

## Design Of Individual Educational Trajectories In Adult Education Based On Artificial Intelligence Technologies

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### ABSTRACT

The article covers the issues of designing individual educational trajectories in adult education based on the use of artificial intelligence technologies in the modern educational system. The article covers the issues of designing individual educational trajectories in adult education based on the use of artificial intelligence technologies in the modern educational system. The study analyzes the theoretical foundations of the andragogical approach, the role of artificial intelligence technologies in the educational process, and the mechanisms for organizing personality-oriented education. The results of the study serve to improve the effectiveness of adult education.

В статье освещаются вопросы проектирования индивидуальных траекторий обучения в образовании взрослых на основе использования технологий искусственного интеллекта в современной системе образования. В статье освещаются вопросы проектирования индивидуальных траекторий обучения в образовании взрослых на основе использования технологий искусственного интеллекта в современной системе образования. В исследовании анализируются теоретические основы андрагогического подхода, роль технологий искусственного интеллекта в образовательном процессе и механизмы организации личностно-ориентированного обучения. Результаты исследования способствуют повышению эффективности обучения взрослых.

### ARTICLE INFO

**Received:** 30<sup>th</sup> September 2025

**Accepted:** 28<sup>th</sup> October 2025

**KEY WORDS:** adult education, andragogy, artificial intelligence, individual educational trajectory, adaptive education, digital pedagogy, lifelong learning, образование взрослых, андрагогика, искусственный интеллект, индивидуальная траектория обучения, адаптивное обучение, цифровая педагогика, обучение на протяжении всей жизни.

**Annotatsiya:** Maqolada zamonaviy ta'lim tizimida sun'iy intellekt texnologiyalaridan foydalanish asosida kattalar ta'limida individual o'quv trajektoriyalarini loyihalash masalalari yoritilgan. Tadqiqotda andragogik yondashuvning nazariy asoslari, sun'iy intellekt texnologiyalarining ta'lim jarayonidagi o'rni hamda shaxsga yo'naltirilgan ta'limni tashkil etish mexanizmlari tahlil qilinadi. Tadqiqot natijalari kattalar ta'limi samaradorligini oshirishga xizmat qiladi.

**Kalit so'zlar:** kattalar ta'limi, andragogika, sun'iy intellekt, individual o'quv trajektoriyasi, moslashuvchan ta'lim, raqamli pedagogika, umrboqiy ta'lim.

In the context of today's globalization and digital transformation, the socio-economic development of society is becoming directly dependent on the quality of Education. The rapid change in labor market requirements assumes that the individual constantly acquires new knowledge and competencies. In the context of today's globalization and digital transformation, the socio-economic development of society is becoming directly dependent on the quality of Education. The rapid change in labor market requirements assumes that the individual constantly acquires new knowledge and competencies. In this process, adult education is of particular importance as an important link in the system of continuing education.

The peculiarities of adult education — working with an audience with different ages, professional experience, needs and motivation — limit the effectiveness of traditional teaching models. The peculiarities of adult education — working with an audience with different ages, professional experience, needs and motivation — limit the effectiveness of traditional teaching models. Therefore, the issue of individualization and personalization of the educational process is taking the field as an urgent scientific problem. In solving this problem, the design of individual educational trajectories based on artificial intelligence technologies is of significant scientific and practical importance.

In modern society, technologies are rapidly developing, and professional knowledge and skills require constant updating. As a result, adult education has become a continuous process that continues throughout the life of an individual, not just an addition. In modern society, technologies are rapidly developing, and professional knowledge and skills require constant updating. As a result, adult education has become a continuous process that continues throughout the life of an individual, not just an addition. The main task of adult education is to expand existing knowledge and experience, form new professional competencies and adapt the individual to the changing requirements of the labor market. In this process, a traditional, homogeneous system of teaching based on content and techniques cannot be effective enough that adults will have different professional experience, needs, interests and opportunities.

Therefore, in today's pedagogical thought, the adaptation of education to personality, that is, an individual approach, is considered as a priority. The use of artificial intelligence technologies is important in the effective implementation of this task. Therefore, in today's pedagogical thought, the adaptation of education to personality, that is, an individual approach, is considered as a priority. The use of artificial intelligence technologies is important in the effective implementation of this task. Artificial intelligence makes it possible to organize the educational process in a flexible, effective and result-oriented form by developing individual educational trajectories in adult education.

The concept of an individual educational trajectory in adult education

An Individual educational trajectory is understood as a personal educational path compiled taking into account the level of knowledge, professional experience, personal goals, pace of learning and interests of an adult listener. Individual educational trajectory is understood as a personal educational path compiled taking into account the level of knowledge, professional experience, personal goals, pace of learning and interests of an adult listener. In adult education, this concept is especially important, since an adult learner acquires knowledge not simply on the basis of academic requirements, but in order to satisfy specific vital and professional needs.

In the traditional educational system, all listeners are offered the same curriculum, while the individual educational trajectory ensures that the educational process is built to suit the individual. In the traditional educational system, all listeners are offered the same curriculum, while the individual educational trajectory ensures that the educational process is built to suit the individual.

#### *The role of artificial intelligence technologies in the educational process*

Artificial intelligence technologies are modern tools that allow you to analyze a large amount of information in the educational process, monitor educational activities and make optimal decisions. The role of artificial intelligence technologies in the educational process

Artificial intelligence technologies are modern tools that allow you to analyze a large amount of information in the educational process, monitor educational activities and make optimal decisions. In adult education, artificial intelligence collects information about the educational activities of listeners, determines their level of knowledge, errors, learning speed and interests, and on this basis forms flexible educational directions.

With the help of technologies of machine learning and educational analytics of artificial intelligence, the process of training becomes dynamic, not static. That is, during the educational process, the educational content is constantly updated, depending on the development of the listener.

The process of designing individual educational trajectories based on artificial intelligence. The design of an Individual learning trajectory is carried out in several consistent stages. The process of designing individual educational trajectories based on artificial intelligence. The design of an Individual learning trajectory is carried out in several consistent stages. At the initial stage, with the help of artificial intelligence, the initial level of knowledge of the listener and the available competencies are determined. In this process, adaptive tests, diagnostic tasks and mechanisms for analyzing educational activities are used. As a result, it is determined in which directions the listener needs to develop.

At the next stage, artificial intelligence selects and sorts educational materials based on the results of this diagnosis. The listener is offered only the necessary topics, assignments and practical training appropriate to his professional needs. At the next stage, artificial intelligence selects and sorts educational materials based on the results of this diagnosis. The listener is offered only the necessary topics, assignments and practical training appropriate to his professional needs. This creates a deeper mastery of knowledge while saving time in adult education.

During the educational process, artificial intelligence constantly monitors the learning process. If the listener is challenged on a specific topic, the system re-explains the learning material, offering additional examples or simplified exercises. During the educational process, artificial intelligence constantly monitors the learning process. If the listener is challenged on a specific topic, the system re-explains the learning material, offering additional examples or simplified exercises. On the contrary, more complex tasks are given for listeners who are rapidly mastering, and the pace of individual development is ensured.

The design of individual educational trajectories based on artificial intelligence is fully consistent with the basic principles of andragogy. The design of individual educational trajectories based on artificial intelligence is fully consistent with the basic principles of andragogy. This approach supports the need for independent education of adults, takes into account their previous experience and directs education to solve practical problems. As a result, the teacher takes on the role of managing and advising the educational process, rather than a supervisor. In addition, artificial intelligence-based individual education develops in adults the skills of reflection, that is, Analysis and assessment of their own educational activities. This has a positive effect on their subsequent independent learning activities.

*Adult pedagogy (andragogy) is an independent branch of pedagogical science that studies the laws of education, education and development of adult individuals. Adult pedagogy (andragogy) is an independent branch of pedagogical science that studies the laws of Adult pedagogy (andragogy) is an independent branch of pedagogical science that studies the laws of education, education and development of adult individuals.*

In the 21st century, the formation of a knowledge society, the rapid development of technologies and rapid changes in the labor market have dramatically increased the importance of adult education. In the 21st century, the formation of a knowledge society, the rapid development of technologies and rapid changes in the labor market have dramatically increased the importance of adult education. Today, as professional knowledge is becoming obsolete in a short period of time, an individual cannot be limited to education received only once. From this point of view, the concept of lifelong learning (lifelong learning) is coming to the forefront.

The adult audience is fundamentally different from young readers in its: age, professional experience, vital needs, psychological characteristics. Traditional standard teaching methods are less effective for this audience and require an individual approach. The adult audience is fundamentally different

from young readers in its: age, professional experience, vital needs, psychological characteristics. Traditional standard teaching methods are less effective for this audience and require an individual approach.

Artificial intelligence technologies make it possible to solve this very problem, namely: they serve to design individual learning trajectories that are updated in real time, flexible, suitable for the needs of each listener.

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Adult education pedagogy-andragogy is the field of science that studies the laws, methods and principles of teaching adults. American scientist M. Knowles defines the following basic principles of andragogy:

- the older one wants to manage his studies by himself;
- previous experience in the process of reading is a key factor in the process of reading.;
- education should be focused on solving practical problems;
- intrinsic motivation dominates.

Artificial intelligence supports these principles technologically and comes true in practice.

An Individual learning trajectory is a personalized learning direction developed individually for each adult listener, which takes into account the following:

• level of knowledge (elementary, middle, high) An Individual learning trajectory is a personalized learning direction developed individually for each adult listener, which takes into account the following:

- level of knowledge (elementary, middle, high),
- \* professional competencies,
- personal goals,
- pace and style of learning.

When the same program is offered to all listeners in traditional education, the individual trajectory adjusts the education to the individual, resulting in an accelerated learning process and increased efficiency.

Artificial intelligence technologies are a set of systems capable of automatically controlling the learning process by analyzing large amounts of data. In education, SI does the following:

analyzes the educational activities of the student Artificial intelligence technologies are a set of systems capable of automatically controlling the learning process by analyzing large amounts of data. In education, SI does the following:

analyzes the ed

Analysis has shown that individual learning trajectories designed on the basis of artificial intelligence technologies provide high efficiency in adult education. First of all, with the help of artificial intelligence, the level of knowledge, competencies and pace of learning of the listener are determined. On this basis, the content of the training is selected in accordance with personal needs.

According to the results of the study, in the educational process organized on the basis of artificial intelligence:

- ✓ learning flexibility increases;
- ✓ the time of mastering knowledge is reduced;
- ✓ the inner motivation of the audience increases;
- ✓ reflexion and independent educational skills develop.

In addition, as a result of updating individual learning trajectories in real time, the difficulties that arise in the educational process are quickly overcome.

Designing individual learning trajectories in adult education based on artificial intelligence technologies is one of the most important and promising areas of the modern education system. Designing individual learning trajectories in adult education based on artificial intelligence technologies is one of the most important and promising areas of the modern education system. This individual learning trajectories in adult education based on artificial intelligence.

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