Role of Artificial Intelligence in Educational Organizations
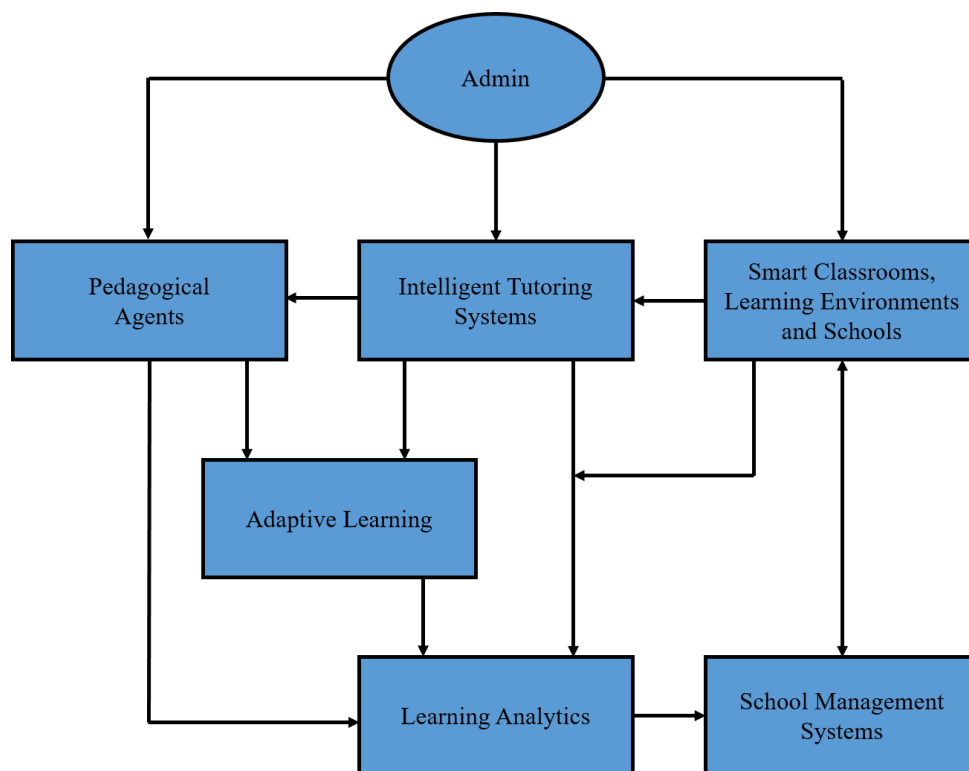
Gulista Khan, Associate Professor,
College of Computing Sciences and Information Technology, Teerthanker Mahaveer University,
Moradabad, Uttar Pradesh, India
Email Id- gulista.khan@gmail.com

ABSTRACT: Technologies has always been crucial to education, but due to the growing accessibility of smart devices as well as web-based curricula, its usage is now more common than ever. Artificial intelligence is being applied in education in a variety of ways to improve students in their learning. In the previous 25 years, there has been a considerable advancement in artificial intelligence in the subject of education. As a result, there has been a revolution in the field of education today. Education is widely accessible nowadays and costs money. On the other hand, two questions surface when we attempt to influence our future by thinking back on our past. The first is what the sector of education's positive influences are and what prospects this technology may bring about in the future. In this essay, the author makes predictions about the field of artificial intelligence and education (AIED) research in the near future based on instructional procedures and models as a scientific tool, models as elements of educational artefacts, and models as the foundation for the design and model of educational artefacts that have been studied. Other academics will learn about utilizing AI as a teaching tool from a future publication here, which will also serve as a foundation for their own study. This study will help students achieve their objectives by giving them tailored feedback on their assignments, tests, and other assignments using AI algorithms.

KEYWORDS: Artificial Intelligence, Education, Students, Teaching, Technology.
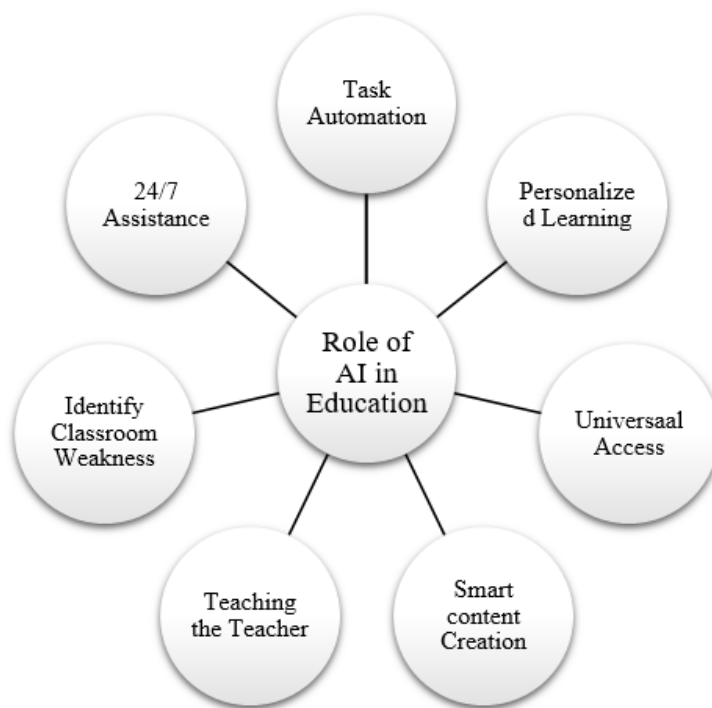
1. INTRODUCTION

The Internet and mobile phones seem to be two interconnected phenomena that have an influence on everyday life. Technology is continually transforming several industries. The amount of screen time that parents, teachers, and psychologists should let their kids to use is a topic of intense debate. Another quickly evolving technology has the potential to fundamentally alter how the university system functions. Artificial intelligence in education is already being used to provide novel methods of instruction for a range of situations [1]. All throughout the globe, colleges and institutions are already using AI [2]. AI in education has given parents, teachers, students, and of course educational institutions an entirely new perspective on education. AI in education refers to the use of computer intelligence to support learners and educators while enhancing the efficiency of the educational process [3]–[5]. It makes no mention of substituting humanoid robots for real instructors in the classroom. Numerous technologies, including AI, which will be included into the system, will have an impact on education in the future. In order to integrate emerging ICTs into teaching and learning, especially for higher education, a specialist field called AIED evolved in the 1970s. The main goal of AIED is to provide people flexible, engaging educational possibilities in addition to jobs that are essentially automated. Some of the innovations that are often used in AIED include the learning environment, smart classroom technology, adaptive learning, and instructional agents. The link between each of these developments is shown in Figure 1:

Figure 1: Display some popular trends in Artificial Intelligence in Education systems.

Artificial intelligence (AI) research is an old field of study. It gained popularity via television series and a number of historical authors as well. Despite the fact that thus far, things haven't gone as planned, technology is still there and affecting every business [6]. Technology is not often underrepresented, even though it has an impact on many professions, including education. But this is what artificial intelligence is all about. Experts have recently predicted that between 2017 and 2021, the US would experience a 47.5% growth in the application of artificial intelligence in academics. The analysis of a market for artificial intelligence in the US education sector, for example, supports this. However, they all agree that it will impact how and where they carry out their jobs and that best practices should be used in the classroom, despite the fact that many education experts believe technology cannot replace teachers. More than only how trainers may carry out their tasks are being altered by it [7]. It is also altering the way that kids learn. There is no nation-specific restriction on its growth. By 2025, according to market research experts, $5.80 billion will be spent globally on artificial intelligence in education, with a 45% annual growth rate. The author has seen the last of this technique's fantastic applications in movies. The author lives this every day, and it has created a lot of opportunities in the sphere of education as well. Figure 2 illustrates how machine intelligence is already playing a significant role in various fields, including education.

Figure 2: Illustrates the Leading Roles of Artificial Intelligence in Education Sectors.

  i.   *Task-Automation:*

The educational industry will benefit from learning how AI has been used in other businesses to automate employment. Along with carrying out numerous administrative and organizational tasks, administrators and students often have to keep an eye on the classroom environment. Teachers make a statement in essay writing services in addition to educating students. In addition, they spend time organizing instructional materials, setting up supplies for lectures, marking tests, checking assignments, gathering documentation, generating performance reports, etc [8]. It takes a lot of work to do this. Even though they spend so much time on activities other than teaching, they nevertheless wind up being overworked. These tasks will be automated by artificial intelligence, giving instructors more time to concentrate on their core instructional responsibilities.

  ii.   *Personalized-Learning:*

Each piece of educational software may be improved thanks to AI. Students already have access to software, games, and learning resources that are adaptable. The application of such AI in education is perhaps one of the most crucial at the moment since teaching is simpler, more practical, and does not depend on previous knowledge. By focusing on the specific area in which each student is weak and making them repeat things they have not yet mastered, this strategy targets the goals of each student. It will make possible individualized learning using AI. When kids ask for it, teachers must support and direct them.

  iii.   *Universal-Access:*

In international markets, AI technology may makes colleges and universities accessible to the broader public, including those who have hearing or vision disabilities or who speak other languages. Thanks to a PowerPoint plugin like Presentation Translator, students are receiving real-time subtitles for everything instructors say. This opens up chances for parents who want to teach a topic that may not be taught in their school or who have kids who need a different degree of instruction or skip class because of sickness. AI can break through the boundaries among universities and conventional grade levels.

2. DISCUSSION

Since it alters how quickly humans learn, the use of artificial intelligence in education has grown in favour. Artificial intelligence in education has the ability to alter the game for every young person. Given that many schools in the nation now employ some kind of artificial intelligence (AI), you should be aware of how it might benefit your kid. The learning environment has changed as a result of the employment of technology in education, which has improved outreach and execution [9]. Technological in Education, as defined by the Association for Educational Communications and Technology (AECT), is the moral application of fostering learning and enhancing performance via the invention, usage, and administration of potent technology processes and tools. As a component of online learning, operational process design, development, usage, monitoring, and evaluation were highlighted as concepts and methodologies. Technology had a significant role in the pandemic-compelled online course delivery. Since online education is now considered to be the most effective form of instruction, further advancements must be made in this area. It will be possible to enhance online courses thanks to AI [10], [11]. This might increase the online education industry in India, which is expected to reach $1.96 billion by 2021. Professors will always be present at higher education institutions, but AI will support and enhance their job. It is anticipated that AI will address the delivery and methodology gaps in education. With the aid of AI, students will get a customized curriculum, assessments, learning approach, and delivery. Otherwise, it would have been difficult for instructors to oversee and provide education that was tailored to the unique needs of each student.

3. CONCLUSION

AI might be beneficial for parents who have always been concerned about their children's social life. Thanks to AI technology, they could now monitor parent and kid online use more closely than in the past. The instructor use software that divides pupils into suitable groups in accordance with requirements after assessing data points and the extent to which they comprehend the entirely unrelated subject matter. Using AI, students will have access to professors and lectures whenever they want, from almost anywhere. When used as a tool in the classroom, AI may help the students succeed by providing them with answer options on their homework, exams, and other assignments that are based on AI-algorithms. Artificial intelligence-enabled automation has the ability to make life simpler for everyone by eliminating the need for time-consuming tasks like handling emails or finding files. It's the age of education now! AI has a significant impact on how education is changing and provide so many wonderful advantages. Every student will have equal access, regardless of their learning style or disabilities; this is significant since not all kids acquire information and skills at the same pace. Students may brighten their futures by using AI.

REFERENCES:

[1]   W. Chester, "Ethical Guidelines for AI in Education: Starting a Conversation," *World Futures*, 2000.

[2]   J. Andriessen and J. Sandberg, "Where is Education Heading and How About AI?," 1999.

[3]   J. Kay, "AI and education: Grand challenges," *IEEE Intell. Syst.*, 2012, doi: 10.1109/MIS.2012.92.

[4]   B. P. Woolf, H. C. Lane, V. K. Chaudhri, and J. L. Kolodner, "AI grand challenges for education," *AI Mag.*, 2013, doi: 10.1609/aimag.v34i4.2490.

[5]   N. H. Arai and T. Matsuzaki, "The impact of A . I . on education – Can a robot get into The University of Tokyo ?," *Proc. ICCE*, 2014.

[6]   R. Steinmetz and S. Göbel, "Challenges in Serious Gaming as Emerging Multimedia Technology for Education, Training, Sports and Health," 2012. doi: 10.1007/978-3-642-27355-1_3.

[7]   A. Terracina terracina@dis.uniroma1.it and M. Mecella mecella@dis.unuiroma1.it, "Building an Emotional IPA Through Empirical Design With High-School Students.," *Proc. Eur. Conf. Games Based Learn.*, 2015.

[8]   J. Momoh, "Next Generation Optimization for Electric Power Systems," in *Economic Market Design and Planning for Electric Power Systems*, 2009. doi: 10.1002/9780470529164.ch10.

[9]   B. Mesko, "The role of artificial intelligence in precision medicine," *Expert Review of Precision Medicine and Drug Development*. 2017. doi: 10.1080/23808993.2017.1380516.

[10]   S. Gulwani, "Example- Based Learning in Aided STEM," *Commun. ACM*, 2014.

[11]   G. Al-Hudhud, "Intelligent system design requirements for personalizing e-learning systems: Applications of AI to education," *Int. J. Eng. Educ.*, 2012.