

## **Revolution in Education through Artificial Intelligence (AI)**

Dr. Sunita<sup>1</sup>, Dr. Renu Bala<sup>2</sup> & Dr. Mohammad Akbarul Qadri<sup>3</sup>

<sup>1</sup>Assistant Professor, Vaish College of Education, Baund Kalan, CharkhiDadri

<sup>2</sup>Associate Professor, Department of Library Science, NIILM University, Kaithal, Haryana

<sup>3</sup>Assistant Professor, Al-Hassan Teachers' Training College, Chakbahauddin, Dalsingsarai, Samastipur.

### **Abstract**

The Artificial Intelligence (AI) has made major changes in all aspects human life. It also has brought revolution in the field of education. The teaching and learning process is rapidly changing. The AI is making education more personal, interactive and useful. It creates a serious for teachers work and helps students in their learning.

This technology is changing the method of teaching and learning. Students can learn with their own face using AI. The AI is also helping teachers to understand the performance of every student easily. The AI is also helping educational administration too. It saves time and work is done in a more systematic way. Now a large number of schools, colleges and universities are getting benefits from AI tools. The Intelligent Tutoring Systems are personally benefiting students. The AI based classroom can be managed by a teacher easily. It can be said that the AI has made its place in all spheres of the educational aspects. Its deep impacts can be seen not only in learning and teaching strategies but all over the system of education.

Artificial intelligence is not the future promises or a dream of tomorrow but it is now an inseparable part of our educational system. It is just not creating learning opportunities to students but also making easiness for teachers in their teaching process. Teaching learning exam examinations administration management attendance can be managed using AI.

*Keywords:* Artificial intelligence, Education, Revolution, Teaching, Learning

### **Introduction**

Artificial intelligence is not a dream of distance now. It has become a part of our life rapidly. Now we do lots of work in our daily life on computers, mobiles and laptops using AI. The field of education is not far behind. The AI has made major changes in the field of education in current scenario.

This technology is changing the method of teaching and Learning. Students can learn with their own pace using AI. The AI is also helping teachers to understand the performance of every student easily. The AI is also helping educational administration too. It saves time and work is done in a more systematic way. Now a large number of schools, colleges and universities are getting benefits from AI tools. The Intelligent Tutoring Systems are personally benefiting students. The AI based classroom can be managed by a teacher easily. It can be said that the AI has made its place in all spheres of the educational aspects. Its deep impacts can be seen not only in learning and teaching strategies but all over the system of education.

Teachers and academic administrative can analyses data at large scale with the help of AI. It can help them to make better decisions and educational planning. The AI has limited the obstacles of education too. Now there are lots of educational AI tools available which can help all types of students in learning at their own pace and in need. As the AI is growing the educational system is changing and developing. Education will be more personal more easy and more effective in the future. It can be said that AI is ushering in an era where learning will be better, beneficial and easier.

Now the question arises how AI can be used in education? Now AI is not just technology but it is the way of learning. It assists to understand the nature of students, to better their performance and to make the teaching learning process interesting. Let's learn how the different ways and innovation of AI make the teaching learning process effective and easy.

Artificial intelligence is not the future promises or a dream of tomorrow but it is now an inseparable part of our educational system. It is just not creating learning opportunities to students but also making easiness for teachers in their teaching process. Teaching learning exam examinations administration management attendance can be managed using AI. Let's see in detail what are the benefits of using AI in the field of education, Some are listed below among them:

- 1. Personalized learning:**

Individual difference is a very big term in educational psychology which explains that All students are not the same. Some students learn rapidly and some cannot and some have their own learning styles. I can analyze and understand all such types of individual differences and can create the learning material according to the student's understanding and capacity etc. for example dream box and smart sparrow system are analyzing students responses and then zip change the lesson automatically according to their needs so that they can understand easily. In this way every child learns according to his needs capacity and no one feels a burden.

**2. Self-management tasks:**

AI reduces the work load of the educators by using different tools. With the help of AI, we enhance the class schedule of other management tasks.

**3. Engaged learners:**

AI makes learning more effective and engaging through different programs like gamification quizzes. It responds to the students and motivates them.

**4. Increased participation of students:**

AI technology helps the students to increase their knowledge because it creates an environment to learn the students. AI helps in the educational games and provides personal learning experience to the pupil.

**5. Imperative expression:**

Robot machines act as human beings that impact the easy lifestyle of a person.

**6. Manageable classroom atmosphere:**

AI tools help teachers to make their classroom more creative and attractive. For example:  
- study material craft, student attendance, teacher attendance, tracking student performance which helps to maintain a classroom atmosphere in a productive and motivational manner.

**7. Encryption of data:**

Encryption of data means security of data any details and information regarding students and their learning can be encrypted with security code and passcode. Specially used for examination and test.

**8. Create interesting learning and teaching methods:**

AI creates graphics, images and video for explanation of any topic that interacts with the real world.

**9. Enhance reliability:**

AI tools enhance reliability for creating graphic and multimedia features of the internet with people in appropriate manners.

**Application of AI in Education**

AI is bringing revolution in the field of education. The teaching and learning process is rapidly changing. The AI is making education more personal, interactive and useful. It creates a serious for teachers work and helps students in their learning. Let's check out how AI is assisting in the field of teaching and learning process there are some examples written in the below.

**1. Adaptive Learning:**

Every person is unique in this world in the same way every person has individual differences in all spheres of life. Every student has his unique learning style. In a class some students understand concepts easily and some take more time to understand them, and every student has different questions and answers. In this regard AI helps students after assessing their mental abilities and prepares study material according to them. In such a way every student is learning and no one is left behind.

**2. Assistive Technology:**

AI software and tools help s try from students who have some difficulties in speaking and listening. For example: 'Speech recognition tools' convert an audio into text. In such a

way it helps those students who have hearing impairment and dyslexia. All students with the help of AI learn without any hurdles and difficulties.

**3. Data and Learning Analytics:**

Educational data such as attendance, online portal, grade and examination results all can be analyzed easily with its help. It also points out which student is facing difficulty and in which subject or field and it is an unbelievable help for teachers. On the basis of its information teachers make better planning for teaching and focus on students' weaknesses. In such a way students' performance improves and the learning process becomes more effective.

**4. Classroom Management:**

AI helps in maintaining discipline in the classroom. Some AI platforms make learning as easy as to play. It tracks students behaviour and activities. More points are given to those students who have good behaviour. This keeps students more active and makes it easier for the teacher to maintain classroom discipline.

**5. Intelligent Tutoring Systems:**

AI based tutoring system provides students personal guidelines. The systems change the lessons according to the need and learning styles. For example, platforms like 'Carnegie Learning' help students to understand the complex concept in an easy way. With the help of these systems students can learn and understand difficult subjects easily and their academic performance improves.

**6. Automated Grading and Assessment:**

AI can access and evaluate assignments and examination copies. It does not only give the result but also provides feedback in detail. Academic performance improves by using it and it saves teachers time and brings uniformity in grading. AI also can assess essay types of questions and also can check their standard correctness.

**7. Chatbots and Virtual Assistants:**

AI Chatbots also provide assistance outside of the classroom. They give the answers to student's questions, record deadlines, programme schedules and provide guidance in the educational process. This allows students to learn themselves and become able to solve the problems.

**8. Curriculum Planning:**

AI is helpful in planning and improving curriculum. It points out the shortcomings in the syllabus after analyzing the educational data. Teachers update the syllabus on the basis of its analysis. In this way, the curriculum remains modern and updated according to the needs of the students.

**9. Interactive Learning Games:**

Max education games and activities interactive and active. While playing these games students learn and solve the difficult questions in an easy way. In this way the AI makes the learning process more interesting and exciting.

**10. Personalized Learning:**

The AI platforms prepare lessons according to individual differences for everyone. These platforms reduce the burden of students and provide education according to their needs. By using these AI students learn according to their learning style and pace.

**11. Task Automation:**

AI prepares homework, grading, reporting and other works itself. By using this a teacher can focus on more important educational work and can spend more time discussing it with students so that they can guide them in a better way.

**12. Smart Content Creation:**

AI prepares digital license study material and assignments question papers for teachers. For example, AI tools such as 'Eduaide.AI' and 'Magic School AI' prepare lessons and study materials.

### **13. Proctoring:**

AI tools also proctoring as they stop students from cheating in examinations and provide help in maintaining honesty. They analyze the students behaviour and if any illegal activities are found then they inform the teachers immediately. This keeps the exams safe and transparent.

### **14. Language Learning:**

AI tools such as 'Duolingo' teach students the language and correct pronunciation. They make exercises easier or harder according to the students' progress. The use of AI tools makes the language learning process effective and interesting.

## **Conclusion**

Thus, we can say that in today's era, Artificial Intelligence has great importance in the teaching and learning process. The use of AI tools makes the language learning process effective and interesting. AI is bringing revolution in the field of education. The teaching and learning process is rapidly changing. The AI is making education more personal, interactive and useful. It creates a serious for teachers work and helps students in their learning

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