THE ROLE OF ARTIFICIAL INTELLIGENCE IN ORGANIZING THE PEDAGOGICAL PROCESS

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Abstract: The article is devoted to the problem of artificial intelligence, which is considered one of the most important and newest achievements of our century. The article provides information about the history of the emergence of artificial intelligence, which is derived from the concept of "Fuzzy Logic" by the Azerbaijani scientist Lutfi-Zadeh. The main line of the article is the place, role and importance of artificial intelligence in the organization of pedagogical work.

Keywords: artificial intelligence, intellectual approaches, pedagogical process, Lutfali Alasgarzadeh, Lutfi-Zade legacy, application of artificial intelligence, pedagogical technologies, pedagogical innovations, innovative approaches

Introduction: The Republic of Azerbaijan has attracted attention with its scientific innovations, both in the years after we gained independence and during the period of independence.

It is necessary to specially note the care taken to involve the representatives of the younger generation in scientific research, to obtain scientific degrees and scientific titles. Since the first years of our independence, the world-famous Azerbaijani scientist Lutfi-Zade (Lutfeli Rahim oglu Alasgarzadeh), who created a laboratory on the problems of "Fuzzy Logic" within the University of Berkeley in the State of California, America, a group of Azerbaijani scientists who met with him in different cities of Germany listened to his lectures with pleasure. At the conference, along with Azerbaijani scientists, scientists from other countries of the world also expressed their views on "Fuzzy Logic"

Today, artificial intelligence, born from fuzzy logic, has gained more popularity in the international environment.

As a certain ideal, artificial intelligence is a rather abstract construct that has no real basis. But artificial intelligence is also a kind of real relationship between man and society. Neither epistemological nor methodological procedures exhaust its essence. In this regard, artificial intelligence provides a process of strengthening the synthesis of cognitive procedures that have both a sensory and a rational basis. Artificial intelligence is a set of certain abilities to find some principle in knowledge itself, that is, to express the possibility of reflection, to recreate the goal, to choose ways to achieve it (3, p. 513).

Globalization is a historical process that has unified the world, increasing the mutual influence and dependence of peoples and states.

The historical system that emerged under the influence of globalization factors is reflected as follows:

- The use of electronic communication tools to minimize the time and space that separates people;

- Technological changes that allow the distribution of manufactured products around the world;

- The formation of global ideologies, such as the environmental or human rights movement (3, p. 617)

Research object: It is worth noting that innovations and innovative approaches, which are among the most important achievements of the globalization era, have also been integrated into the pedagogical environment. Today, the use of pedagogical technologies and pedagogical innovations in educational institutions has become commonplace. The word “innovation” is a Latin word and carries shades of meaning such as “renewal”, “innovation”, “making a fundamental change”, “unveiling any innovation”. “Innovation” as a term has received the status of pedagogical terminology since the 60s. Back in the mid-60s in Europe. In the USA, all innovations applied were called innovations. Currently, the range of innovations applied in general education schools of the West, the USA, developed Asian countries, especially Russia is very rich (5, pp. 580-581).

It should be noted as a matter of pride that in the current conditions, the use of innovative tools in all types of educational institutions of our country, including preschool, primary, secondary, secondary-specialized and higher educational institutions, has paved the way for the application of artificial intelligence, if we may say so. All this ensures the gradual development of innovations in educational institutions. Which stages of development can be classified as follows:

- The stage of birth, emergence of new ideas, propositions, concepts. This stage is sometimes conditionally called the “discovery stage”:

- The stage of theoretical systematization of the born, emerging discovery, finding, conceptual idea:

- The stage of determining the possibilities and effective ways of applying the discovered innovations in practice:

- The stage of eliminating the contradictions, inconsistencies and shortcomings that appear during the application of innovations in practice:

- The stage of obtaining a sustainable effect:

- The stage of application and description of the discovered innovations, that is, the stage of dissemination of the innovation:

- The stage of applying the discovered innovation to a specific field of activity and increasing the sustainable effect;

- Replacement of applied innovations with new ones. The stage of division of the continuous effectiveness of the product, which is created by the power of new innovations, into new categories. This is also called the stage of determining the higher category;

- Continuation of searches, etc. (5, p. 581).

- As a continuation of the mentioned stages of development of globalization, it is necessary to note the possibilities of applying artificial intelligence.

Lotfi-Zadeh's Soft Computing results are being applied in many countries of the world. This theory embodies the intellectual combinations of fuzzy logic, artificial neural networks, genetic algorithms, chaos theory and probabilistic inference paradigms. The world's most famous computer centers and the largest production networks are being created on the basis of Lotfi-Zadeh's Soft Computing theory. In particular, the new work system implemented in these networks is the theory of computers that work with words (not numbers). The greatness of this theory is that the granulation of information in these computers is regulated not by numbers or codes, but only by words and sentences. Today, there is no popular management center in our world that does not refer to this discovery of Lotfi-Zadeh (5, p. 672).

The name of the Azerbaijani scientist Lutfi-Zade, who brought fame to world science, is mentioned today along with Aristotle, Bahmanyar, N. Tusi, Newton, Einstein and other prominent figures. Currently working as the head of the department and head of the Soft Computing Research Institute at the University of California, Berkeley, USA, this scientist has become an undisputed leader by putting forward the idea of fuzzy logic for the first time in the world.

Conclusion: The creation of discrete and digital control information and communication systems by Lutfi-Zadeh and his fame as the founder of this theory became a real sensation (5, p. 671).

Even in a number of countries, textbooks on “Zadeh transformations” were published. Even today, Lutfi-Zadeh’s legacy is increasingly being used in most countries of the world. The “Pedagogy” textbooks used in higher education institutions of our country also contain paragraphs and sections entitled “Lutfi-Zadeh’s legacy and its use in secondary schools”. In particular, Lutfi-Zadeh’s “Zadeh transformations” applied in the system of mathematics and technical sciences are famous all over the world.

The role played by the Laplace transform in mathematics and technology is played by the Lutfizade transform at the same level and even more than that. One of Lutfizade's greatest contributions is the proposal of theories of control and observability of state space dynamic systems, which form the basis of modern

management science. Through these theories, Lutfizade, who was the first in the world to make proposals about controlled and observable objects of the state space, gained fame as the owner of great inventions. He proved that there can be infinite values between one and zero. This proposal became a great theory for humanity, thus, along with classical mathematics, a new field of science called fuzzy mathematics was created. As a result, separate sections of world science began to emerge (5, p. 671).

References:

1. Abbasov A.N., Alizade H.A. Pedagogy (textbook). Baku, Translated, 2024.
2. Qasemli V. et al. Digital economy. Baku, “Azprint” publishing house, 2023.
3. Nazarov M.H., Nabiyev A.M. Fundamentals of social management. Baku, TIC Print, 2024.
4. Nazarov M.H., Guliyev N.Z., Nazarova X.M. Pedagogical technologies. Textbook. Baku, ADPU publishing house, 2020.
5. Sadigov F.B. General pedagogy. Baku, Maarif, 2024.