rsl . ru / rsl 01009000000/ rsl 01009756000/ rsl 01009756263/ rsl 01009756263. pdf
17. Pankova N. M. University of innovative type: complementarity of liberalism and pragmatism in education: dis . ...cand. Philosopher Sciences: 09.00.11. Tomsk, 2016. 150 pp .
18. Pogosyan N.V. University mission 4.0 and its innovative features // In the collection: Modern education for the digital economy: new challenges and development prospects. Collection of proceedings of the International Scientific Conference. 2019. pp. 475-484.
19. Tagunova I. A. Features of trends in the development of education in the context of globalization // Bulletin of the University of the Russian Academy of Education. 2007. No. 4. P. 14-20.
20. Timokhina E. V. Management of research activities and innovative development of the university: dis . ...cand. econ. Sciences: 08.00.05. Kursk, 2019. 196 pp . URL : http :// dlib . rsl . ru / rsl 01000000/ rsl 01009984000/ rsl 01009984763/ rsl 01009984763. pdf