



## AI in Education: Using Artificial Intelligence to Enhance Teaching Learning Process

Najmunnisa <sup>1\*</sup>, Dharmendra Kumar <sup>2</sup>

<sup>1</sup> Assistant Professor, R.B.D. Mahila Mahavidyalaya, Bijnor, Uttar Pradesh, India

<sup>2</sup> Professor, Vardhman College Bijnor, Uttar Pradesh, India

\* Corresponding Author: Najmunnisa

---

---

### Article Info

**ISSN (online):** 2582-7138

**Volume:** 05

**Issue:** 06

**November-December** 2024

**Received:** 11-09-2024

**Accepted:** 13-10-2024

**Page No:** 200-203

India, due to the digital revolution, the number of internet users is increasing day by day. Internet technology reaches not only the urban area but also the rural landscape too. So there is tremendous demand for e-learning in India. Artificial Intelligence has the immense power to revolutionize e-learning and saves learners time and expenses. This would not burden learners because the AI-based e-learning platform will automatically provide all education-related information. It is powered by the technique of machine learning, deep learning, rule based system, Chat GPT, Playground AI heuristic searching, Artificial Neural network, Natural Language Processing, LMS (learning management system) and Support Vector Machine, etc. Such techniques make the teaching and learning process faster with minimum amount of errors. Thus, AI tools has been found to be useful in current teaching learning process among teachers and the students.

**Keywords:** Artificial Intelligence, Students, Teachers, Learning

---

---

### Introduction

India, due to the digital revolution, the number of internet users is increasing day by day. Internet technology reaches not only the urban area but also the rural landscape too. So there is tremendous demand for e-learning in India. According to the Global Industry Analysis, the e-learning market will reach \$325 billion by 2025 <sup>[1]</sup>. As per the statistical report, various private universities offer e-learning courses to their undergraduate and postgraduate programs. Ministry of electronics and information technology websites motivate e-learning as an essential tool for dynamic education. The government also provides aides for research and development projects in e-learning that focus on content development, faculty training, human resource development, etc. As per the online education report in India-2021, there is growing dependability on the internet for education, leading to huge scope for the e-learning market and corresponding employment opportunities <sup>[2]</sup>.

Artificial Intelligence has the immense power to revolutionize e-learning and saves learners time and expenses. This would not burden learners because the AI-based e-learning platform will automatically provide all education-related information. E-learning motivates the learner to acquire the knowledge, enhance the skills for better decision-making, and solve real-time problems. Artificial intelligence is the process of simulating human intelligence into a programmed machine to think like a human being for solving problems. Artificial Intelligence is a branch of computer science used to develop an intelligent machine that can think and act to solve complex problems rationally like a human being. It is powered by the technique of machine learning, deep learning, heuristic searching, rule based system, Artificial Neural network, Support Vector Machine, Natural Language Processing, etc.

Artificial intelligence can fill up the gaps in the subject area in which teachers don't have particular expertise to understand individual learner's skills and interests. Right from manufacturing, medical, e-commerce to education, and in every sector, AI plays an essential role in the automation of various activities (3) Artificial intelligent techniques help to transform learning by providing a personalized approach to the students.

### Applications of AI in education

AI tools like the Inquiry Intelligent Tutoring System (Inq-ITS) exemplify this by monitoring student learning progress, providing personalized learning feedback, and automating assessment with timely scoring <sup>[4]</sup>.

Veronica Salido (December, 2023) the study emphasizes that AI learning tools have the capacity to positively impact student understanding and performance in education. By embracing AI's potential, educators, policy makers, and stakeholders can navigate the integration process while upholding the fundamental values of education. Continued research, collaboration, and informed decision-making are essential to harness the transformative powers of AI and create a more effective and inclusive educational ecosystem. Timms (2016) <sup>[8]</sup> stated that artificial intelligence has had a significant impact on the learning process in many ways, including increased effectiveness and efficiency in school administration, global learning, individualized learning, innovative content, and motivational teaching. It is crucial to comprehend this relationship because it can help politicians and educational institutions realize the full potential of AI.

Artificial Intelligence automates the educational process, streamlines the educators, and saves time and routine administrative tasks. AI is necessary for learning and developing technology in the educational setting and society. It is crucial in the learning process because AI enhances the learning and creativity of students' performance. It improves academic performance and learning (Mallillin, 2020) <sup>[7]</sup>.

This enables us to enlighten young students on the strategic deployment of AI and social media to bolster both their academic endeavours and mental wellness. In doing so, we construct a navigational blue print for the youth to capitalize on smart learning methodologies for holistic self-improvement. This is consistent with prior studies that have endorsed the positive influence of Internet use on student academic performance.

Research by Vargas-Murillo (2023) <sup>[10]</sup> emphasizes the potential ethical considerations and challenges associated with the use of AI tools like Chat GPT in higher education. While these tools can enhance academic processes, their integration must be carefully managed to avoid disrupting existing educational practices and job roles.

### Artificial Intelligence (AI) has a wide range of applications across various industries. Here are some notable examples

1. **Healthcare:** AI is used for diagnosing diseases, personalized treatment plans, and drug discovery. For instance, AI algorithms can analyze medical images to detect abnormalities.
2. **Finance:** AI helps in fraud detection, risk management, and automated trading. Robo-advisors use AI to provide financial advice and manage investments.
3. **E-commerce:** AI powers recommendation systems that suggest products based on user behavior. It also enhances customer service through chatbots.
4. **Automotive:** AI is crucial for developing autonomous vehicles. Companies like Tesla and Waymo are using AI for self-driving technology.
5. **Education:** AI provides personalized learning experiences, automates administrative tasks, and offers intelligent tutoring systems.
6. **Entertainment:** AI is used in content recommendation on platforms like Netflix and Spotify. It also powers virtual

reality and augmented reality experiences.

7. **Agriculture:** AI helps in precision farming by analyzing data from sensors and drones to optimize crop yields and reduce waste.
8. **Human Resources:** AI streamlines recruitment processes by screening resumes and conducting initial interviews.
9. **Manufacturing:** AI-driven robots and automation systems improve efficiency and quality control in production lines.
10. **Security:** AI enhance cyber security by detecting and responding to threats in real time. It is also used in surveillance system.

### These are just a few example of how AI is transforming various sectors. The potential applications are vast and continue to grow as technology advances

1. **Chat GPT:** It is a conversational AI model developed by open AI. Its based on the GPT-4 architecture, which stands for Generative pre trained transformer-4. Chat GPT can understand and generate human-like text based on the input it receives. Its trained on a diverse range of internet text, It can assist with a variety of tasks, such as answering question, writing essays, summarizing text, translating languages, and even generating creative content like stories and poems. Chat GPT is available through various platform, including web interfaces, APIs, and integrations with other applications with other applications, making it accessible for both personal and professional use.
2. **Binge:** BINGE is an Australian streaming service that offers a wide range of TV shows, movies, documentaries, and more. BINGE provides access to thousands of hours of content from popular networks like HBO, BBC, FX, and more. In addition to on demand content, BINGE also include live TV channels. Binge is also AI-powered app which helps in content writing, generates ideas and information.
3. **Gama App:** The Gama app an AI powered tool designed to help users create beautiful presentations, documents, and websites quickly and easily. It offers a variety of pre-made templates to jumpstart your projects, allowing you to create engaging content in seconds. In it you can include interactive elements like galleries, videos, and embeds to make your presentations more dynamic. Gama makes it simple to share your content online, with options to track engagement and project sensitive files with password. its allow you to import existing documents and presentations, restyle them with a click, and export them as Pdf or ppt files.
4. **12 ft ladder:** (Bypass Pay walls, Unlock Online Content Easily) This tool is designed to help users bypass pay walls on various websites. It is helpful for reading any newspaper, article, which is paid. Its allowing users to access content that would otherwise be restricted. By reload the page with the modified URL provided by the 12ft ladder, you should be able to view the content without encountering the paywalls.
5. **Playground AI:** It is free AI powered design tool that allows users to create a wide range of digital content. It is used for image generation. Anyone can create art, social media posts, presentation, posters, videos, logos, and image. Its offers two main editing workspace; the board and the canvas, which include features like in painting, negative prompts and mixing synthetic and real

images. Its provide various templates for different types of projects, making it easy to start designing quickly. The platform is designed to be intuitive, allowing users of all skill levels to create professional-quality designs.

6. **Yoodli app:** (for practice of job interview and speech / presentation and resume) It is AI powered speech coach designed to help users improve their communication skills. Yoodli provides instant feedback on various aspects of your speech, including filler word, pacing eye contact, body language, and more. Your practice sessions are private by default, ensuring a safe space to improve without judgment. This app offers tailored advice and analytics to help you and enhance you're speaking abilities over the time.
7. **I.O. (for job and interview for ATS tracking system):** A tool that offers simulated mock interviews with industry-specific questions. Users can receive personalized feedback on their answers, including their tone, content, and presentation. Career Io also allows users to search for interviews by company, so they can learn more about the types of questions they might encounter.
8. **LMS (learning management system):** LMS is a software application designed to manage, deliver, and track educational courses or training programmes. LMS platforms allow you to create, manage, and organize courses easily. You can upload various types of content, such as videos, document, and quizzes. Its also provide report on learner progress, course completion rates, and performance metrics. Its make learning accessible from anywhere, at any time, which is specially beneficial for remote distributed teams. Many LMS platforms offer customization options to tailor the learning experience to the specific needs of your organization. Features like Gamification, social learning, and interactive content help keep learner engaged and motivated.
9. **Book Boon:** Book Boon is a great platform if you want to download online book PDFs without an additional fee. Yes, most publications here are free to access, and anyone whether they are lecturers or students may benefit from it to be a trustful source.

Not only textbooks, you may also find business guides, resources to enhance your career, and other valuable things inside. Although some books are limited only to premium users, there are plenty of them that can also be obtained for free. So if you're not planning to commit to a certain plan, you can always get your favourite books free.

10. **Digital Public Library of America:** If you wish to download online book PDFs and possibly other kinds of art, including artworks, photographs, digital books, or other valuable documents that anyone can see online, the Digital Public Library of America is the place to start. As you download online book PDFs, you may know that most of the documents are served in this particular format. However, there are some that probably have different ones, like music that is saved in audio formats, or images in JPEG.
11. **Google Scholar:** This is one of the most popular go-to places for students when they want to download online book PDF. Google Scholar has a complete library of papers and books that may be useful in enhancing your knowledge and experience. It includes various literature from multiple academic fields and presents them in the

best way possible.

Anybody might get dizzying exploring a library as wide as this. Therefore, Google Scholar already has a solution, which is the search bar you may use to find specific publications based on the year, author, or related keywords.

12. **Internet Archive:** The next platform we'd like to introduce to download online book PDF is Internet Archive, the place where you can get not only e-books but other types of media formats, including images, videos, music, and texts. As the name tells you, the platform has been saving these materials from the internet, no matter the type or publish date.

What's more interesting about it is the fact that you can even find documents that many would consider rare, including historical documents, contemporary books, and other items tied to culture and history. So whenever you need, you can download online book PDFs.

Seeing this benefit, there's no question that the Internet Archive may be a beneficial asset for all lecturers, students, and avid readers.

13. **Library Genesis:** For those who love reading e-books and want to find a place to download online book PDF or academic materials to support their studies, Library Genesis is definitely a solid option. The e-book categories available here are academic, science, non-fiction, mathematics, humanities, social science, engineering, and technology. Each user has the freedom to explore any book section they want without an additional fee. This is also a great platform where you can look for journals, articles, papers, or textbooks that may be useful in supporting your study or research. Seeing how big its collection is, no wonder that students, teachers, and authors are recommending it as on of the best platforms to get e-books. This is also a great platform where you can look for journals, articles, papers, or textbooks that may be useful in supporting your study or research. Seeing how big its collection is, no wonder that students, teachers, and authors are recommending it as one of the best platforms to get e-books.

14. **Project Gutenberg:** The next website you can check to download online book PDF for free is Project Gutenberg. This platform is the place where you can find a lot of digital books, whether they are about fiction, poetry, literature, or even drama. Project Gutenberg may be your best hangout place as there are so many book options to explore. Also, the good news is they are free to read! Aside from the PDF format, this platform also offers files in HTML, MOBI, plain text, and EPUB. That way no matter the device and software you use, you can always read these e-books with ease.

15. **FlipHTML5:** fliphtml5.com, If you're seeking a reliable source to download online book PDFs, consider FlipHTML5 as an excellent option. This platform goes beyond traditional static PDFs by introducing dynamic flipbooks, and animated online books that enhance the reading experience with a more immersive touch.

Here is where you can check the flipbook creations from fellow users, which are created for different needs and industries. For example, there are flipbooks for brochures, digital magazines, student handbooks, and many others you

can download.

16. **Document Collaboration tools:** Document collaboration tools allow several people to work, on the same or different document at the same time. The goal is to produce a final version of a document or file together. This makes it easier to involve all the people involved in the project or work and shorten decision-making time as everyone is usually present. All participants can see in real time the changes made by others. It is possible to comment on parts of the document to draw peers' attentions to a particular problem.
17. **The digital library and database tools:** i.e. pdfdrive.net, book machine, project Gutenberg. The digital library and database tools are used to store electronic media centrally on a data server. The stored resources are accessible at any time via the internet or in special cases via the organisation's internet. These databases may include e-books, digitised books, electronic journals, audio files and films. Access can be obtained by reading the whole or only part of it. The best known electronic database and libraries that can be accessed are project Gutenberg and Google Books.
18. **Youtube and learning channels:** Youtube is an online video-sharing platform with more than a billion monthly users who collectively watch more than 1 billion hours of video every day. It is the second most visited site in the world after Google search. After a recent review of the education literature, it can be concluded that there are a number of educational videos on youtube.

#### **Apart of this there are plenty of AI tools which are useful for teachers and students as well**

Canva app:- for making invitation cards

Write Anything-Writesonic

Generates Art- Midjourney

Generates Code- Replit

Generates Video- Synthesia

Generates Music- Soundraw

Generates PPTs- Slide AI

Edit Picture- Remini

Edit Video- Pictory

Chat GPT- Solves anything

Dall-E-2- Generates Art from Text

Synthesia- Create talking avatar

Murf- Your text to Speech

Do Not Pay- AI Lawyer

Jasper AI- Writes Anything

Chatbot Live- Multipurpose chatbot

FireFlies- Note taking

Jenni AI- Write essays

Tome app- AI presentation

Timely- Track time

Quill boat- Paraphrasing the text and translation.

#### **Conclusion**

Artificial Intelligence is a branch of computer science used to develop an intelligent machine that can think and act to solve complex problems rationally like a human being, etc. AI learning tools have the capacity to positively impact student understanding and performance in education. It is crucial in the learning process because AI enhances the learning and creativity of student's performance. Thus, AI tools have been found to be useful in current teaching learning process. But this is the only one side of the coin, because it has its own

pros and cons. AI tools like chatgpt and binge are killing the creative thinking, imagination and ideas of the students. They don't want to take a little bit of stress in generating ideas, creative thinking to solve the problem. So many innovations have been done in the world due to the imagination power and so many solutions take place in imagination. If we will depend on AI, we will demolish our genuine competences. Thoughts, ideas, imagination, dreams, are those things which differ us from AI.

#### **References**

1. Alordiah O, Osagiede AM, Omumu CF, Okokoyo EI, Emiko-Agbajor TH, Chenube O, Oji J. Awareness, knowledge, and utilisation of online digital tools for literature review in educational research. *Heliyon*; 2023;9(1). doi:10.1016/j.heliyon.2022.e12669.
2. VMware. Personalized education: The future of learning. *The Atlantic* [Internet]; c2018 May 28 [cited 2023 Mar 25]. Available from: <https://www.theatlantic.com/sponsored/vmware-2017-personalized-education>.
3. Top 5 trends in corporate eLearning for 2020 [Internet]. *eLearning Industry*; c2020 Mar 20 [cited 2023 Mar 25]. Available from: <https://elearningindustry.com/top-5-trends-corporate-elearning-for-2020>.
4. KPMG. Online education in India: 2021. [Internet]; c2020 Mar 16 [cited 2023 Mar 25]. Available from: [specific source needed for complete citation].
5. Gobert JD, Sao Pedro MA, Li H, Lott C. Intelligent Tutoring systems: a history and an example of an ITS for science. In: Tierney R, Rizvi F, Ercikan K, Smith G, editors. *International encyclopaedia of education*. 4th ed. Elsevier; 2023:460-7.
6. Luo M, Zhao L, Lyu B. Exploring the fuzzy integrated assessment of college students' education for innovative entrepreneurship under the background of Internet+. *Security and Communication Networks*; c2022. doi:10.1155/2022/4339772.
7. Mallillin LLD, Mendoza LC, Mallillin JB, Felix RC, Lipayon IC. Implementation and readiness of online learning pedagogy: A transition to COVID-19 pandemic. *European Journal of Open Education and E-Learning Studies*; 2020;5(2). doi:10.46827/ejoe.v5i2.3321.
8. Timms MJ. Letting artificial intelligence in education out of the box: Educational cobots and smart classrooms. *International Journal of Artificial Intelligence in Education*. 2016;26(2):701-12. doi:10.1007/s40593-016-0095-y.
9. Tang C, Wang B, Chen CYR, Wu H. CWcolab: Presenting multimedia with web-based context-aware collaboration. *Entertainment Computing*; 2022:43. doi:10.1016/j.entcom.2022.100511.
10. Vargas-Murillo AR, de la Asunción INM, de Jesús Guevara-Soto F. Challenges and opportunities of AI-assisted learning: A systematic literature review on the impact of ChatGPT usage in higher education. *International Journal of Learning, Teaching and Educational Research*. 2023;22(7):122-35.