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# The system of training military university teachersto use resources educational technopark

The educational technopark in a military university should be positioned as an intellectual interdisciplinary educational environment and a modern laboratory-saturated educational space for pedagogical design and modeling, collaboration of teachers and trained officers in order for them to master modern (digital) competencies and gain experience in interdisciplinary and meta-subject design. The article also presents the author's Model of training teachers of a military university to use the resources of an educational technopark. The implemented system of training military university teachers to use the resources of the educational technopark will ensure the effective development of modern teaching methods, where digital competencies will play a key role.

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*Keywords:* Kazakhstan, military education, National Defense University, teacher, specialist, digitalization, educational technopark.

## *Introduction*

Recognizing the importance of having highly qualified military specialists and the need to train competitive domestic personnel, military education has been a focal point since the establishment of the Armed Forces. As a result, Kazakhstan has developed a national system of military personnel training that aligns with the future needs of the Armed Forces. This system ensures a continuous educational process encompassing the five levels specified by the Law of the Republic of Kazakhstan "On Education": secondary education, technical and vocational education, higher education (bachelor's degree), postgraduate education (master's and doctoral programs), as well as additional education, which includes military departments, retraining, and advanced training [1].

The article presents the author’s Model for training military university instructors to utilize the resources of aneducational technopark, exploring its potential and opportunities within the framework of military-pedagogical activities.

The primary goal of the educational technopark is to create conditions for the development of universal pedagogical competencies among the faculty of the National Defense University of the Republic of Kazakhstan and representatives of other military universities in the scientific, pedagogical, and innovative spheres by establishing a material, technical, and informational foundation.

The main tasks of the educational technopark will include:

- Supporting the scientific and practical activities of the university's faculty.
- Assisting the faculty in implementing project-based activities.
- Training the university faculty in the use of modern digital teaching tools.
- Facilitating research activities for the faculty using the laboratory equipment available in the educationaltechnopark.
- Integrating equipment, technical, and methodological teaching aids into the educational process.
- Organizing training for representatives of the military-pedagogical community of the republic in scientific, pedagogical, and innovative areas.

## *Methodological basis*

*Materials and Methods.* The research utilized open sources and scientific literature covering topics in pedagogy, military training, and education. The study's methodological framework was based on analysis, deduction, induction, and modeling.

*Research Results and Discussion.* An analysis of the scientific literature [2-5] revealed certain gaps in the understanding and research of issues related to:

*firstly,* regarding the organization and functioning of the educational technology park within a military university (existing knowledge is fragmentary and does not cover a broad range of aspects related to solving organizational issues, material and technical base, and the procedures for interaction between instructors and officer students with innovative technologies);

*secondly,* regarding the content of the activities of military university instructors when using the resources of the educational technology park (the inability to use existing resources hinders the full assimilation of educational programs by officer students and "slows down" their development of key competencies in modern technologies).

The issue of preparing instructors to utilize the resources of educational technopark within the educational process of a military university is complex and interdisciplinary, situated at the intersection of military science, military pedagogy, psychology, sociology, and philosophy.

## *Main body*

In the works of many scholars from civilian universities, there is an emphasis on developing universal pedagogical competencies among students within the framework of a technopark [6-10]. The fundamental distinction of the educational technopark concept at the National Defense University of the Republic of Kazakhstan lies in its focus on the integration of modern (digital) competencies, primarily among military instructors. These instructors are being prepared to organize the educational process using the technopark's resources, adhering to the principle that "an instructor must know not only how to teach but also what to teach." A deep understanding by the faculty of the impact of innovative pedagogical practices will ensure the high quality and effectiveness of officer training.

The practical significance of this research is that educational technoparks in military universities offer promising opportunities for:

- incorporating innovations such as computer-based learning technologies, interactive multimedia, web-based learning, online education, case-based learning, critical thinking technologies, and others into the educational process.
- developing creative methods and forms of officer training.
- supporting the university's research activities and demonstrating readiness for digital transformation.
- facilitating collaboration with the military industry and defense sector in the interest of national defense.
- engaging in interaction and exchanging best practices with leading universities in the country.

Based on this, the educational technopark in a military university should be positioned as an intellectual, interdisciplinary educational environment and a modern, laboratory-rich learning space for pedagogical design and modeling. It will serve as a platform for collaboration between instructors and trainee officers, enabling them to acquire modern (digital) competencies and gain experience in interdisciplinary and cross-disciplinary construction.

The educational technopark proposed at the National Defense University of the Republic of Kazakhstan will be a modernly equipped facility with advanced technology and digital tools, including:

- interactive panels and projectors (for conducting interactive lessons, presentations, and collaborative work among trainee officers);
- all-in-one computers and laptops (for accessing electronic educational resources and applications, and for studying educational programs aimed at developing digital competencies);
- virtual and augmented reality devices (for creating a virtual environment that allows officers to immerse themselves in training scenarios that simulate real-world conditions);
- media studio featuring video and audio equipment (camera and microphone), lighting equipment, sound recording devices, editing and processing

software, a teleprompter, and background decorations (to enhance public speaking skills and develop competencies necessary for creating high-quality video content);

- interactive floor-standing touch video tables (for conducting research and practical training sessions);

- modern tablets (for rapid data transfer within a group, participation in virtual lessons, and reading e-books).

The declared system-activity approach forms the conceptual core of the project and defines the primary directions for the functioning of the educational technopark and the activities of military university instructors in utilizing its resources within the educational process.

The elements of scientific novelty in the project include:

- designing a model and, based on it, describing a system for preparing military university instructors to use the resources of the educationaltechnopark.

- justifying the scientific and pedagogical directions of the technopark's activities within the educational process of a military university.

- creating a map of military-pedagogical and methodological resources within the technopark at the military university.

- developing a methodology for preparing a team of instructors to use the technopark's resources in the educational process of a military university.

- refining the set of competencies, including digital skills, required of military university instructors for the successful organization of the educational process within an innovative educational environment.

A crucial characteristic of the pedagogical resources in education, particularly relevant to the concentrated educational content and technologies, is their integrative nature. This quality is inherently linked to the subjective and objective world, playing a decisive role in the construction of the educational process and defining the learning environment.

Another key characteristic of pedagogical resources is their multifaceted nature, which involves studying the material from various perspectives and viewpoints. Integration can only arise from a multifaceted examination of phenomena. Finally, the most important system-forming characteristic of pedagogical resources is their expansiveness, which enables learners in military-professional activities to make a personalized choice of education according to their needs and goals and the means to achieve them. Expansiveness creates opportunities for implementing a varied educational process, both in terms of content and technology.

The system for training military university instructors to utilize the resources of the educational technopark is illustrated in Figure 1.

The system consists of the following interrelated elements:

1. Selection of the Classroom

2. Procurement and Installation of Furniture, Equipment, and Software

3.Development and Approval of the Educational Technopark Regulations

4. Development and Approval of the Instruction Manual for the Educational Technopark

5. Development and approval of a program for the faculty of a military university on organizing educational activities based at the educational technology park, with a duration of up to 20 hours;

6.Development and approval of an advanced program for the faculty of a military university on organizing educational activities based at the educational technology park, with a duration of up to 20 hours;

7. Development of Methodological Documentation

8. Preparation of Instructor-Trainers.

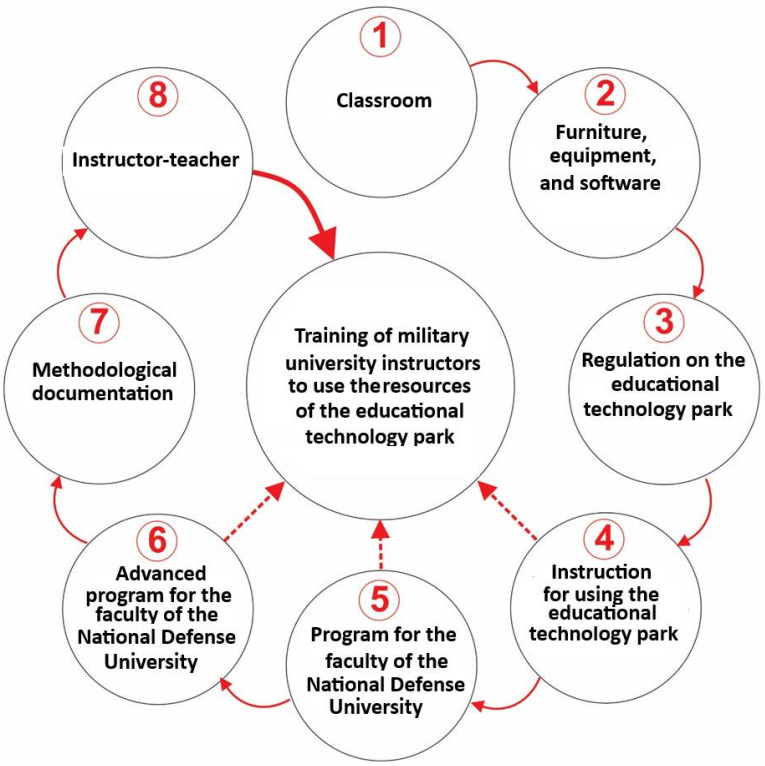


Figure 1 – System for Training Military University Instructors to Utilize the Resources of the Educational Technopark

*Conclusion*

Thus, the system for preparing the faculty of the National Defense University of the Republic of Kazakhstan to utilize the resources of the educationaltechnopark will ensure the effective adoption of modern teaching methods, where digital competencies play a crucial role. This approach will enable the creation of interactive and adaptive educational programs, increase variability, and enrich the educational process, thereby enhancing the level of officer training within the military university. The use of the educational technopark will help develop not only professional competencies but also the ability to operate in a modern digital environment among both instructors and trainee officers. This becomes a vital condition for the development of a successful military career and meets society's demand for highly qualified, creative, and innovative-thinking officers.

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## Система подготовки преподавателей военного ВУЗ-а к использованию ресурсов педагогического технопарка

Педагогический технопарк в военном вузе должен позиционироваться как интеллектуальная междисциплинарная образовательная среда и современное лабораторно-насыщенное учебное пространство для педагогического проектирования и моделирования, коллаборации преподавателей и обучающихся офицеров в целях освоения ими современных (цифровых) компетенций и приобретения опыта междисциплинарного и метапредметного конструирования. В статьетакже представлена авторскаяМодель подготовки преподавателей военного вуза к использованию ресурсов педагогического технопарка. Внедренная система подготовки преподавателей военного вуза к использованию ресурсов педагогического технопарка обеспечит эффективное освоение современных методов обучения, где цифровые компетенции будут играть ключевую роль.

Научная статья опубликована в рамках выполнения научного проекта грантового финансирования на 2024-2026 годы ИРН AP 23488037 «Подготовка преподавателей к использованию ресурсов педагогического технопарка в образовательном процессе военного вуза» (исследование финансируется Комитетом науки Министерства науки и высшего образования Республики Казахстан).

*Ключевые слова:* Казахстан, военное образование, Национальный университет обороны, преподаватель, специалист, цифровизация, педагогический технопарк.

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## Әскери ЖОО оқытушыларын даярлау жүйесі ресурстарды пайдалануға педагогикалық технопарк

Әскери ЖОО-дағы педагогикалық технопарк зияткерлік пәнаралық білім беру ортасы және педагогикалық жобалау мен модельдеуге, оқытушылар мен білім алушы офицерлердің заманауи (цифрлық) құзыреттіліктерін игеру және пәнаралық және мета-пәндік құрастыру тәжірибесін алу мақсатында олардың ынтымақтастығына арналған заманауи зертханалық-қанықкан оқу кеңістігі ретінде орналастырылуы тиіс. Мақалада

сонымен қатар әскери университет оқытушыларын педагогикалық технопарк ресурстарын пайдалануға дайындаудың авторлық моделі келтірілген. Әскери ЖОО оқытушыларын педагогикалық технопарк ресурстарын пайдалануға даярлаудың енгізілген жүйесі цифрлық құзыреттер шешуші рөл атқаратын оқытудың заманауи әдістерін тиімді игеруді қамтамасыз етеді.

Ғылыми мақала 2024-2026 жылдарға арналған «әскери ЖОО-ның білім беру процесінде педагогикалық технопарк ресурстарын пайдалануға оқытушыларды даярлау» ЖРН AP 23488037 гранттық қаржыландырудың ғылыми жобасын орындау шеңберінде жарияланды (зерттеуді Қазақстан Республикасы Ғылым және жоғары білім министрлігінің Ғылым комитеті қаржыландырады).

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