

## ARTIFICIAL INTELLIGENCE IN EDUCATION

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### **Annotation**

This article focuses on the importance of Artificial intelligence in education. It explains how it help both teachers and students for orgazining productive and interactive lessons, get advice on difficult situations. This article also gives information about both positive and negative sides of AI in education. Furthermore, it emphasizes that AI should be used as a supportive tool rather than replacement for teachers.

**Keywords:** Artifial intelligence, study, education, lesson, benefit, tool, effect, technology, app, system.

**Annotatsiya:** Ushbu maqola sun'iy intellektning ta'limdagi ahamiyatiga qaratilgan. Unda sun'iy intellekt o'qituvchilar va talabalarga samarali va interaktiv darslarni tashkil etishda hamda murakkab vaziyatlarda maslahat olishda qanday yordam berishi tushuntiriladi. Shuningdek, maqolada ta'limda sun'iy intellektidan foydalanishning ijobiy va salbiy tomonlari haqida ham ma'lumot beriladi. Bundan tashqari, sun'iy intellekt o'qituvchilarning o'rnini bosuvchi vosita emas, balki ularni qo'llab-quvvatlovchi yordamchi vosita sifatida ishlatilishi kerakligi ta'kidlanadi.

**Kalit so'zlar:** Sun'iy intellekt, o'qish, ta'lim, dars, foyda, vosita, ta'sir, texnologiya, ilova, tizim.

**Аннотация:** Данная статья посвящена важности искусственного интеллекта в образовании. В ней объясняется, как искусственный интеллект помогает как преподавателям, так и студентам организовывать продуктивные и интерактивные занятия, а также получать советы в сложных ситуациях. В статье также представлена информация о положительных и отрицательных сторонах использования искусственного интеллекта в образовании. Кроме того, подчеркивается, что искусственный интеллект должен использоваться как вспомогательный инструмент, а не как замена учителям.

**Ключевые слова:** Искусственный интеллект, учёба, образование, урок, польза, инструмент, влияние, технология, приложение, система.

## Introduction

In the modern world, artificial intelligence is becoming one of the most important parts of education, as it has changed the way of teaching with modern methods that are more effective than the traditional way of education. AI gives many opportunities to both students and teachers in various ways to simplify tasks and organize effective, interactive and productive lessons by making suitable lesson plans. Despite its advantages for us, it has some negative effects on students. Since it helps them do their work by reducing human effort, they will heavily depend on technology and it decreases their critical thinking and self-confidence. Therefore, everyone should keep balance on using AI.

## The History of AI

The use of AI in the field of education can be traced back to the 1970s when LOGO programming TURTLE robots were introduced to young learners. However, those tools focused more on computational thinking or programming concepts instead of AI. In 1995, a book named 'Artificial Intelligence: A Modern Approach' was published and is considered the most standard textbook in the field of AI for computer science

undergraduates (Russell and Norvig, 1995). Accordingly, computer science university students could learn how AI can solve problems, reason, learn, make decisions, communicate, perceive, and act (Russell and Norvig, 1995). However, the concept remained limited to the field of computer science only. Later, the concept of AI in education evolved as the integration of AI into the education management system, which facilitates teaching, learning, and decision-making as well as provides virtual assistance for personalized education (Dignum, 2021; Hwang et al., 2020). AI can further enable providing individual customized learning for students, thus facilitating the learning needs. Educators can deliver the learning content to the students using AI-based technologies such as cloud computing in a format and form suitable for various student needs (Kabudi, Pappas, and Olsen, 2021). AI can also provide an opportunity for students to interact with chatbots, thus enhancing their learning and clearing any confusions, resulting in facilitating independent learning (Chen et al., 2020).

### **AI in Modern Classrooms**

The concept of AI is gradually making its way into the education field. Initially, it was known as AI literacy, which refers to the ability to understand, use, monitor, and critically reflect on AI applications without necessarily being able to develop AI models themselves (Long and Magerko, 2020). The term ‘AI’ was first used in an online article in 2015 (Konishi, 2015). The term joins a long line of proposed literacies intended to symbolize the understanding of a particular technological construct, like “media literacy” or “data literacy” (Wolff, Gooch, Montaner, Rashid, and Kortuem, 2016). “AI literacy” encompasses AI competencies that the general population should possess and accordingly focuses mainly on learners without a computer science background (“non-experts”). A frequently cited definition of AI literacy was developed by Long and Magerko (2020), who define it as "a set of competencies that enables individuals to critically evaluate AI technologies, communicate and collaborate effectively with AI, and use AI as a tool online, at home, and in the workplace." As the number of students who are eager to learn new

skills and new foreign languages in popular universities of foreign countries is increasing day by day, they need efficient ways that can help them overcome financial boundaries and get a chance of studying by staying at home. In such kinds of situations, online education and distance learning come in handy for students. Artificial intelligence has become an essential part of modern classrooms. Nowadays many schools and universities use AI-powered technologies to improve teaching and learning processes. Smart boards, virtual assistants, educational applications and online learning platforms are used to help teachers create more effective and interactive lessons.

### **Personalized Learning**

Using AI in classrooms can help teachers give instant feedback to each student without forcing students to wait for a long time. As they get feedback quickly, they can understand easily what they should do to improve their knowledge, and they can find their weak points that they have to work on to get higher scores. It is not beneficial for them to only realize their weak or strong points, but when they are aware that they have made progress on their study, they will get more motivation to study more because all students need positive feedback about themselves. Furthermore, by using various platforms, websites or other apps that include AI, they can learn anything on their own peace without following others' roots. Since everyone has their own attitude to do something, others' learning methods may not be suitable or easy for them. But, after they add their level of knowledge and their aim related to their study, AI will create an effective study plan that helps them study by obeying clear instructions without wasting time. Adaptive learning systems are another advantage of using AI. Although every student learns differently, traditional classrooms usually teach everyone in the same way. But if they use apps like 'Quizlet' or 'Duolingo,' system analyzes students' mistakes and which topic is difficult for each student.

### **AI as a support tool for teachers**

AI allows teachers to organize classroom activities more efficiently. For example, AI systems can automatically check attendance, prepare activities, and evaluate students' assignments in a short time. As a result, teachers can save time and focus more on explaining lessons and communicating with students. In addition, AI helps students access educational materials easily. Online platforms provide videos, exercises, and instant feedback that support independent learning. Students can study at their own pace and review difficult topics whenever necessary. AI technologies also make lessons more engaging through games, animations, and multimedia content.

### **Negative Sides of Using AI in Education**

Although AI has many advantages in education, it also has drawbacks. One of the most important ones of them is that students may become too dependent on technologies. The reason why, after students find its benefit while doing their homework, they do not want to use their own opinions, creativity or knowledge, and as a result, it reduces their critical thinking and knowledge they gained before. Another disadvantage of this is academic dishonesty, because when students cheat something from AI, it will be difficult for teachers to check their students' real knowledge, and they cannot create a suitable lesson plan for students to increase their performance. Many students use different platforms and AI tools to cheat in order to get high grades. However, this is more harmful than beneficial for their learning process. Parents should explain this issue to children at an early age and encourage them to use AI responsibly. Otherwise, when students face real exams or challenging situations, they may not be able to overcome these difficulties with their own knowledge and skills.

### **Conclusion**

In conclusion, AI is becoming one of the most important tools in education because of the number of benefits that we can get by using it. It helps teachers create more interactive and productive lessons while supporting students in their learning process. Despite its advantages, AI also has some negative effects such as overdependence on

technology, reduced critical thinking skills, and self-confidence. Therefore, students should not become fully dependent on technology because real knowledge and independent thinking are still essential for success in life.

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