



## "METHODS OF USING ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL SYSTEM"

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**Annotation:** Many academics in the field predict that the role of educators—teachers, schools, and leaders—will shift as a result of the rise in research on artificial intelligence (AI) in education. In this sense, the goal of this research is to investigate the possible effects of artificial intelligence (AI) in education and the implications that this may have for the future of education. The study employed a qualitative research design known as phenomenology to investigate the perspectives of participants from various industries. The findings indicate that when AI becomes more prevalent in education, teachers and schools will have to deal with both new products and disadvantages. The results highlight certain suggestions for applying AI and combating, despite the fact that most participants seemed to have positive opinions of AI, academics and teachers more specifically emphasized some negative aspects of the technology's potential impact on training. While engineers perceive AI as a tool to improve quality and benefit everyone in the education sector, lawyers and jurists frequently concentrate more on the legal justifications for AI in education and potential future issues.

**Key Words:** Artificial intelligence, learning, and administration of schools

**Introduction.** The ability of machines or computers to think and behave like humans is known as artificial intelligence (AI), and it refers to efforts being made to create computerized systems that can mimic human thought processes and behavior. Accordingly, the fundamental definition of artificial intelligence is the ability of tools or programs that accurately imitate the thought processes and conduct of humans. Timms suggests that the idea that artificial intelligence will be incorporated into the home computer layout may be a product of the current system. It could enter our lives in any number of ways and types. According to Ng (2017), artificial intelligence is the modern equivalent of electricity. Given its potential to ensure economic development, artificial intelligence is a strong contender to be positioned as the fundamental building block of the Fifth Industrial Revolution (see Golic, 2019). That may be the reason China's AI investment total of \$40 billion in 2017 cracked previous records. China's gross domestic product (GDP) is predicted to rise by 26% (\$7 trillion) by 2030, in line with its earnings from AI. In the same duration, North America is predicted to grow by 14.5% (\$3.7 trillion) (PwC, 2017). These statistics help the public better understand artificial intelligence's extra advantages and worldwide influence he future economy, and in our case, for the future of education, which in turn, directs the economy and workforce, paving the way for the new Industrial Revolution.

The broad a restructuring of the social order to the management and instruction of students in educational institutions are going to be affected by the deep development of artificial intelligence. Among the key organizations that might be most impacted by the advancement of

artificial intelligence are schools, which are expected to adjust to the digital age and incorporate 21st century skills into their core curricula. According to Karsenti (2019), new technologies will permeate our lives and enthrall our children, so schools may be forced to accommodate them. How stakeholders in the fields of law, business, education, and engineering view this development and anticipate the use of artificial intelligence in education form the focus of this study. Thus, the purpose of this study is to examine what the use of artificial intelligence in education means and what kind of implication it can reveal for the future of education, according to the opinions of the participants from different sectors.

The International Artificial Intelligence in Education society (AIED) is an interdisciplinary community at the frontiers of the fields of computer science, education and psychology. The

International AIED society was launched on 1<sup>st</sup> January 1997. It gathers researchers by holding the International Journal of AI in Education (IJAIED) and AIED conference series. In general, there are four areas of AIED in academic support services, and institutional and administrative services such as Profiling and Prediction, Assessment and Evaluation, Adaptive systems, Personalization and intelligent tutoring systems. The field of AI is both innovative and derivative.

Artificial Intelligence is an emerging technology that started modifying educational tools and institutions. Education is a field where the presence of teachers is must which is the best educational practice the advent of Artificial Intelligence changes the teacher's job who are irreplaceable in the education system. The AI uses mainly advanced analytics, deep learning and machine learning for monitoring the speed of a particular individual among the others. As artificial intelligence (AI) solutions develop, they aid in discovering gaps in instruction and learning and raise instructive proficiency. AI can improve productivity, personalization, and administrative tasks so that teachers have more time and freedom to impart knowledge and flexibility—qualities that are exclusive to humans and which machines would find difficult to match. Teachers who operate in tandem with machines can help students achieve their full academic potential.

**AI'S IMPACT IN EDUCATION.** Future artificial intelligence (AI) will affect almost every aspect of our lives, but the education sector will be particularly affected because education is a vital component of life and the current system needs a lot of improvement. The educational options available in the future thanks to AI are far more flexible than those of the past.

The most crucial members of the schooling system, the teachers, are both costly and not scalable. Teachers are underappreciated and given a ton of paperwork in some of the countries. AI could help each person independently by providing them with a customized curriculum based on their assessments of their abilities and areas of interest.

**AI'S BENEFITS FOR EDUCATION.** Young people these days often spend a lot of time on their tablets or smartphones. This allows them to use AI applications to study for ten to fifteen minutes during their free time. AI uses gesture recognition technology to help us understand the students' ease or mood during the lectures. As artificial intelligence (AI) advances, the machine can now read student facial expressions and gestures to determine whether a student is having difficulty understanding the lecture and can adjust the lesson to make it easier for the student to follow up.

The customization of the academic curriculum can be done by AI powered machines. AI tools can make global classrooms possible including people who are visually or hearing

impaired. This can also help students who cannot attend classes due to illness. In the normal education system, the teacher grades the students on their homework and tests, which would consume a lot of time. Here when AI steps in it would make a quick work out of these tasks. It also helps in suggesting the ways to overcome the gaps in learning. AI provides with several resources to people who speak different languages or have hearing or visual difficulties. Presentation Translator provides subtitles in real-time mode, which is an AI based system application. For example, with the help of google translator students can read and hear in their national language. For more interactive sessions modern technologies like VR and gamification are helpful. Multiple-choice tests have already been graded by machines in a few setups, and progress is currently being made toward the possibility of grading written responses—such as paragraphs and statements—by machines. This facilitates a teacher's work and saves time, which can be allocated towards focusing more on the growth and individual assessment of each student.

Admissions and enrollment processes can also be done with AI in the future and its full potential is yet to be out. AI can help students in their homework or test preparations at home. AI in the near future will be able to respond to a range of learning styles. It's all thanks to Artificial Intelligence that tutoring and studying programs are becoming more advanced. AI can create groups in students who are suited for particular tasks.

This is known as Adaptive Group Formation. AI application software which can instantly grade student's essays. These essays are added into a central database and the future essays can be compared using the previous essays present in the database. Artificial intelligence in education is a computer-based technology that provides personalized, adaptive and insightful teaching. The key parts of AIED system is Domain Knowledge model that provides the capability of the system to complete the tasks that makes the students to judge to contribute towards the solution. The Student Model that provides representation of the learner in terms of their developing knowledge and skills. The Model of Pedagogy is the component that represents teaching capability of the system and finally the Interface component that provides the channel through which the learner and the system communicate.

Voice Assistant is another aspect of AI that has great educational value. It's an innovative use of artificial intelligence. These include Amazon's Alexa, Apple's Siri, Microsoft's Cortana, and Google Assistant. Without the teacher's assistance, these voice assistants enable students to have direct conversations with the educational resources available on the internet and on installed devices.

Some universities and other educational institutions are gradually abandoning the traditional methods of instruction as they grow dated. As a complement to giving students printed learning resources or complex websites with information about campus, they already started providing voice assistants to students. For instance, in the hope to give new students more frequent access to accurate and succinct institutional information about their needs on campus, Arizona State University is now offering Amazon's Alexa.

Voice Assistants can be used at home and other non-educational locations to access any learning assistance. Voice Assistants main aim here is to provide answers for the common questions regarding campus needs or for a particular schedule and courses of each student which helps the institution in cutting down the printing expenses of handbook that are only



used temporarily during the initial period of their joining in the institution and supports in reducing the requirement for internal support. The use of this technology is expected to be escalated in the coming years.

**Creating an AI-Powered Educational Platform.** To create an AI platform for education, there are six basic steps. Step 1: Examine the available options. Step 2: Examine the application's content, which needs to be engaging and interactive. Step 3: Talk to the development team about the project's requirements. Step 4: In order to prevent bugs, the application needs to be properly tested in-depth. Step 5: After the app is released, promote it and gather user feedback. Step 6: Continually update your application.

Initially we must make some analysis on the existing solutions carefully and add new feature to them so that the user gets attracted to your solution instead of the others. Study the design ideas. User's always prefer the useful content so you can choose topics like Medicine, Literature, Math and others. This useful content can also be obtained from tutors of various universities or colleges and from various sources like courses, training programs. You need to clarify the business goals and project requirements before the project development. The development team must be an experienced team of software developers and they need to have experience in Artificial Intelligence. You can create a simple startup version of your application or platform and after taking feedback from the users and their reviews you can update your platform on a regular basis adding extra content or extra features. Excellent user experience should be provided in order to attract more users. This can happen when there are no complaints from the users end and for this to happen we should find and fix the bugs before launching the platform. This bug fixing can be done by qualified Quality Assurance Engineers. Regular upgrade of the platform is needed based on the user's feedback.

**DISADVANTAGES OF AI IN EDUCATION .** Despite of the huge opportunities AI offers there might also be some potential risks with it. AI is likely to become either the best or the worst thing that might happen to humanity. AI could support teaching and learning but new ethical implications and risks emerges with the development of AI applications in higher education. One such example is, due to the ongoing corona virus pandemic and the budget cuts, the administrators might think of replacing teaching with profitable automated AI solutions. If the usage of AI in education increases there might be chance that personal interactions get decreased and students get technology addicted and sometimes this may hurt the learners instead of helping them. The faculty members, student counsellors, teaching assistants and administrative staff might get feared that the Intelligent Tutor System which is application of AI might replace them. AI system require a huge amount of data including information of students and staff which is confidential and it heads to serious privacy issues. When compared to the cost of installation, maintenance and repair AI is highly expensive. Only the heavily funded educational organizations can allow themselves to enjoy such high technology. When relied on this technology too much it can cause lack of personal connections and might hurt the users in this perspective. When something like natural disasters or accidents occur and an AI needs repairs we can never know how much amount of data is lost.

**Conclusion .** AI has brought about a revolutionary shift in education. The next generation of AI applications in education have not yet been developed, according to a report published by the Center for Integrative Research in Computer and Learning Sciences. Thus, those

developing AI applications should to provide thorough data on this to educators and those drafting education policy. Although there are several cons of using AI in educational sector, our future is AI so the educational system should start exposing their students to this sort of technology which started using a bit of AI. The impact of AI will be seen first in the lowest education levels and gradually increase to the higher education. The ultimate impact of AI in education will only decided by the time. The main aim of AI is to make the work of an educator easier but not to replace them.

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