



AI (ARTIFICIAL INTELLIGENCE) EMPOWERED TEACHING

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Abstract

In today's modern world AI has its impact in almost all the fields of our lives, education and teaching sector is no other exception. As artificial intelligence is continuously developing it is providing different new methodologies to students and teachers which are ultimately enabling them to discover more. There were the days back when we used to stand outside the school library to get the opportunity to copy two or three Encyclopedia pages or if we have to search about some topics we have to look onto a lot of reference book and different books and that was way much time consuming, to use as a kind of reference for our school projects. With this age having grown up with the benefit of access to technology at their fingertips, the field of education has hugely changed and overturned in this digitally driven world. AI-powered learning platforms, on the other hand, can adapt to each student's individual needs and learning style, hence it acts as a helping hand in teaching.

Introduction:-



Education and teaching has been continuously evolving field. In country like India, we have seen the education system evolves for many decades. The history of education system dates back to 10th century. We have been known for our Vedic teaching and Puranas for a long time.

The scenario in the teaching field has been changed in the past few years. Especially, when corona was on the surge. As we all know that in modern times AI (Artificial Intelligence) has occupied almost each and every aspect of human life, be it health care, Insurance, Life Sciences, Telecommunications and even daily day to day life. Teaching and education sector is no other exception. AI has been broadly used in education sector as well. Everything has its own pros as well as cons, in the similar way AI also have some plus points and some minus points. First of all let us discuss what actually artificial intelligence is? What does it stand for? And how does it affected the teaching and learning methodologies in the present Time

Artificial Intelligence:

It is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision. **Artificial intelligence (AI)** is intelligence-perceiving, synthesizing, and inferring information-demonstrated by machines, as opposed to intelligence displayed by non-human animals and humans. Example tasks in which this is done include speech recognition, computer vision, translation between (natural) languages, as well as other mappings of inputs. If we conclude in simple words then artificial intelligence is the aid by which machines have the capability to think like humans. The word itself makes it clear that providing of intelligence to machines so that they can develop to think like humans artificially is known as artificial intelligence.

AI (Artificial Intelligence) in Teaching:-

The term teaching method covers the overall standards, instructional strategies and the process that teacher follows in the classroom. There are different methods and one cannot say which one is perfect. The teaching method completely relies on what fits the way of thinking of the teacher, kind of student in classroom, the subject which is to be taught.

These days artificial intelligence has been widely used in teaching and learning. It has changed the entire methodologies of teaching and has given a new direction to the field of teaching. We can see that today teacher and student don't need to be at the same place rather artificial intelligence made distance learning possible. Another example we can see in day to day life is of smart board, nowadays each and every institution and organization is equipped with this facility whether it be a coaching institute or school smart boards and multimedia has been widely used. The potential of using artificial intelligence in education to enhance learning, assist teacher and fuel more effective individual learning is exciting, but a bit daunting. Famous and one of the leading writers on artificial intelligence and its benefits in education, **Mathew lynch** ("My vision for the future of artificial intelligence in education"), has explored the potential pitfall along with benefits, stated that: "the use of AI in education is valuable in some ways, but as humans we must be hyper vigilant in monitoring its development and its overall role in the world." Teaching and learning are the two sides of a coin. The most accepted criterion for measuring good teaching is the amount of student learning that occurs. There is a famous saying:-

TELL ME, I FORGET. SHOW ME, I
REMEMBER. INVOLVE ME, I UNDERSTAND.

This clearly means that the methodology by which a student is taught directly affects the learning ability or learning capacity of a student.

According to a famous writer in artificial intelligence "AI does not detract from classroom instruction but enhances it in many ways." The benefits of AI in education are as follows:-

- i. **Personalization** – It can be hyperactively difficult for one teacher to figure out how to meet the needs of each and every student in his or her classroom. AI system can easily adapt to each and every student's individual learning needs and can target instruction based on their strength and weaknesses.
- ii. **Grading** – surely AI can help grade exams using an answer key; but it can also compile data about how students performed and even grade more abstract assessments such as essays and letters etc.

Research Problem:-

Study of AI empowered teaching.

Objective :-

To study the effect of AI on the teaching of teacher.

Hypothesis:-

To complete the purpose of study, the following hypothesis was created –
No difference is found in the study of artificial intelligence on the efficiency of professor.

Research Method:-

The purpose of the proposed research study is to study the effect of artificial intelligence on the efficiency of teachers. Therefore, survey method has been used in the presentation of the work.

Population:-

Teachers working in various educational institutions of Jaipur district are the present teaching population.

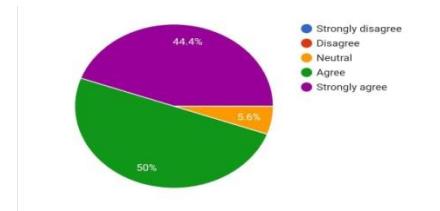
Sampling:-

50 teachers of the selected educational institutions as a judge of justice, fulfilling the objective on the basis of availability, keeping hands on the medium of the research, selected by method.

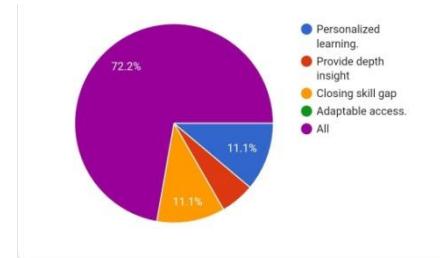
Study of the above tools:-

A self made scale has been used to fulfill the objective of present study. Questionnaire has been used to know the effect of measuring the efficiency of artificial intelligence.

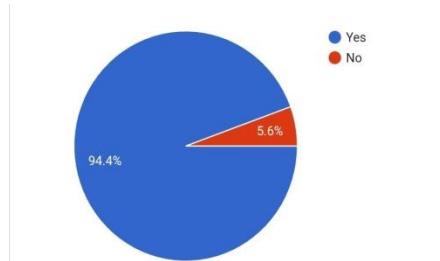
Firstly the participants were asked that whether they agree or not that artificial intelligence plays an important role in modern teaching technique .and in the light of the question, approximately 50% of the people agreed with that AI has an important role in teaching and learning and about 44.4% people strongly agreed with fact and about 5.6% people answered neutral but we haven't got any answer that shows the disagreement with the influence of AI on teaching. This is because AI, Nowdays is playing an important and immense role in the teaching sector as mentioned earlier that it made teaching easier by making the things personalized and it has also made distance education possible. Nowdays, we can see many online educators such as Physics Wallah, BYJU'S, Vedantu etc. They all the online education platforms and are providing the knowledge via the medium of artificial intelligence and technology. Enabling the students to personalize and close the skill gap as well.



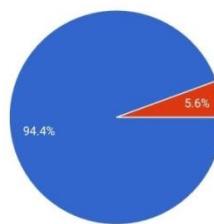
Further we asked that what impact AI has in education field today, whether it provide personalized learning, in-depth insight, closing skill gap, adaptable access or all. about 72.2% of the population answered that AI has impacted the education field I all the way as it provide in-depth insight, personalized learning, closes skill gaps, adaptable access as well. Machine learning or AI algorithm predicts results, allowing you to tailor content to the learner's experience and personal objective. For example- online learners who articulate a specific gap receive tailored recommendation that helps them fill in the gaps in their experience in a more personalized way. Now, if we talk about that how AI provides in-depth insights then we can conclude that automating models combined with AI will allow more use of it. Advanced algorithms are being developed and combined in a way to analyze more data faster and at multiple levels. This intelligent processing is key to identifying and predicting rare events, understanding complex systems and optimizing unique scenarios. AI can skill gaps as for many roles, especially those tat one involve routine tasks. Using these tools can lower your labor cost and improve workflow, which means AI in a short time is capable to reduce the labour costing and can improve the workflow as well.



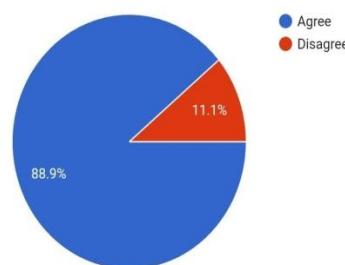
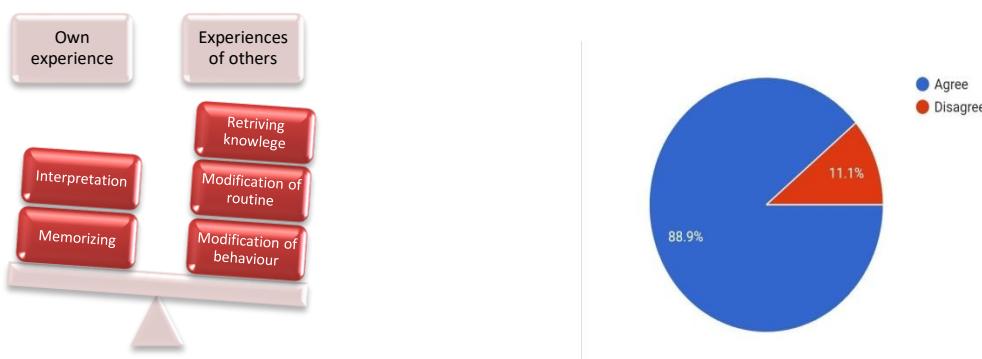
Next respondents were asked that whether AI can solve the problems prevailing in the present education sector as skill gaps, measuring effectiveness etc. approximately about 94.4% of the population answered 'YES' or they agreed with the fact that AI is capable of preventing the problems present in the education and teaching field and about 5.6% of the people answered that they do not believe that AI is capable of preventing the loopholes present in the education field as it is a great challenge itself that how to use technology is for the students and the teachers . In most of the cases or the most suitable scenario, the problem is that either teachers are not being trained on how to use AI based technology in the classroom. AS, a result, they have to figure it out themselves or find someone they already know. Teachers need help in understanding how these tools can be use or can provide assistance in order to provide student with an engaging learning experience.



Next the teachers were asked that whether they think that AI has provided an aid in teaching and learning, about 94.4% of the respondents answered 'YES' which directly indicates that in present times AI has been broadly used in teaching sector and has provided an aid in both teaching as well as learning



Lastly the respondents were asked that whether AI helps in fostering “Teacher-Student” communication and interaction and majority of population agreed with fact that AI do help in mending student and teacher interaction. This could be due to the fact that artificial intelligence system offers effective support for online learning and teaching, including personalization learning for students, automating instructor’s routine tasks, and powering adaptive assessments. About 11.1 % of the respondents answered that don’t agree with the fact AI helps in fostering “**Student and Teacher interaction**”, this could be due to fact that that teaching is one to one or one to many relationship that work in many unique ways. Not only does a teacher imparts wordly knowledge to the students, but they also learn from them. Teachers and students form a symbiotic and synergistic ecosystem that helps in mutual enhancement of knowledge. Further what makes humanized teaching methodology so unique and special is the fact that teaching happens outside the classroom as well. It happens throughout the life , and that too in various forms, such as visual learning, learning by listening, by doing things, life experiences, etc. also, learning varies from one person to person to depending upon their perception, abilities and preference. This can be understood by the following chart:-



Conclusion:-

In the end we can conclude that, technology is an essential part of human progress. Whether it is stick, stones, smart phones, tech has allowed us to excel in our environments. With the tech becoming more ubiquitous and classroom being digitized, pros and cons of artificial intelligence have been the focus of many heated debated between educational experts and tech experts. After all computers are getting smarter and developed and artificial intelligence is more science-fact than science fiction. Artificial intelligence in teaching and education sector is like the two sides of the coins, having pros and cons of its own. If we talk about the merits or pros of artificial intelligence in this field then we can say that AI is that platform that provide personalizes learning, intelligent tutoring systems (ITS), adaptive group information, facilitation by example, intelligent moderation, virtual reality learning, essay grading software, real time problem solving , improving course quality, intelligent game based learning environments, empowering the disabled are all possible due to artificial intelligence system used in teaching . On the other hand, if we talk about the cons or demerits of AI in teaching and education sector the list not short as well. As we all know each and everything comprises of merits and demerits, so do Artificial intelligence as well. Firstly, artificial intelligence based teaching systems are highly expensive and when combining the cost of installation, maintenance and repair, it's clear that AI is expensive. Only the most well funded educational institutions will find themselves in a position to benefit from artificial intelligence based teaching methodologies. Secondly it can be a bit addictive as we rely on machines to make everyday tasks more efficient. Thirdly, artificial intelligence sometimes lack personal interactions, while smart machines improve the education and teaching experience, but they should not be considered as a substitute for personal interaction. In short we can say that in the present time artificial intelligence has impacted the teaching and education field a lot and has provided assistance in mending student- teacher interaction, can also be helpful in closing the loopholes present in education and teaching sector such as closing skill gaps and can provide in-depth insight, making the things personalized and easy to understand.

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