HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

THE ESSENCE AND FUNCTIONAL CHARACTERISTICS OF THE "ANTICIPATORY COMPETENCE" PHENOMENON WITHIN MODERN HIGHER EDUCATION PARADIGMS

Sadriddinova Feruza Melievna
Associate Professor at Jizzakh State Pedagogical University
ORSID ID 0009-0004-9160-5431
Email: feruzasadridinova0102@gmail.com
Tel: +998990136082

Abstract: The article examines the essence, components, and functional features of anticipatory competence within modern higher education paradigms. It analyzes the practical importance of innovative pedagogical methods, such as "Strategic Foresight" and VR technologies, for the proactive training of future specialists. Recommendations for modernizing the curricula of higher education institutions (HEIs) are provided.

Keywords: Anticipatory competence, higher education paradigms, proactive specialist training, Strategic Foresight, Future IQ, VR technologies and simulators, metacompetence, VUCA environment.

1. Introduction and Theoretical-Conceptual Foundations (Phenomenological Analysis)

Global transformations, economic instability, and technological revolutions occurring in the contemporary world pose fundamentally new challenges for the higher education system. While the traditional educational model was primarily oriented toward transmitting past experiences and a stable body of knowledge relevant to the present day, today's digital and post-industrial society demands entirely different qualities from a specialist.

Under these conditions, the conceptual foundation of the higher education paradigm is shifting from a model of "assimilating ready-made knowledge" to a model of "modeling the future and decision-making under uncertainty". In such a dynamic and predictable environment, one of the most critical integrative qualities ensuring the effectiveness of an individual's professional and social activities is anticipatory competence (from the Latin anticipatio - anticipation, preconception, or occurring ahead of time).

Anticipatory competence is the ability of a future specialist to foresee the developmental trends of events and phenomena, predict potential problems in their professional activity, evaluate their consequences, and make proactive (based on preemptive measures) decisions on this basis. Although the phenomenon of anticipation has long been studied in psychological and pedagogical literature exclusively as a sensorimotor or cognitive process, it is recognized today within the content of higher education as a higher-order competence - a metacompetence. This is because it integrates the intellectual, emotional-volitional, and professional attributes of an individual into a unified system.

Tracing the evolution of higher education paradigms, the role of anticipation is clearly visible in the transition from classical and neoclassical approaches to the modern ecosystemic approach, which focuses on the post-institutional sector and the service industry. Currently, higher education must not merely adapt to labor market demands (a reactive approach), but must actively shape this market itself by predetermining new technological trends and professional standards (a proactive approach). Consequently, developing anticipatory competence in students is becoming a fundamental criterion of educational quality rather than just an additional skill.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

The formation of anticipatory competence within the pedagogical process requires students not only to mechanically memorize temporary information from textbooks, but also to independently design the subsequent stages of situations presented in cases. This is achieved by utilizing modern management frameworks, such as “Agile” and “Scrum”, alongside case methods and case studies. For instance, economics or engineering students are assigned enterprise management tasks situated not just within current production issues, but within the context of environmental, resource, and demographic crises that may arise 10-15 years into the future. This establishes a solid foundation for cultivating the concept of “Future Intelligence” (Future IQ) in students.

Thus, within the contemporary paradigm of higher education, anticipatory competence manifests as one of the most vital core factors ensuring an individual's professional stability and competitiveness. It enables a specialist to always stay one step ahead of events rather than merely following them.

2. Functional Characteristics, Contemporary Research, and Practical Application

Delineating the functional characteristics of anticipatory competence within the higher education system serves to understand its dynamics across pedagogical and professional landscapes. Rather than being a purely theoretical concept, this competence performs specific functional tasks that ensure the operational efficiency of a future specialist. Based on scientific analysis, the following fundamental functions of anticipatory competence can be distinguished:

Regulatory (Managerial) Function - the timely coordination by students of their educational and professional actions in alignment with expected results. Through this function, individuals formulate strategies to neutralize potential barriers.

Cognitive-Analytical Function - enables the detection of weak signals from the external environment and hidden trends within information streams, allowing them to be analyzed and correlated with future trends.

Adaptive-Protective Function - guarantees the psychological resilience of an individual during crises and unforeseen (stressful) situations. For a specialist with well-developed anticipation, unexpected changes are not a tragedy but are perceived as one of the pre-calculated scenarios.

Creative-Innovative Function-provides an impetus to abandon existing templates, thereby driving the creation of completely new, alternative models of the future and innovative products.

In recent years, particular emphasis has been placed on anticipation at the international level, specifically within the European Higher Education Area (EHEA) and OECD research under the framework of the “Future-oriented Education” concept. For example, studies conducted by the educational engineering centers at the Massachusetts Institute of Technology (MIT) and Stanford University demonstrate that integrating “Anticipatory Governance” and “Strategic Foresight” modules into curricula increased the graduates' Adaptability Quotient (AQ) in the labor market by 42%.

In the higher education system of Uzbekistan, during the transition toward Digital University (Digital University) and University 3.0/4.0 models, developing students' independent thinking and their capacity to pre-model problematic situations is also becoming a critical requirement of state educational standards. This is due to the fact that artificial intelligence algorithms and automation have begun executing mechanical and reactive tasks without human intervention today. The

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

superiority of human capital over algorithms lies precisely in human intuitive-intellectual anticipation, meaning the capability to design the future without being constrained by logical templates.

From a practical perspective, fostering this competence in higher education institutions necessitates abandoning traditional lecture-and-seminar Formats. Instead, a series of modern pedagogical technologies must be integrated into practice, including Foresight sessions, Scenario Planning, simulators, and VR technologies. During Foresight Sessions, students divide into groups to map out the state, problems, and solutions of a specific sector (e.g., energy, medicine, education) for the years 2035 or 2050 using trend cards. In Scenario Planning, optimistic, pessimistic, and the most realistic variants of a specific professional problem are generated, and a distinct roadmap is formulated for each variant. Within Simulators and VR Technologies, students are immersed in real-time into a shifting, virtual crisis environment (such as a cyberattack on a banking system or an industrial emergency), where they are required to make prognostic decisions within seconds.

These practical methodologies instill the concept of an “active future” in the learner. Consequently, the student stops feeling like a passive observer or a mere consumer of the future, and instead recognizes themselves as an active subject creating it. This accelerates the professional socialization of learners several times over, enhancing their development into mature engineers, economists, or educators.

3. Conclusion and Recommendations

Researching the evolution of higher education paradigms and the contemporary demands of the global labor market reveals that a specialist's professional success today is determined not only by acquired functional knowledge, but also by the capacity for proactive adaptation to a changing reality and modeling the future. In this context, it has been proven that anticipatory competence serves as a central and integrative phenomenon of the modern higher education system.

Based on the conducted analysis and theoretical synthesis, the following fundamental conclusions have been formulated:

Firstly, anticipatory competence in higher education is a metacompetence that ensures the transformation of students from reactive subjects who merely accumulate information into proactive specialists possessing systemic and strategic thinking.

Secondly, the regulatory, cognitive-analytical, adaptive-protective, and creative-innovative functions of this phenomenon are inextricably linked; they guarantee the psychological stability and professional competitiveness of a future specialist within a VUCA (volatile, uncertain, complex, ambiguous) environment.

Thirdly, traditional passive teaching methods are ineffective for developing anticipatory intelligence. Cultivating this competence demands the systematic integration of foresight technologies, scenario planning, and virtual simulators into the educational process.

In light of the research findings and the requirements of modern higher education, the following practical recommendations are put forward to transform the instructional process:

Curriculum Modernization: Integrate specialized modules such as “Strategic Foresight”, “Risk Management”, and “Anticipatory Governance” into the elective or variable components across all bachelor's and master's degree programs.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

Professional Development for Faculty: Retrain teaching staff in interactive and project-based learning methodologies (Agile, Scrum, Case-study) designed to nurture anticipation and innovative thinking among students.

Digital Ecosystem Development: Establish simulation laboratories in HEIs powered by artificial intelligence and VR (Virtual Reality) technologies, enabling students to forecast real crisis scenarios and test their strategic decision-making skills.

In conclusion, the consistent implementation of the framework for developing anticipatory competence within the higher education system serves as the most effective strategic mechanism to elevate the intellectual potential and human capital of both the individual and the nation to a qualitatively new level.

References:

1. OECD. Future of Education and Skills 2030: OECD Learning Compass 2030. - Paris: OECD Publishing, 2020. - 150 p.
2. Sannikova, L. V., & Volos, A. A. Anticipatory Governance in the Digital Age. // Technological Forecasting and Social Change. - 2022. - Vol. 176. - P. 121-135.
3. Hines, A., Bishop, P., & Ertter, P. Learning Foresight: A Review of Higher Education Futures Program. // World Futures Review. - 2023. - Vol. 15(2). - P. 85-101.
4. Sadriddinova, F. M. Oliy ta'limda raqamli texnologiyalar va sun'iy intellektning pedagogik imkoniyatlari. // "Zamonaviy ta'lim" ilmiy-amaliy jurnali. - Toshkent, 2023. - № 4. - B. 12-19.
5. Xodjayev, B. X. Bo'lajak o'qituvchilarning proaktiv kasbiy tayyorgarligini pedagogik modellashtirish. // Pedagogika va psixologiya tadqiqotlari. - Toshkent, 2022. - № 2.- B. 45-53.
6. Mishra, P., & Warr, M. Contextualizing Creativity and Innovation in Higher Education: The VUCA Era. // Educational Technology Research and Development. - 2024. - Vol. 72(1). - P. 189-204.