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A Lifelong Learning Concept or an Ecosystem Approach to Departmental Education

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Abstract

Introduction: the article analyzes transformations in the education system triggered by technological changes, digitalization, and the use of artificial intelligence resources in the training of specialists for the Federal Penitentiary Service of Russia. *Purpose:* to study features and identify trends in the transformation of the departmental education system in the context of digitalization. *Methods:* theoretical methods of formal and dialectical logic, historical, comparative-analytical, and empirical methods of description and interpretation. *Results:* the analysis of regulatory documents, available research on the state of development of the Russian education system allows us to substantiate prospects for the development of the higher education system based on the ecosystem approach or the conceptual provisions of lifelong learning. *Conclusions:* the introduction of digital technologies should take into account the interests of the department and meet the needs of participants in the educational process. The departmental educational system of the Federal Penitentiary Service of Russia, along with its inherent conservatism, requires comprehensive transformation rather than piecemeal changes to individual components. Given that the education system is a constantly developing and evolving institutional framework that should provide conditions for personal development at all levels, the authors propose the introduction of a lifelong education system and the transition to flexible systems in which an individual integrates his/her personal and professional trajectory.

Key words: departmental educational organization; cadet; digital transformation; lifelong learning; ecosystem approach.

5.8.1. General pedagogy, history of pedagogy and education.

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Introduction

The fast-paced dynamics of today's world demand that individuals continuously adapt to evolving changes across key areas of life – politics, economics, and technology. The education system is no exception and needs to be reformed so that, taking into account the trends and demands of society for the training of competent specialists, it can respond to modern challenges while simultaneously ensuring the realization of the potential of each participant in the educational process. A key feature of the education system is its flexibility in training specialists who develop new competencies that are in demand across various sectors of modern society, science, and industry.

In accordance with the decree of the President of the Russian Federation of June 26, 2023, No. 474 (as amended on January 22, 2026), "On certain issues related to improving the higher education system," and the order of the Government of the Russian Federation No. 3759-r of December 21, 2021, "Strategic direction in the field of digital transformation of science and higher education," a higher education reform is being implemented to gradually move away from the Bologna system of education.

The main goal is to define models and paths for the development of the national education system that meet the needs of the development of Russian society and the country's national priorities. The pilot project will run until 2030.

The purpose of this study is to examine features and identify trends in the transformation of the departmental education system in the context of digitalization. We will attempt to analyze factors and conditions, as well as the reasons that dictate the need for changes in the domestic education system. First and foremost, it is necessary to substantiate the feasibility of the transformation and determine its significance for departmental education, in particular for the training of specialists in higher education institutions of the Federal Penitentiary Service of Russia.

Coverage of the problem under study in the scientific literature

Society is characterized by a constant increase in the volume of information, and problems with its perception are becoming more acute. A person is constantly looking for ways to survive in competition with technological progress and the capabilities of digital technologies, which are capable of quickly processing, analyzing, classifying, and summarizing information. Choosing the information, knowledge, and competencies needed for future professional activities is a challenging task for a modern student

(cadet, listener). Technical tools, in particular digital technologies and artificial intelligence, come to the aid of students, but the overall organization of the educational process needs to be changed to take into account new technological opportunities. Today, simple digitalization is no longer enough; transformation is needed – a systemic change in the educational paradigm, including a review of pedagogical approaches, administrative processes, and organizational culture as a whole, as well as digital culture of teachers and students in particular.

The growing volume of information, new digital technologies, and innovations require every participant in the educational process to improve, to constantly learn and relearn, and to acquire new competencies. Today's changes dictate the need to adapt to changing circumstances, to learn how to work with information, to quickly find, promptly process, analyze, and process large volumes of data. Anyone who is convinced that by obtaining a profession and a university diploma, they will be able to build a career and be in demand once and for all is mistaken. In today's job market, earning a degree is no longer enough; graduates have to immediately pursue continuous professional development to acquire new competencies, since the knowledge becomes outdated quickly.

One of the key competencies of a modern specialist is the ability of self-development and self-improvement. Drawing on our own pedagogical experience, we believe that the development of social networks makes it possible to do this online quickly and efficiently, at a time and place that are convenient for the person [1].

Given the demand for distance learning, online platforms focused on specific interests, professional communities, and work in coworking centers are actively developing.

Assessing university graduates' competences, employers emphasize a lack or insufficiency of their practical skills. Despite an increase in the number of practical classes to meet the requirements of the Federal State Educational Standard, the gap in the training of specialists is significant. There is still considerable ground to cover.

To keep up with a changing world, it makes sense to embrace lifelong learning by building an educational ecosystem. This would allow us to shift toward more flexible learning systems.

The term "ecosystem approach" was first introduced in biology in 1935 to refer to independent organisms. Today it has acquired a broader meaning, although there is still no well-established definition.

In the Great explanatory dictionary, the ecosystem approach means “the same as the ecological system” [4]. The Great encyclopedic dictionary defines an ecosystem as “a single natural complex formed by living organisms and their habitat ..., in which ... the components are interconnected ...” [2].

Transferring the concept to an educational ecosystem, we can define it as a complex of diverse elements forming a system of interconnected parts, determined by the factors and conditions of the external environment; complex, dynamic, self-organizing and self-developing connections within the system that ensure mutually beneficial cooperation and coordination among participants in the educational process, and meet their professional and social needs.

The ideas behind educational ecosystems are borrowed from the model of “smart schools” in Finland, where learning is tailored to the individual needs of students. Foreign educational systems such as the American LRNG project in Chicago and the Liberal Arts education model (multidisciplinary bachelor’s degree) are characterized by the integration of various learning formats – school-based, out-of-school, and online learning implemented using mobile apps and online platforms.

In the domestic pedagogical environment, educational ecosystems (“learning ecosystem”) became a subject of discussion in the early 2000s. The initiators of Global Education Futures were experts from the Skolkovo Innovation Center, who conducted a study on the topic of “educational ecosystems as practices of the future”. Having discussed more than 40 educational ecosystems, they identified “characteristics of the transformation of the traditional (classical) education system and demonstrated prospects for the education of the future.” Their findings were driven by an understanding that sweeping societal shifts are unavoidable. These changes reshape not only our daily lives but also our cognitive processes, necessitating new learning methods and updated life and collaboration skills [3].

Contemporary pedagogical frameworks for specialist development are undergoing substantial revision. Thus, according to the researchers’ studies, one of the important competencies is networking skills and effective teamwork [4–7].

The ecosystem principle of a customer-oriented approach is crucial in organizing interaction among participants in the educational process. It allows students to independently choose areas of research and form groups based on their interests on the platform.

What criteria should the evolving education system satisfy to ensure it is genuinely sustainable and supportive for every participant in the educational process?

The core idea of the new education system should be not static but dynamic education that responds to the challenges of the times and meets the needs of every learner.

We believe that an eco-friendly education system should also be flexible and built on the principles of personalization and adaptability, multi-level interconnectedness (learning at the global, local, and personal levels), as well as the principle of diverse opportunities for lifelong learning.

Undoubtedly, the organizational and managerial component of the system also requires transformation. Today, representatives of the professional community in the field of specialist training, the business community, parent and public associations, departments, and, of course, the state are still involved in management. It’s worth noting that their limited engagement with the issues and low level of awareness often fail to support the optimization and improvement of current processes and may even lead to ill-founded or even detrimental proposals for changing the situation.

The professional training process should be based on a new management paradigm of the organization of education subjects. According to the ecosystem approach and the concept of lifelong learning, every subject maximizes their potential professionally, personally, and socially.

Training in departmental universities of the Federal Penitentiary Service of Russia is carried out in accordance with the regulatory documents governing the organization of higher education in the country and the departmental orders. It is worth highlighting that departmental education is characterized by the closed nature of the system, compliance with the secrecy regime, and the presence of the “for official use only” information.

Universities that train specialists for service in the law enforcement system should only use software products in their educational process that have undergone proper examination and certification.

“Certain limitations also exist in civilian universities, but universities in the penitentiary system require high standards of cybersecurity” [8, p. 145].

Realizing that the introduction of digital technologies should primarily take into account the interests of the department, it is necessary to consider the possibilities for meeting the needs of participants in the educational process. Addressing the exclusion of cadets from the digital educational process due

to the existing digital divide requires a solution and we see it in creating accessible and inclusive conditions for all participants in the education system. [9, pp. 42, 43].

What is meant by inclusive conditions? First and foremost, it is the creation of local systems that take into account the specifics of the environment and ensure the adaptation of the educational space through the accessibility of infrastructure and the development of special textbooks, teaching aids, and didactic materials. The list of literature in special libraries needs to be expanded; it is necessary to increase the number of computer labs with certified software and limited access to the Internet (the ability to access official legal websites and agencies; access to reference and legal and other information systems for studying regulatory legal acts, materials of law enforcement practice, and ordering the necessary literature for research work).

At the present stage, the means of information and technological support for learning are relevant and in demand among participants in the educational process. Innovative approaches to training employees of the penitentiary system should be actively implemented in the educational process, but their implementation should be carried out at a qualitatively different level. In the educational process, it is necessary to actively use pedagogical capacities of the information and educational environment of the departmental university and its educational resources for developing the competence of cadets, for example, providing prompt consulting to cadets through the use of chatbots.

The educational system of the Federal Penitentiary Service of Russia is rather conservative, and

therefore it requires serious transformation so that graduates receive theoretical knowledge, necessary skills and abilities, and most importantly, motivation for lifelong learning.

Conclusion

The education system is a constantly developing and evolving institutional framework that must provide the conditions for personal development at all levels. Recognizing that this is one of the most conservative systems, governed by standards, laws, and rules, albeit recently changed (suffice it to note the transition to the Bologna system of education), we believe that the lifelong education system is a paradigm, in which the individual integrates his/her life and educational trajectory.

When introducing technological advances and digital technologies, one should take into account the interests of the department and the participants in the educational process.

Creating an open system for the learning process through reference electronic educational resources of the law enforcement system with special authorization will provide cadets with greater opportunities for self-learning. The use of electronic information and educational environment will individualize the process of professional training.

The departmental education system, as an important component of the national education system, is on the verge of conceptual changes, and it is necessary to do everything possible at all levels (regulatory, organizational and managerial, psychological and pedagogical) to ensure that these changes in the future will provide a high level of training for the new generation of specialists for the penitentiary system.

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