



MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC
SOLUTIONS
SUN'IY INTELLEK ASOSIDA SHAXSGA YO'NALTIRILGAN
TA'LIM

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Annotatsiya: Mazkur maqolada zamonaviy ta'lim tizimida sun'iy intellekt texnologiyalaridan foydalanish asosida shaxsga yo'naltirilgan ta'limni tashkil etish masalalari keng yoritiladi. Bugungi kunda ta'lim jarayonida o'quvchilarning individual qobiliyatlari, ehtiyojlari, qiziqishlari va o'zlashtirish tezligini hisobga olish muhim ahamiyat kasb etmoqda. An'anaviy ta'lim modellari barcha o'quvchilar uchun bir xil yondashuvni taklif etgani sababli, ularning individual imkoniyatlarini to'liq ochib bera olmaydi. Sun'iy intellekt asosidagi ta'lim tizimlari esa adaptiv o'qitish, ta'limiy ma'lumotlarni tahlil qilish va shaxsiy o'quv trajektoriyalarini shakllantirish imkonini beradi. Maqolada sun'iy intellektning didaktik imkoniyatlari, ta'lim jarayonidagi o'rni, afzalliklari hamda uni joriy etishda yuzaga keladigan muammolar ilmiy-nazariy jihatdan tahlil qilinadi.

Abstract: This article examines the implementation of personalized education through the use of artificial intelligence technologies in modern educational systems. Today, increasing attention is paid to learners' individual abilities, needs, interests, and learning pace. Traditional educational models, which are based on standardized approaches, often fail to address these individual differences. Artificial intelligence-based educational systems provide opportunities for adaptive learning, data-driven analysis, and the development of personalized learning trajectories. The article analyzes the didactic potential of artificial intelligence, its advantages, and the challenges associated with its integration into the educational process from a scientific and theoretical perspective.

Kalit so'zlar: sun'iy intellekt, shaxsga yo'naltirilgan ta'lim, adaptiv o'qitish, raqamli ta'lim, individual yondashuv.

Keywords: artificial intelligence, personalized education, adaptive learning, digital education, individual approach.

Kirish

Axborot-kommunikatsiya texnologiyalarining jadal rivojlanishi jamiyatning barcha sohalari qatori ta'lim tizimiga ham sezilarli ta'sir ko'rsatmoqda. Bugungi kunda ta'lim jarayonidan faqat bilim berish emas, balki mustaqil fikrlay oladigan, moslashuvchan va raqamli kompetensiyalarga ega shaxsni shakllantirish talab etilmoqda. Shu sababli ta'limda yangi yondashuvlar, xususan, shaxsga yo'naltirilgan ta'lim konsepsiyasi alohida ahamiyat kasb etmoqda.





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Shaxsga yo'naltirilgan ta'limda o'quvchi ta'lim jarayonining markaziga qo'yiladi va uning individual xususiyatlari asosiy mezon sifatida qaraladi. Ushbu yondashuvni samarali amalga oshirishda sun'iy intellekt texnologiyalari muhim vosita bo'lib xizmat qiladi. Sun'iy intellekt yordamida ta'lim jarayonini tahlil qilish, monitoring qilish va moslashtirish imkoniyati paydo bo'ladi.

Introduction

The rapid development of information and communication technologies has brought significant transformations to educational systems worldwide. In the contemporary digital era, education is expected not only to transfer knowledge but also to develop learners' critical thinking, creativity, adaptability, and digital competencies. Traditional teaching models, which follow standardized curricula and a uniform approach, often fail to meet the diverse individual needs, learning styles, and paces of all students. This has created the need for a shift towards personalized education, which places the learner at the center of the educational process. Artificial intelligence (AI) technologies provide a unique opportunity to implement personalized education effectively. AI enables adaptive learning by continuously analyzing student performance, identifying gaps in understanding, and offering customized content and exercises. Furthermore, AI can monitor progress in real time, enabling teachers to make data-driven decisions that support each learner's individual development. In addition, AI systems can recommend supplementary resources, simulate problem-solving scenarios, and facilitate interactive learning experiences, enhancing engagement and retention.

Asosiy qism

Shaxsga yo'naltirilgan ta'lim gumanistik pedagogika tamoyillariga asoslanadi. Ushbu yondashuv L.S. Vygotskiy, A. Maslou, K. Rogers kabi olimlarning nazariy qarashlariga tayanadi. Ularning fikriga ko'ra, ta'lim jarayoni shaxsning ichki imkoniyatlarini rivojlantirishga xizmat qilishi lozim. O'quvchi passiv tinglovchi emas, balki faol subyekt sifatida namoyon bo'ladi.

Bu yondashuvda o'qituvchi nazoratchi emas, balki yo'naltiruvchi va maslahatchi vazifasini bajaradi. Ta'lim mazmuni va metodlari o'quvchining qobiliyati va ehtiyojlariga moslashtiriladi. Sun'iy intellekt texnologiyalari ta'lim jarayonini individuallashtirishda katta imkoniyatlarga ega. Mashinaviy o'rganish algoritmlari o'quvchilarning bilim darajasi, faolligi va natijalarini tahlil qilib, ularning o'rganish uslubini aniqlaydi. Natijada o'quv materiallari murakkablik darajasiga ko'ra moslashtiriladi.

Sun'iy intellekt asosidagi tizimlar testlar, interaktiv topshiriqlar va virtual yordamchilar orqali o'quvchilarning bilimini mustahkamlashga yordam beradi. Bu esa o'rganish samaradorligini oshiradi. Sun'iy intellekt ta'lim jarayonida o'qituvchining ahamiyatini kamaytirmaydi. Aksincha, u o'qituvchining ijodiy va metodik faoliyatiga ko'proq e'tibor qaratishiga imkon yaratadi. O'qituvchi ta'lim jarayonini boshqaruvchi,





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motivatsiya beruvchi va individual yondashuvni ta'minlovchi shaxs sifatida faoliyat yuritadi.

Sun'iy intellekt asosidagi ta'lim tizimlarini joriy etishda texnik infratuzilma, kadrlar tayyorlash va axborot xavfsizligi bilan bog'liq muammolar mavjud. Shuningdek, shaxsiy ma'lumotlarni himoyalash va algoritmlarning xolisligini ta'minlash dolzarb masala hisoblanadi.

Main part

Personalized education is based on humanistic pedagogical principles. It emphasizes the development of learners' personal skills, independent thinking, and self-awareness. This approach is grounded in the theoretical perspectives of scholars such as L.S. Vygotsky, A. Maslow, and C. Rogers, who argue that education should not merely transfer knowledge but should also foster the holistic development of the learner. In this model, the learner is an active participant, not a passive recipient. The teacher's role also evolves: they are not just providers of information but become facilitators and mentors, guiding learners based on their individual needs and abilities. Instructional content and methods are tailored to each learner's capacities and learning style.

Artificial intelligence technologies play a critical role in individualizing education. Machine learning algorithms can analyze learners' knowledge levels, engagement, and performance patterns to identify optimal learning strategies. Based on these insights, educational platforms deliver adaptive content, exercises, and assessments.

AI systems also provide continuous monitoring of learning activities, enabling the identification of gaps in understanding and the provision of targeted recommendations. Interactive tasks, simulations, and virtual tutors allow learners to strengthen knowledge efficiently and at their own pace, enhancing overall learning outcomes.

Transformation of the Teacher's Role

Far from reducing the importance of the teacher, AI enhances the teacher's capacity to support learning. Teachers are freed from repetitive and administrative tasks, allowing more time to focus on creative, instructional, and methodological activities. The teacher becomes a guide, motivator, and analyst who helps learners navigate personalized educational pathways.

Challenges and Limitations of Implementing Artificial Intelligence

Despite its benefits, implementing AI in education presents several challenges. These include insufficient technical infrastructure, the need to develop teachers' digital literacy and competence, and concerns over data security and privacy. Ensuring the fairness, transparency, and ethical use of AI algorithms is also a critical issue, requiring careful monitoring and governance.

Xulosa

Xulosa qilib aytganda, sun'iy intellekt asosida shaxsga yo'naltirilgan ta'lim zamonaviy ta'lim tizimida inqilobiy yondashuv sifatida namoyon bo'ladi. Ushbu yondashuv o'quvchini ta'lim jarayonining markaziga qo'yadi va har bir o'quvchining individual qobiliyatlarini to'liq ro'yobga chiqarish imkonini yaratadi. Bu nafaqat o'quvchilarning





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faol ishtirokini ta'minlaydi, balki ularni mustaqil o'qishga, tanqidiy fikrlashga va 21-asr kompetensiyalarini rivojlantirishga undaydi.

Sun'iy intellektni shaxsga yo'naltirilgan ta'lim jarayoniga integratsiya qilish bir qator afzalliklarni beradi. U o'quvchilarning rivojlanishini doimiy monitoring qiladi, ta'lim materiallarini individual darajaga moslashtiradi va o'qituvchiga o'quvchilarning ehtiyojlariga mos pedagogik qarorlar qabul qilish imkoniyatini yaratadi. Natijada ta'lim jarayoni dinamik, moslashuvchan va har bir o'quvchining qiziqishi va sur'atiga javob beradigan bo'ladi. Shuningdek, sun'iy intellekt yordamida o'quvchilarni rag'batlantirish, interaktiv mashg'ulotlar va individual feedback taqdim etish orqali bilimni chuqurroq o'zlashtirish ta'minlanadi.

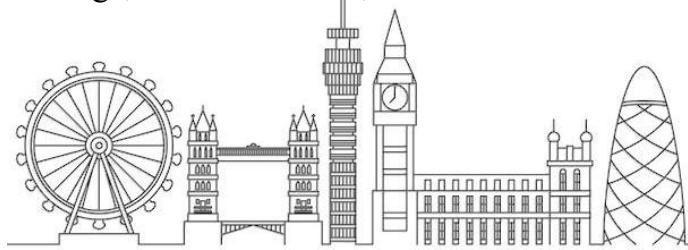
Conclusion

In conclusion, personalized education based on artificial intelligence represents a transformative approach in modern educational systems. By placing the learner at the center of the educational process and utilizing advanced AI technologies, this approach allows for the full realization of each student's individual potential. It promotes active engagement, self-directed learning, and the development of critical digital competencies, which are essential in the 21st century.

The integration of AI into personalized learning offers significant advantages. It provides continuous monitoring of learners' progress, enables adaptive content delivery, and allows teachers to make data-driven pedagogical decisions. This creates a dynamic, flexible learning environment that responds to the unique needs, interests, and pace of each student. Moreover, AI-assisted personalized education enhances motivation and fosters a deeper understanding of subjects by providing interactive, customized, and timely feedback. Looking forward, the strategic and thoughtful integration of artificial intelligence into educational practice has the potential to redefine traditional teaching and learning paradigms. It not only supports learners in achieving academic success but also equips them with the skills, knowledge, and competencies needed to thrive in a rapidly changing, digitalized world. Ultimately, personalized education powered by AI can contribute to more inclusive, effective, and innovative learning environments, laying the foundation for lifelong learning and continuous personal development.

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