# Role of Artificial Intelligence in Education systems, its challenges and opportunities in India

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**ABSTRACT:**

The origin of the term AI can be traced back to early 1950 . the relatively recent advancement in information technology,AI can be described  as a system's ability to learn and interpret external data via  software or machines/devices for problems solving by performing specific roles and tasks currently  executed by human .

Within the education sector ,AI  can be deployed  to improve teacher effectiveness and student engagement by offering capabilities  such as intelligent  game base- based learning  environment ,tutoring systems  and intelligent  narrative technologies .in  this article I aim to outline the opportunities and challenges in AI in Education sector.

**KEYWORDS:**

*Artificial intelligence ,machines,devices,educations,technology*

**Introduction:**

**The modern arena of education**   have massively revolutionized and overturned in digitally driven world, on such technology that have slowly paved its way inside the world of education is artificial intelligence.

The technology has overturned  the world of learning as education materials specially during the pandemic of covid 19 . it becomes the more accessible to all with the use of smart phone and computer. this allowing facilities to invest more time for the students .facilities can get the opportunity for close evaluation of students  their aptitude ,attitude, interest etc.

Firstly A.I enabled hyper personalization helps in developing  customized learning in environment based on ability performed mode of learning and experience .secondly the use of smart assistant (Amazon alexa,google home, Microsoft cortana)and associated technologies offer significant potential to help students .universities are already using voice assistants to help answer common questions about campus, students  schedule and courses .

Thirdly AI systems can assist educations with secondary task such as grading activities providing personalized responses to the students handling routine and repetitive paperwork and dealing with logistics  related matters. AI based analytics can help with academic research within various disciplines

And potentially transform library process and staffing requirement with aim to provide a richer user experience.

The   Tamilnadu e-Governance Agency has partnered  with Anna University to launch a Tamil smart assistant called ANIL. They implementing an innovative use of AI  through face recognition for recording attendance. The system is saving more than one hour per day and is freeing up extra time for core educational activities.

REIVIEW OF LITERATURE:

The relevant exploratory research papers based  on data's, journals and Google scholar website had been reviewed to collect maximum information on relative topic. The entire paper based on secondary data which details has been mentioned in references to examine pros and cons effect of AI in developing country like India. The  various aspects of the topics are considered as under :-

1)  Distinguishing what has been done from what need to be done .

2)  Discovering  important variable relevant to the topics .

3)  Synthesizing and gaining a new perspective on this topics

4)  Relating idea and theory to application

5)  Placing the research in a historical context to show familiarity with  state of art development

OBJECTIVE OF STUDY

1)  How to reach excellence in education with AI .

2)  How AI help to fulfill the gap of 50 percent less teachers per thousand students when compared with developed countries .

3)  Unemployment is the major issue of India .Can AI relevant in this context.

4)  Can AI achieve inclusive and sustainable support in education system of India

OPPURTUNIES OF AI

India has 1.1 billion mobile phone users with 600 million internet users and 374 million smart phone users  it has one of the cheapest data rate in the world( $ 0.24/Gb) and average data speed of 6 mbps these factors open up huge potential  adoption of AI technology in India

## 1) PERSONALISED LEARNING.

AI is being employed for personalizing learning for each and every student. The hyper-personalization concept which is enabled through machine learning. The AI incorporated to design a customized learning profile as well as tailor make training materials. Various  AI powered apps systems helps the students in accessing instant and customized response  as well as in getting their doubt cleared from their teachers.AI also play role in augmenting tutoring and designing  personal conversation assistant , who can offer them aid education or assignment tasks this also provide freedom to student to learn at their own place and time.

## 2)  VOICE ASSISTANT

These includes Amazon's alexa,apple siri, Microsoft cortona etc.allow the students  to converse with education materials without the involvement of teacher. the objective behind these voice assistant is to supply answers to all common reducing the requirement for internal support as well as cut down the expense of printing  college handbooks which are only temporarily used.

The employment of these assistant system break the monotony and fetches an existing prospects of students .the implementation of this technology is expected to escalate in coming year.

## 3)AIDING EDUCATORS IN ADMISTRATIVE  TASK

Teachers don't  just battle the work of education oriented duties but are also handed the responsibility of handling classroom environment and dealing with variety of Institutional tasks like evaluation of exams papers, necessary  paperwork , handling personal and administrative issues, self development activities like research work,publication,seminars, workshops etc.So  AI system have been crucial aid at dealing with back-office and task related duties such as grading task as well as facilitating personalized response for students. Alongside they can also deal with the routine and monotonous paper work related to logistics and personnel issues.

## 4)BREAKING BARRIERS.

AI tools and device has been aiding in making global classroom accessible to all irrespective of their language or disabilities. The  programmes are all inclusive. For instance presentation translator is a free power point plug-in that develops subtitle in real-time of what the teacher is saying. These also provide access to students of the courses which is not available in their own campus.

## CHALLENGES AND SHORTCOMINGS.

## 1) LACK OF EXPLAINABILITY.

Generally AI operates effectively as a black-box-based system that does not transparently provide the reasoning behind any particular concept, classification and decision made by system. These are the major limitation.

## 2)LACK OF CONTEXUAL AWARENESS AND INABILITY TO LEARN.

 AI based systems are good at performing with given parameters and rules.However,they still have major limitation in terms of making decisions where context plays a critical role. Unlike human ,AI –based systems cannot learn from their environment. This limits the application of AI to specific types of domains.

## 3)JOB LOSSES

**Increasing automation** will lead to significant job losses particularly at operational and  lower skill levels for repetitive tasks. This critical consequence of AI use will continue to impact all sectors and countries across the world but particularly developing economics where employment opportunities are already limited.

   The major challenges are-How to select tasks for automation ,how to select the level of automation for each task ,how to manage the impact of all AI and how to manage AI enabled automation errors.

## 4)LACK OF TRUST AND RESISTANCE TO CHANGE

Due to negative media coverage on the consequences of AI people are generally apprehensive about implementation. This poses a major challenge on How to establish trust among society, parents and students.

## 5)LACK OF ETHICS AND VALUE

Ethics for machine has been an area of immense interest for the researchers. To deal with ethics purely from an AI perspective. There are  two dimension in AI

**1)Privacy and data protection**

**2)  Human and environmental values**

   Privacy is possibly the top most concern while  using AI system .Secondly policy makers need to ask Has the AI as respective ,dignity and kindness, compassion equity or not ?An important aspect which need to be built into AI system is the overall cost of decision on the society.

## CONCLUSION

**AI**  as a technology holds tremendous potential for a country like India which is data rich and has the requisite technological capability to create AI solution  in all level of educational levels

   **N**ot so far in the future we can expect AI  and machine learning to occupy an integral place in all educational experiences AI has started to prove its advantages and power in a guide range of education area and it remain to be seen how the technology will empower and enhance overall learning outcomes for all.

## REFERENCES

1)Dwedi,V.K,Hughes,Ismagilova E,Aarts,Coombs,C Crick,t.Mishra &Galanos,v(2019)

International journal of information management DOI  https://doi.org/10.1016/j.ijinfomgt.2019.08.002

2)Walton P(2018) Artificial Intelligence and the limitation of information (Switzerland) doi:10.3390/info9120332

3)Schemlzer ,R(2019) AI Application in education ,Forbs

https://www.forbes.com/sites /cognitiveworld2019/07/12/ai-application-in -education/#5f93548f62a3

4)Duan .Y.Edwards J.S&Dwedi Y.K (2019) Artificial intelligence for decision making in the era of Big –Data –Evolution, Challenges and research agenda International journal of in formation Management ,48,63-71