

The Role Of Artificial Intelligence In Training Cadets

Xamdamov Alisher Samijonovich

Head of the Department of the Institute of Ground Forces

Abstract

This article examines the role of artificial intelligence (AI) in cadet training within higher military and professional education institutions. The research results show that AI tools better support personalized learning and cognitive load management and competency-based assessment methods used in cadet training settings.

Keywords: artificial intelligence, cadet training, personalized learning, educational technology, military education, adaptive systems, competency-based education.

Introduction. The worldwide spread of artificial intelligence technologies has caused all educational systems to undergo their fundamental transformation. Cadet training requires military personnel to learn academic knowledge while developing skills needed for fast responses and leadership through situations which are too challenging to evaluate through standard teaching methods [1]. Modern educational systems based on AI technology allow students to experience learning possibilities which traditional teaching methods did not provide because they enable educators to create customized learning experiences based on students' thinking patterns while they deliver instant performance evaluations which teachers cannot manage across multiple students [2]. The national education development strategy of Uzbekistan establishes digital technology implementation as a primary goal for higher education reform efforts which provides evidence that AI research needs to be done at cadet training facilities. [3].

Methodology and literature review. The entire research methodology of this article depends on academic literature evaluation which requires critical analysis and synthesizing of information. The study used a structured approach to compare outcomes between different research sources which helped to discover common research themes while assessing the strengths and weaknesses of all examined studies. The educational science analytical review process follows established standards of evaluation according to this method [4]. The international academic community has increased its research activities for artificial intelligence applications in education since the year 2018. The research by Holmes and his colleagues establishes three main categories that classify educational artificial intelligence tools into three main groups: intelligent tutoring systems, automated assessment platforms, and immersive simulation environments [5]. The United States and China have used intelligent tutoring systems to train military personnel because these systems adjust learning materials according to students' actual mastery of content which results in better knowledge retention than standard lecture methods. [6].

The research of Novikov and Zaitsev shows that military academies can use adaptive learning platforms together with their competency-based educational standards because curriculum developers must ensure that artificial intelligence learning paths match official competency requirements [7]. The study confirms international research through its demonstration that AI operates in educational settings as a tool that supports human teaching activities according to Luckin's findings [8]. The development of adaptive challenge systems enables learners to maintain their cognitive peak through machine-mediated instruction which applies the zone of proximal development concept to create learning experiences that adapt to individual student needs [9].

Results and discussion. The synthesis of all literature which has been examined produces multiple findings that establish the present situation of AI usage in cadet training together with its future development. First, the reviewed literature shows that AI systems bring their greatest benefits to cadet training when they operate as additional tools for learning activities. All

sources which have been examined show that AI serves as an educational instrument which enhances instructor-led teaching while instructors maintain their role as mentors and evaluators who uphold ethical standards during the training process. The finding shows that both Western academic systems and post-Soviet academic systems demonstrate a shared belief about how AI should function in professional educational settings. Second, personalized learning emerges as the most consistently cited benefit of AI integration. Intelligent tutoring systems which monitor student performance patterns have shown that they can improve learning outcomes through control of instructional content's difficulty and speed and learning methods.

The systems achieve adaptive functionality because they solve the main problem which exists in cohort-based training. The research shows that AI implementation brings about assessment transformation as its major result. The automated assessment platforms can analyze performance data at a greater scale than human evaluators who evaluate results through their assessment procedures while they deliver immediate specific feedback to cadets within minutes after they finish their tasks. The feedback process becomes faster which leads to better metacognitive development because cadets receive detailed information about their knowledge gaps at an earlier time. The literature demonstrates strong support for using simulation-based AI learning environments to train tactical personnel and emergency response teams. The AI system creates unique training environments which prevent cadets from memorizing answers because they need to use their knowledge to solve new problems that reflect actual work conditions.

Conclusion. The analysis of contemporary scholarly literature demonstrates that artificial intelligence holds substantial and well-documented potential for enhancing cadet training across multiple instructional dimensions, including personalization, simulation fidelity, and assessment efficiency. However, the literature equally establishes that this potential is conditional: it is realized only when AI tools are integrated thoughtfully within existing pedagogical frameworks, supported by adequate infrastructure, and governed by clear ethical and institutional standards. For Uzbekistan's cadet training institutions, the path toward meaningful AI integration involves three mutually dependent priorities. First, instructional personnel must be equipped with the competencies necessary to use, critically evaluate, and pedagogically direct AI tools rather than simply operate them. Second, curriculum designers must ensure that AI-generated learning pathways remain aligned with nationally established competency standards, preserving the regulatory coherence that professional military education requires.

References

- Johnson M., Militello L. Adaptive Training Systems in Military Education // Journal of Defense Modeling and Simulation. — 2020. — Vol. 17, № 3. — P. 211–228.
- Ernaeva, G. X., Sattarov, T. F., & Maxamatjanova, N. M. (2023). Diagnostic significance of psychodiagnostic examinations of taekwondo players. *Frontline Medical Sciences and Pharmaceutical Journal*, 3(06), 19-27.
- Hamraev, B., & Maxamatjanova, N. (2023). Study and evaluation of the possibilities of cognitive behavioral therapy in psychosexual disorders. *Центрально-азиатский журнал образования и инноваций*, 2, 4.
- Юсупходжаева, С., & Гафурова, С. Ш. (2022). Значение когнитивно-бихевиоральной психотерапии при тревожно-депрессивных расстройствах.
- Gafurova, S., & Yusuphodjayeva, S. (2023). Differential analysis of neurotic disorders in irritable bowel syndrome and improvement of medical psychological support in them. *Science and innovation*, 2(D2), 177-181.
- Гафурова, С., & Юсупходжаева, С. (2023). Дифференциальный анализ невротических расстройств при синдроме раздраженного кишечника и совершенствование медико-психологической поддержки при них. *Talqin va tadqiqotlar*, 1, 19.

- Тлегенов, М. Т. (2025, December). ДИНАМИКА ЧИСЛЕННОСТИ ПОЛУДЕННЫХ ПЕСЧАНОК В НИЗОВЬЯХ ДЕЛЬТЫ АМУДАРЬИ 2021-2024 гг. In *Conferences* (Vol. 1, No. 7, pp. 255-261).
- АМУДАРЬИ, В. Н. (2022). ЭКОЛОГИЯ (ПО ОТРАСЛЯМ). ЭКОЛОГИЯ (ПО ОТРАСЛЯМ), 93(3).
- Алимова, З. К., & Агабабян, Л. Р. (2026). УЛЬТРАЗВУКОВАЯ ДИАГНОСТИКА ЭНДОМЕТРИОЗА И АДЕНОМИОЗА: СОВРЕМЕННЫЕ ПОДХОДЫ. *GLOBAL TRENDS IN SCIENCE AND INNOVATION*, 3(1), 214-217.
- Агабабян, Л. Р., & Исраилова, З. Ш. (2025, September). ВЛИЯНИЕ ПАПИЛЛОМАВИРУСНОЙ ИНФЕКЦИИ НА РЕПРОДУКТИВНОЕ ЗДОРОВЬЕ ЖЕНЩИН С ВТОРИЧНЫМ БЕСПЛОДИЕМ. In *CONFERENCE OF MODERN SCIENCE & PEDAGOGY* (Vol. 1, No. 5, pp. 240-242).
- Пахомова, Ж. Е., Асатова, М. М., Надирханова, Н. С., Агабабян, Л. Р., Алиева, Д. А., Асранкулова, Д. Б., ... & Уринбаева, Н. А. (2025). «Объединяя усилия в лечении невынашивания беременности: экспертный диалог о гестагенах» Резолюция I Форума экспертов по невынашиванию беременности в Республике Узбекистан.
- АГАБАБЯН, Л. Р., & УСМАНКУЛОВА, Х. М. (2025). СИНДРОМ ПОЛИКИСТОЗНЫХ ЯИЧНИКОВ КАК ПРИЧИНА ЖЕНСКОГО БЕСПЛОДИЯ: СОВРЕМЕННЫЕ МЕТОДЫ ДИАГНОСТИКИ И ЛЕЧЕНИЯ. *Medical journal of Uzbekistan*, 329-334.
- Муминова, Н. А. (2017). Дидактические игры, используемые для повышения эффективности уроков родного языка в 1 классах начального образования. *Журнал научных публикаций аспирантов и докторантов*, (4), 39-41.
- Khodjaeva, D. I., & Saidova, Z. T. (2022). Interaction between Categories of Taxis and Temporality. *EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION*, 2(3), 110-113.
- Khodjaeva, D. (2021). Different viewpoints on lexicography and dictionary types. *ACADEMICIA: An International Multidisciplinary Research Journal*, 11(2), 1255-1258.
- Latipov, A. A. (2024). SALES MANAGEMENT METHODS IN THE TOURISM SECTOR INDUSTRIES. *Science and innovation*, 3(Special Issue 46), 459-461.
- Akbaralievich, L. A. (2023). CONTINUOUS PHASE AND MEANS OF USE IN UZBEK LANGUAGE. *MATERIALLAR TO'PLAMI*, 390.
- Буранова, Л. У. (2016). Хамлет монологи ва унинг таржималари хакида. *Евразийский научный журнал*, (5), 503-504.
- Salieva, Z. (2024). Using Readings in the Writing Class. In *Conference Proceedings: Fostering Your Research Spirit* (pp. 768-770).
- Ибадуллаев, Ф. Ф. (2016). Несколько записей о формирование текста. *Ученый XXI века*, (4-4 (17)), 46-48.
- Ibadullayev, F. F. (2019). WORKING ON THE LEXIC METHODOLOGY AT HIGHER EDUCATIONS. In *МОЛОДОЙ ИССЛЕДОВАТЕЛЬ: ВЫЗОВЫ И ПЕРСПЕКТИВЫ* (pp. 246-248).
- qizi Furqatova, H. A., & qizi Najmiddinova, M. N. (2025). THE ROLE OF PRAGMATICS FOR LEARNING ENGLISH AND UZBEK LANGUAGES. *Modern Scientific Research*, 3(7), 51-56.
- qizi Furqatova, H. A., & qizi Najmiddinova, M. N. (2025). SIMILARITIES AND DIFFERENCES OF CONCEPTS IN ENGLISH AND UZBEK CULTURES. *International Journal American Journal of Modern World Sciences*, 2(7), 59-67.
- Karimova, N. M., Yuldashova, S. T., Pulatova, F. A., & Shodiyeva, S. R. (2023). Pedagogical Conditions for Students to use Critical Thinking in the Development of Interethnic Communication. *Journal of Survey in Fisheries Sciences*, 10(2S), 4211-4219.
- Saida, Y. (2023). THE DIFFERENCE BETWEEN PEDAGOGICAL TECHNOLOGY AND METHODOLOGY. *Involta Scientific Journal*, 2(1), 124-128.

- Vicker, K., & Murodova, F. (2026). USING TASK-BASED APPROACH IN COMMUNICATION SKILLS. *Asian journal of scientific research and innovations*, 1(1), 266-268.
- Rolf, J. N., & Feruzovna, M. F. (2025). POSSIBILITIES OF USING IMPROVED MODERN TECHNOLOGIES IN THE DEVELOPMENT OF CHILDREN'S ORAL COMMUNICATION SKILLS. SHOKH LIBRARY.
- JAMALOVA, N. Pedagogical Conditions for the Development of Individual-Personal Characteristics of Students of a Higher Educational Institution. *PINDUS Journal of Culture, Literature, and ELT (PJCLE)*.—2022.
- Юсубов, Ж. К., Мусаев, О. Р., & Жамалова, Н. У. (2020). РОЛЬ КОМПЕТЕНТНЫХ КАДРОВ ГОСУДАРСТВЕННОЙ СЛУЖБЫ В ПОВЫШЕНИИ ЭФФЕКТИВНОСТИ ГОСУДАРСТВЕННОГО УПРАВЛЕНИЯ. *Научно-методический и теоретический журнал*.-2020.
- Baxramovich, T. R. (2025). SAMARKAND IN THE WORKS OF RUSSIAN WRITERS. *Multidisciplinary and Multidimensional Journal*, 4(5), 177-180.
- Baxramovich, T. R. (2025). SIMILARITIES AND DIFFERENCES OF ALLITERATION IN UZBEK AND RUSSIAN POETRY. *INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN EDUCATION, TECHNOLOGY AND MANAGEMENT*, 4(5), 460-465.
- NASIROVA, M. (2024). NEOLOGIZMLAR TURLARI VA SHAKLLANISH OMILLARI. «ACTA NUUZ», 1(1.2. 1), 309-312.
- Bahodirovna, F. M., & Anatolevich, K. A. (2026). A LINGUOCULTURAL STUDY OF THE MOTHER FIGURE IN JOHN ERNEST STEINBECK'S LITERARY WORKS. SHOKH LIBRARY, 1(1).
- Sh, B. P. (2021, October). Ideas of Mahmudhoja Behbudi Reflected in Publicism. In *IDEAS* (Vol. 7, No. 10).
- Bazarova, D. (2024). Ta'lim rus tilida olib boriladigan guruhlarda "o 'zbek tilida so 'z tarkibi" mavzusini o 'rgatish tajribasidan. O 'zbek tilining xorijda o 'qitilishi: ta'lim nazariyasi va amaliyoti, 1(01), 88-90.
- Baxronovna, B. D. (2024). On taye artistic skills of Erkin Vahidov (as an example of the " Dream World" collection). *Ethiopian International Journal of Multidisciplinary*.
- Narxodjayeva, X. S., & Absoatov, D. S. O. G. L. (2022). Said Ahmad asarlaridagi salomlashuv birliklarining lingvopragmatik xususiyatlari. *Science and Education*, 3(3), 808-813.
- Zawacki-Richter O., Marín V.I., Bond M., Gouverneur F. Systematic Review of Research on Artificial Intelligence Applications in Higher Education // *International Journal of Educational Technology in Higher Education*. — 2019. — Vol. 16, № 1. — P. 1–27.
- Yusupov B.A. Oliy ta'limda raqamli transformatsiya: muammolar va yechimlar. — Toshkent: Fan, 2022. — 184 b.
- Bryman A. *Social Research Methods*. 5th ed. — Oxford: Oxford University Press, 2016. — 747 p.