



## POSITIVE AND NEGATIVE ASPECTS OF ARTIFICIAL INTELLIGENCE IN THE PROCESS OF FORMING TEACHERS' SKILLS

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**Abstract:** This article analyzes the positive and negative aspects of artificial intelligence technologies in the formation of communicative skills in pedagogical activities. In the 21st century, the education system is changing radically, and the rapid development of digitalization, artificial intelligence and information technologies is also affecting pedagogical approaches. This article analyzes how pedagogical dialogue, interactivity and the quality of communication are changing under the influence of modern technologies.

**Keywords:** Artificial intelligence, communicative skills, teacher, educational technologies, digital competence.

Today, artificial intelligence technologies are entering almost all aspects of our lives. Especially in the education system, this process has accelerated significantly. The quality of education is being improved with the help of digitalization of the educational process and platforms based on artificial intelligence. For teachers, mastering these new technologies, especially improving communicative skills in new conditions, is becoming an urgent issue.

The "AI in Education" programs developed by the UN and UNESCO show that artificial intelligence allows for the modernization of teaching methods, adaptation of the educational environment, and the creation of individual programs based on the needs of students.

**Theoretical foundations.** Communicative skills are an integral part of pedagogical skills in education. In the theories developed by psychologists and educators such as Vygotsky, Leontiev, Bruner, communication is recognized as a central component of the educational process. According to Vygotsky's sociocultural theory, human thinking develops through social communication. Therefore, the communication between the teacher and the student is the basis of education. Artificial intelligence allows for a new form of this communication process, but theoretically this communication is moving from the "human-human" form to the "human-technology" model. Cognitive psychology theories talk about using artificial intelligence to individually observe students, evaluate their thinking processes, and effectively transfer various types of knowledge. Therefore, the theoretical foundations are in favor of combining AI technologies with the human factor.

**Practical foundations.** In practice, artificial intelligence technologies are widely used in education:

- **Virtual assistants:** Through AI-based platforms, students can ask questions and receive answers at any time of the day. For example, applications such as "Khan Academy" and "Duolingo" have extensive opportunities for this.

- **Online assessment systems:** Artificial intelligence automatically analyzes test results and prepares individual reviews. This allows the teacher to save time.



- **Simulation and AR/VR technologies:** With the help of these technologies

based on artificial intelligence, educators can teach practical exercises in a way that is close to real life. This is especially effective in the fields of medicine, engineering, and pedagogy.

- **Training for educators:** Many international organizations (for example, UNESCO, British Council) have developed online courses on teaching AI technologies. Through this, educators can continuously improve their skills.

Interactive lessons organized using artificial intelligence, methods such as “flipped classroom”, “blended learning” are introducing innovative approaches to pedagogical activity. This requires teachers to have a new format of communicative skills.

Artificial intelligence and new opportunities in education. Artificial intelligence plays an important role in automating the teaching and learning process, ensuring an individual approach, and identifying students’ achievements and problems. For example, through platforms working with AI, tasks that match students’ interests are automatically selected. This leads to a person-oriented approach to the educational process. With the help of AI tools, the teacher can organize the lesson in a more interactive format. The ability to attract students’ attention and activate them increases through the use of visual and audio materials.

Change in communicative skills for teachers. As a result of the introduction of AI technologies, the form and style of pedagogical communication have also changed. Teachers are now seen not only as teachers, but also as digital communicators and experts in the use of technological tools. This requires expanding their oral, written, and visual communication skills.

For example, 24/7 communication with students using AI chatbots, providing feedback through electronic portals, preparing video lessons and distributing them on social networks are new areas of pedagogical communication.

**Positive aspects of artificial intelligence:**

- Saves teachers' time and reduces their workload.
- Strengthens an individual approach to students.
- Increases students' independent learning potential.
- The feedback system works quickly and effectively (Karimov, 2020).
- Availability of flexible curricula and platforms.
- Continuous monitoring and analysis of the educational environment.

**Negative aspects:**

- Decreased live communication.
- The emotional connection between the teacher and the student is weakened.
- The educational process may be disrupted due to technical failures.
- The reliability of information is not always guaranteed (Norqulova, 2023).
- The risk of tying students to artificial algorithms.
- Pedagogical intuition and empathy may be lost.

**Amaliy asoslar.** Amaliy jihatdan sun’iy intellekt texnologiyalari ta’limda keng ko’lamda qo’llanilmoqda:

- **Virtual yordamchilar:** AI asosidagi platformalar orqali o’quvchilar kunning istalgan vaqtida savol berib, javob oladilar. Masalan, “Khan Academy” va “Duolingo” kabi ilovalarda bu imkoniyatlar keng.

- **Onlayn baholash tizimlari:** Sun’iy intellekt test natijalarini avtomatik tarzda tahlil qilib, individual taqrizlar tayyorlaydi. Bu esa o’qituvchiga vaqt tejash imkonini beradi.

• **Simulyatsiya va AR/VR texnologiyalari:** Sun'iy intellektga asoslangan bu texnologiyalar yordamida pedagoglar amaliy mashg'ulotlarni real hayotga yaqin tarzda o'rgata olishadi. Bu esa, ayniqsa, tibbiyot, muhandislik va pedagogika sohalarida juda samarali.

• **Pedagoglar uchun treninglar:** Ko'plab xalqaro tashkilotlar (masalan, UNESCO, British Council) tomonidan AI texnologiyalarini o'rgatish bo'yicha onlayn kurslar ishlab chiqilgan. Bu orqali pedagoglar doimiy ravishda malakasini oshirishi mumkin.

Sun'iy intellekt yordamida tashkil etilgan interaktiv darslar, "flipped classroom" (teskari sinf), "blended learning" (aralash ta'lim) kabi metodlar pedagogik faoliyatga innovatsion yondashuvlar kiritmoqda. Bu esa o'qituvchilardan kommunikativ ko'nikmalarning yangicha formatini talab qiladi.

**Sun'iy intellekt va ta'limdagi yangi imkoniyatlar.** Sun'iy intellekt o'qitish va o'rganish jarayonini avtomatlashtirish, individual yondashuvni ta'minlash, o'quvchilarning yutuqlari va muammolarini aniqlashda muhim rol o'ynaydi<sup>1</sup>. Masalan, AI yordamida ishlovchi platformalar orqali o'quvchilarning qiziqishiga mos topshiriqlar avtomatik ravishda tanlanadi. Bu esa ta'lim jarayonini shaxsga yo'naltirilgan yondashuvga olib keladi. AI vositalari yordamida o'qituvchi darsni yanada interaktiv formatda tashkil eta oladi. Vizual va audio materiallardan foydalanish orqali o'quvchilarning e'tiborini jalb qilish, ularni faollashtirish imkoniyati ortadi.

**Pedagoglar uchun kommunikativ ko'nikmalarning o'zgarishi.** AI texnologiyalarining joriy etilishi natijasida pedagogik muloqot shakli va uslubi ham o'zgarishga yuz tutdi. Endilikda o'qituvchilar nafaqat dars beruvchi, balki raqamli kommunikator, texnologik vositalardan foydalanuvchi mutaxassis sifatida namoyon bo'lmoqda. Bu esa ularning og'zaki, yozma va vizual muloqot ko'nikmalarini kengaytirishni talab qiladi.

Masalan, AI chatbotlar yordamida o'quvchilar bilan 24/7 aloqa o'rnatish, elektron portallar orqali teskari aloqa berish, video darslarni tayyorlash va ularni ijtimoiy tarmoqlarda tarqatish pedagogik kommunikatsiyaning yangi yo'nalishlariga kiradi.

#### **Sun'iy intellektning ijobiy jihatlari:**

- O'qituvchilarning vaqtini tejaydi va yuklamasini kamaytiradi.
- O'quvchilarga individual yondashuvni kuchaytiradi.
- O'quvchilarning mustaqil o'rganish salohiyatini oshiradi.
- Feedback (aloqa) tizimi tez va samarali ishlaydi (Karimov, 2020).
- Moslashuvchan o'quv rejalari va platformalarning mavjudligi.
- Ta'lim muhitining doimiy monitoringi va tahlili.

#### **Salbiy jihatlari:**

- Jonli muloqotning kamayishi.
- Pedagog va o'quvchi o'rtasidagi hissiy aloqa zaiflashadi.
- Texnik nosozliklar tufayli ta'lim jarayoni buzilishi mumkin.
- Har doim ham axborotning ishonchliligi kafolatlanmaydi (Norqulova, 2023).
- O'quvchilarni sun'iy algoritmlarga bog'lab qo'yish xavfi.
- Pedagogik intuitsiya va empatiya yo'qolishi mumkin.

Positive and negative aspects of artificial intelligence (in tabular form)

Positive aspects	Negative aspects
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Positive aspects	Negative aspects
Reduces teacher workload and saves time	Decrease in live communication
Creates opportunities for individual work with students	The emotional connection between teacher and student weakens
Students can learn independently at their own pace	Technical failures can disrupt the learning process
The feedback system works effectively, there is a possibility of rapid information exchange	The danger of over-reliance on artificial algorithms
Helps develop digital competencies	The teacher's intuitive decisions and elements of empathy may decrease
AR/VR and simulations make lessons more visual and engaging	The information AI provides may not always be reliable or up-to-date.
Artificial monitoring systems help control the quality of education	The same algorithmic approach to all students ignores human differences

#### Recommendations for educators:

- Adopt AI technologies with a critical mindset.
- Continuously improve digital literacy.
- Direct AI tools correctly, without losing live communication.
- Adhere to ethical standards and ensure confidentiality.
- See AI as an auxiliary tool in the teaching process, but humans should retain the main pedagogical role.

As the role of artificial intelligence in the education system increases, the need for educators to combine communicative skills with new technologies is also increasing. As shown in this article, artificial intelligence can be a useful tool in the effective organization of the educational process, but it can never completely replace the human factor - live communication, empathy and pedagogical sensitivity. Therefore, educators need to use technologies with a creative and critical approach.

As a final conclusion, we can say that in this era of rapid development of digital technologies, a teacher must be flexible, constantly learning and able to manage artificial intelligence.

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