Exploring The Future Of Artificial Intelligence In Education

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Abstract -

This publication aims to provide a comprehensive analysis of the future of artificial intelligence in education sector. In this paper I will explore about the future of Artificial intelligence in education sector and explore the potential benefits challenges and opportunities that lie ahead in future .The purpose of this paper will be to discuss about the new trend of artificial intelligence in educational sector and talk about its pros and cons and how it helps in individuals and highlight the growing importance of artificial intelligence and its important role in shaping the future of education. The first section of this paper discusses the current state of artificial intelligence highlighting the gaps and limitation and cons in existing curriculum furthermore it address the relevance of bringing and or promoting inclusivity and diversity in education sector to ensure proper access to opportunities .The other part deals how teachers and students will cope up with changing environment and how everyone will face the problems of the rapid scene change through artificial intelligence as many of them would not be ready to cope up with this change.

 The third section explores the ethical consideration regarding artificial intelligence including privacy and safety whether it is safe or a threat to privacy and its capability to cater human student needs and how artificial intelligence will provide focus on individual students mentorship and help students in achieving their goal and this section discusses further the artificial intelligence technology tools like adaptive learning systems ,intelligence tutoring etc and how it will help student to enhance learning experience now some limelight on   how artificial intelligence has played a major role in previous years . Like as it is helping students and people can to get quick response regarding knowledge and student can completely do their work with help of ai tools   and can do their search regarding their topics ,subject etc. So these things and various other factors they prove that how much important artificial intelligence is gaining in upcoming years this effect has been started slowly .

This paper will help me in several ways in enhancing my knowledge firstly it will help me in improving my understanding regarding artificial intelligence secondly it will help me to learn more about new tools being a finance student it will provide a great help to me and it will help me in learning about new financial tools which enter the existing market thirdly this paper will play a major role in the development of my career and gives a major boost to my career . And this paper will help me in exploring several new things and

make myself more comfortable with the changing environment as we all know how much now after COVID-19 AI has increased and its relevance is also increasing day by day and this paper will play a major role towards the readers and the audiences as because in my opinion more people will get aware about artificial intelligence and its tools they can get their work done in no time with the help of the AI tools which have taken place in recent scenario and basically they can communicate these information regarding AI to their students children and it will help in their academics and every student can get its work done in a short time with the help of AI and it is of great help to this generation students .

In conclusion this publication highlights the urgency of reimagining AI education to prepare the next generation for AI driven word. It calls for a holistic approach that combines the technical skills with ethical consideration critical thinking and creativity. By addressing the challenges and opportunities and implementing effective strategies we can ensure that the students are equipped with the knowledge and skills necessary to navigate the future of AI.

Keywords- Publishing, Education sector, Artificial intelligence, changes in technology.

Objectives

- To explore the future of artificial intelligence in education sector
- And how artificial intelligence will help in changing the education sector and help the student in gaining knowledge in a much much simpler manner.
- And how the education sector will get a boost that will help in developing a new segment in education sector .
- And how shifting of education from offline to online at least some of peoples has adopted the technology will benefit the students.

Introduction-

In recent years, the field of education or the education sector has seen a significant transformation with the combination of artificial intelligence technologies. Which sounds great thing and gives a positive vibe in education sector and this transformation is necessary for the development of our education sector as it is necessary that the world is changing and adopting latest technology so education sector is also evolving with this period of time. Artificial intelligence is the intelligence of machines or software, as opposed to the intelligence of humans or other animals. It is a field of study in computer science that develops and studies intelligent machines. Such machines may be called AIs . The core part of artificial intelligence is the algorithms. AI demonstrates some of the behavior that is linked with human intelligence such as planning, reasoning, learning, manipulation, and creativity. AI makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks. It allows teachers to design and assign tasks, give feedback, and effectively control classroom interactions.

The Google Classroom AI algorithms can support automated grading, make individualized recommendations for learning materials, and examine student data to provide insights on performance and growth.
AI has been used in facial recognition systems, with a 99% accuracy rate. Some examples are Apple's Face ID and Android's Face Unlock, which are used to secure mobile devices.

 Artificial intelligence is basically a branch of computer science that deals with intelligent human behavior and has opened up several new possibilities for promoting and enhancing teaching and learning experiences means it helps in better learning better teaching and providing knowledge in a much much better and easier manner. By involving   artificial intelligence in educational sector institutions they are being able to

personalize learning experience improve their administrative process and provide students with suitable knowledge and educative tools. So this publications basically aims to provide a comprehensive analysis of the future of artificial intelligence in education sector.

Ai will help in education in the following ways.

Artificial intelligence (AI) has many uses in the education sector, including:

- Personalized learning

    AI can recognize and tailor teaching to each student's learning style, interests, and abilities. For example, AI can analyze student strengths and weaknesses, identify areas for improvement, and tailor learning materials.

- Smart content

    AI can generate educational materials that are tailored to the needs and preferences of learners.

- Automated grading and feedback

    AI can enhance language assessment with automated grading and feedback.

- Chatbots and virtual assistants

    AI-powered chatbots and virtual assistants can offer students immediate assistance, respond to their questions, and help with administrative duties.

- Time-saving assistance

    AI can help educators save time by providing more efficient ways to generate instructional content and track student progress.

- Improved pedagogy

    AI can help educators improve their pedagogy.

- Identify gaps in student knowledge

    AI can help educators identify gaps in student knowledge and provide targeted feedback to improve learning outcomes.

- Analyze educational data

    AI can analyze vast amounts of educational data to identify trends and patterns. This can help school administrators and decision-makers in education predict student performance and help design strategies to improve outcomes.

- Create educational resources
    AI-powered platforms can help teachers curate a range of educational resources. For example, teachers can use generative AI to create lessons, activities, assessments, prompts for discussion, and presentations.

Problems identified-

Now I will discuss about the several problems which will obstruct or hinder next in the transformation of our OLD education system to artificial intelligence system

- The first problem is that very few people in India are using Android mobile phones and laptops and in backward areas this is the major problem as very few people are using software devices while some people are not smart enough.
- Now the second problem is basically the affordability as we all know that every education institution is not able to adapt for all its students while some students might not be able to afford these devices like laptops computers mobile phones etc as we all see during the COVID. There was a condition of **digital divide** in that era because several students and people didn't even possess mobile phones and backward areas like villages there were even some students don't know how to use them or they didn't have the facility .

Methods and Data Analysis

Aim-

To explore the future of artificial intelligence in education sector and how artificial intelligence will help in changing the education sector and help the student in gaining knowledge in a much much easier manner and how it will change the entire scenario.

Design-

This research is descriptive research and involves information from various reliable sources.

Secondary research has been used .

EXAMPLES OF AI IN EDUCATION

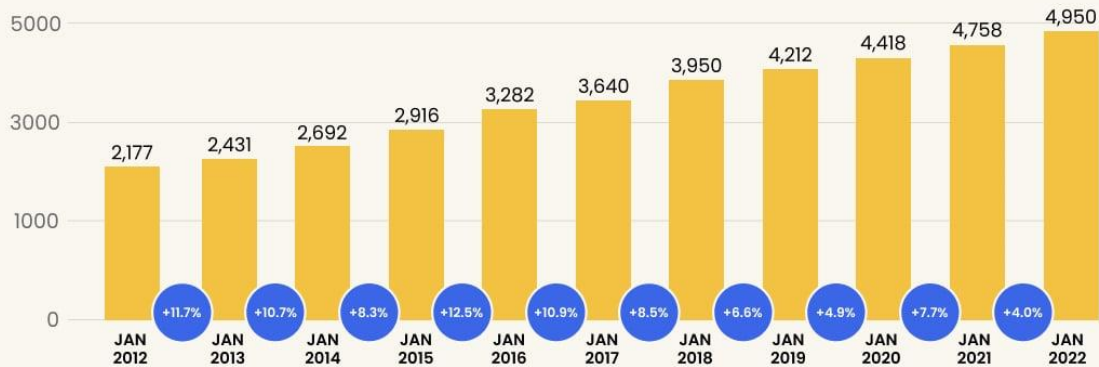| 1	2	3	4	5
Translation & Language Learning	Writing	Early Childhood Education	Teaching	Tutoring

The Motley Fool

Data analysis

As per my thoughts the artificial intelligence future in education sector looks good and very nice and it will be a good turnaround for education sector. But we will need to try level best then only this looks possible as-

- The availability of smartphones in rural India has been increasing in recent past:

- 2018: 36.5%

- 2020: 61.8 %

- 2021: 67.6%

    - As of March 2023, India's internet subscribers increased to 881.25 million, up from 865.9 million in December 2022. This represents a quarterly growth rate of 1.77%

- But this not sufficient as if we want ai in education sector then 100% or atleast 90% of the rural student need to use android devices because only then this ai education is possible.

- But there is also good sign of increase in number of internet users as the data show.

- According to a report by the Internet and Mobile Association of India (IAMAI) and KANTAR, the number of active internet users in India is expected to grow to 900 million by 2025.

- 2016–2020: The internet grew at double-digit rates.

- 2021: The growth rate dropped to about 4%.

- 2022: Urban India's internet penetration increased by 6%, while rural India's increased by 14%.

- 2023: As of March 2023, internet subscribers in India increased to 881.25 million, a quarterly growth rate of 1.77%.

- 2025: A report predicts that 56% of new internet users in India will come from rural areas by 2025

- India's digital population is estimated to be around 692 million active users as of February 2023. 52% of the country's population is under 40 years of age, which is higher than the global average of 46%. So these are the positive signs of future growth of ai education in india is considered.

- In 2020, 74% of students in private schools had access to smartphones at home for learning, compared to 50% of students in government schools.

- In 2021, 27.9% of rural households bought a new Smartphone for their children's education. But, 26.1% of the school students with at least one Smartphone at home did not have access to it for online studying. So this sounds really strange and we all know about the rural urban gap and if this gap is not fulfilled over the years then this will create a huge problem in not only in our country but also our education sector will also be adversely impacted as well.

- And another thing that I found was only 48.7% of the public is using internet or have internet accesses which needs to be increase in order to bring ai in education

- A survey revealed that 49.03 % of students in rural India have access to smartphones but only 34% of that number use them for studies. A pan-India survey of 6,229 parents of schoolchildren, aged 6–16, in rural communities across 21 States revealed more kids used smartphones for entertainment rather than for studying.

- **The market size in the Artificial Intelligence market is projected to reach US$5.47bn in 2024. The market size is expected to show an annual growth rate (CAGR 2024-2030) of 17.94%.**

- Internet usage: 31% of the rural population uses the internet, compared to 67% of the urban population.

- Digital literacy: Only 38% of households in India are digitally literate.

- Social media use: 61% of urban areas use social media instant messaging, compared to 27% of rural areas

- According to the India Consumer Sentiment Index, released by consumer data intelligence consultancy Axis My India, only one per cent of those surveyed said that they use AI tools daily. Out of a total of 9,567 respondents, one per cent use these tools occasionally and another one per cent use them rarely.

- In my words I must say that what I have seen is basically yes less number of people use ai in india and yes even some people don't n know about it ever

Discussion

Now as I have discussed everything about ai and its relevance and use in education sector and now I will discusses further about privacy and protection from threat and how much it is safe for today's generation And yes ai is safe to use but at the same time being Privacy risks can emerge including re-identification from training data sets and even AI models and downstream impacts of non-personal data used to train models that impact individuals and communities. The use of AI in advertising, personalization, and recommendation systems also poses data privacy risks. The algorithms used in these applications collect vast amounts of user data, which is then used to target users with specific products or content. So ai is safe but at the same time it may create risk so every thing requires to be used with due diligence and safety and with precaution.

Now I will further discuss about those things which I found in my study basically which is that I have seen a positive trend in increase in the number of Internet users as I have much more discussed in a data analysis section and other sections and as per several news articles the growth seems to be exponentially increasing after 2025 and till 2025 it will increase by a huge margin which will provide a huge market of education sector through AI in India and will promote and create a new educational environment in our country and which will benefit teachers students children and everyone associated with education sector and you all know that AI will benefit all the sector whether it is technology, marketing ,medical, law ,commerce or any other sector and further yes I have discussed that there are problems in implementing AI in our latest technology and education sector because our country is a developing country but the basic good thing is that the Internet connectivity is increasing and the rural urban gap is slowly slowly getting reduced so there are low chances as there will be a situation of digital divide in our country and slowly slowly everything is taking place so there will be a positive technology turn around in our country and our educational sector will restructure after the use of AI and as we all know that ruler areas are also progressing along with urban areas and there are several students and teachers they slowly slowly they are engaging themselves with the use of AI and which is a positive sign because if we want to implement AI then our focus should not be a basically one location because we will have to see that both urban and rural area they grow at the same pace in case of technology then only AI education sector model can be successful so in my opinion the growth of AI in India is very well and and talking about its privacy again it depends from person to person and everything is good and bad as we know science is a good thing and science is a blessing and science is also harmful thing it depends on the person so AI is good thing also and at the same time it may post threat and privacy as I have mentioned earlier it depends upon person to person and it vary from organization to organization and how the organization uses it for the benefit of the customer so . In 2020 and 2021 with the help of Google it started and in my opinion the idea of education sector re-emerging with the help of AI is a brilliant idea and I believe that this will and this entire strategy will bring our country to next level in case of technology and in case of technological the education sector where it is concerned and the teaching skills will also be improved as we have already witnessed the COVID-19 how students and teacher have to compromise on their studies some people were not able to have the mobile phones are Android devices .

The basic thing is to provide these people these things only then are dream of having an AI education word can be fulfilled otherwise it cannot be done unless we the citizens of INDIA along with the government decide to do it.

Findings- (Based on Secondary Data)

- According to a 2023 survey, 49.3% of students in rural India have access to smartphones.

- The availability of smartphones in rural India has been increasing in recent past:

- A s I have already discussed about the data and everything above but now I will only say that everything is possible if everyone supports
and becomes impossible if people does not support so I found through entire research that firstly the rural urban gap which will haunt always by creating obstacles' in the learning processes that will hinder learning.

- **And now I will also discusses about other findings which includes fistly,   in our all the people are not literate so how can we expect that their children will know about ai leave they even don't know about basic things secondly, some parents don't have sufficient resources to send their children to school forgot about ai they don't even go to school thirdly, the students in rural areas they are sometimes not given software devices etc so though the current situation looks quite difficult but at the same time an opportunity for an ai learning adaptation**.

- **An study revealed that only 88% of the Indians are equipped with AI which is quite low in number if we want to implement AI education sector then firstly AI should occupy the Indian market because if it is not able to occupy the market then it is very difficult to implement AI education sector because many of the household will be unaware of artificial intelligence and they even don't know that there exist in software like AI which is changing the entire world globally.**

Conclusion-

In short I want to conclude by saying that the future of Ai in education looks nothing smaller than a turnaround and a explosive in the upcoming scenario. It has the potential to transform the way of learning teaching, and assessing. By using the power of ai we can bring personalized nand inclusive educational experiences which will help students to become more modern and competitive .Now let us bring this technological innovation and change the enyire learning system by making it more simpler and easy and helpful and engaging so we all should support this new innovation in the teaching field.

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