Role of Artificial Intelligence in Providing Education to the Students of Remote Areas: With Special Reference to the Leh & Ladakh region.

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Abstract:

With the evolution of technology, an ecosystem is building where people are interested to bring comfort into their lives. Technological advancement has made life easier and comfortable. One of the prominent inventions of this age is Artificial Intelligence. Artificial intelligence has made its mark in almost every field. Such as industry, agriculture, entertainment, defense and last but not the least education. This research article will be specifically focusing on the role of artificial intelligence in the education sector. The Indian government has always taken significant steps for the development and progress of the education sector. But it has still not remained unaffected from the multiple challenges. The biggest challenge of this sector is to provide education to the remote areas. These areas are called as "**remote**" because they are still struggling to get proper well-connected roads and well- structured schools or colleges. The students belonging to these areas are facing crisis to attend their daily classes. This research will be highlighting the education struggles of the Leh and Ladakh region. Leh and Ladakh has become a union territory and a beautiful place for tourism. But this place has its own issues. From having a cold climate and dry weather, this place is still having problems to get proper well- connected roads, infrastructure, employment opportunities, education Institutions and health and sanitation facilities. Although, the government has always put efforts for the development of these areas but still their struggles are not over it yet. In this process, artificial Intelligence has proven to be a blessing for these children. AI has considered these issues and tried to provide proper education to the students who had to drop their education due to various reasons. Under this research article, a proper and detailed discussion will be made regarding the recent developments in the technological sector and education sector and the future of Artificial Intelligence in the education sector. This research will be primarily based upon the secondary data. This data has been collected from the Internet, Magazines and Other articles. Graphs and table will be presented for the detailed analysis and a proper understanding.

Keywords: Artificial Intelligence, Education, Technological Advancement, Struggle, Future Prospects.

Introduction to the topic:

Education is the most powerful weapon which you can use to change the world." - Nelson Mandela. This quote justifies the importance of being educated. Today Indian government has put immense efforts in the form of various schemes to upgrade the education system of the country. They are trying hard to make education reach every nook and corner of the society. Despite of multiple schemes and investments, there are still many areas which are away from getting benefits from it. But the latest technological advancements that have proven to be a blessing for the sections which were earlier left behind is Artificial Intelligence. This research article has tried to bring up the challenges in the education sector that the children belonging to the remote areas of our country is facing every day and how the technological upgradation has played a crucial role in bridging this gap. Artificial Intelligence has not only helped in providing education to the students who were unable to take education in a formal setting. But it also builds the teaching -learning process much more interesting, comfortable and adaptative.

History of Education in Leh & Ladakh:

Leh & Ladakh obtained its formal education from the time India got its independence. In the earlier times, the rule of one son from the family was allowed to study so that he could read the holy books which were written in the Tibetian language was followed in most of the family. Gradually, as the time grows and people started feeling the importance of the education for better employment opportunities. The first school opened by the local society was named as "Lamdon Social Welfare Society" in the year 1973. With the prospering tourism started from the year 1974 young people of Leh and Ladakh started looking for new employment prospects.

Pic Courtesy: Google

Challenges faced by the Education sector:

 Since the time of Independence Leh and Ladakh has always been a place where the developments have been very slow. After the launch of so many schemes and efforts of the government and making it a union territory there are still few villages which are remotely

placed and even struggling to get a proper well – connected roads. People living in these places are reluctant to send their children to schools and colleges due to multiple reasons. Such as improper sanitation, undeveloped infrastructure, climatic conditions & mindset. But apart from these issues there are other hurdles which restricts the proper development of the education sector of these remote areas are:

➢ Improper health and sanitation facilities especially for the girl students
➢ Lack of well trained and well-educated teachers
➢ No proper implementation of the educational programmes launched by the government
➢ No proper monitoring and supervision of the government schemes
➢ Teachers' absenteeism
➢ Poverty
➢ Improper hostel facilities
➢ No cultural or ancillary subjects
➢ Improper Laboratories and classrooms.

Artificial Intelligence:

AI is a new age technological advancement which helps to generate, perform and classify tasks like usually humans do. It is a modern innovation which has made the difficult tasks much easier and brought a huge amount of comfort and flexibility in the lives of people. Artificial Intelligence has been adaptive in multiple sectors such as: industry, agriculture, medical, and education. It has generated profits and made these sectors progressive and upgraded. The artificial intelligence has a significant contribution specially in the education sector in terms of personalised learning to providing an interactive learning system. Overall, artificial intelligence is a new age human innovation which has proven to be a boon for the society and it promises to push the society to a level of updated growth and development.

Benefits of Artificial Intelligence in the field on Education Sector:

Artificial Intelligence has provided significant contribution in the field of education sector. The people of the remote areas of the society are still facing hassles in providing basic education to their children due to various hurdles. But with the advent of AI in this field the hurdles are getting sorted out and now these areas are also getting proper educational facilities which bring them better employment opportunities and economical stability. AI has changed the traditional medium of providing education and made it much updated. It has provided an interactive base for studying specially in the remote areas where studying in the online medium is much more as compare to the traditional classroom style learning. Some of the important benefits provided to the remote areas are stated below are:

➢ Provided personalised learning for the students
➢ AI's have organised an intelligent tutoring for the students to solve their doubts.
➢ Automated Tasks to save the time and energy
➢ Proper language translation and learning techniques to help student get the content in their own language.

➢   Supervised learning
➢   Reinforcement learning for the primary kids
➢   Virtual assistants help the students during a task and guide them
➢   Online courses can be provided to the students from an online institute like cousera, edx and others and students are also provided with certificates for these courses which can improve the employment opportunities.
➢   Predict students' performance
➢   Helps in students formative learning process.
➢   Proctored Examinations
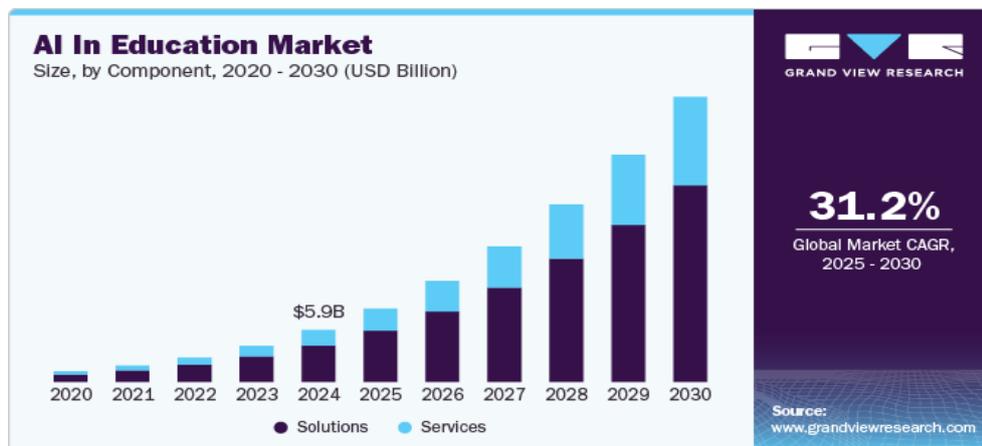➢   Builds better learning experiences and revive the higher education system.

Artificial Intelligence has also collaborated with the industries and tried to develop skill development courses and placement opportunities for the students. The online learning process has developed a cultural connect and round the clock guidance for the students. AI has made a positive transformative shift in the process of delivering education to the students.

Data Analysis:

Census years	Persons	Males	Females	Male/Female gap in literacy rate
1951	18.33	27.16	8.86	18.30
1961	28.3	40.4	15.35	25.05
1971	34.45	45.6	21.97	23.98
1981	45.57	56.38	29.76	26.62
1991	52.21	64.13	39.29	24.84
2001	64.83	75.26	53.67	21.59
2011	74.04	82.14	65.46	16.68

Source: Census of India from 1951–2011

This is literacy census report of the Leh & Ladakh region for the years (1951-2011), which shows that the males literacy rate was constantly growing from 18.33 (1951) to 74.04 (2011), where as the female literacy rate has also shown a growth but on a slow rate from 8.86 (1951) to 65.6 (2011). This literacy rate was before the application of artificial intelligence in the education sector.

Source: grandviewsearch.com

This data shows a predictive analysis of the AI in the field of education sector from the year (2020-2030) and on the global level it predicts to generate about 31.2% revenue. Overall, the educator sector assures to have a strong growth in the field of machine learning.

Conclusion:

With the advent of the artificial learning in the education sector of the Indian society, it has done a tremendous contribution for its upgradation and development. Education has achieved new heights and reached to almost every part of the society. Earlier, after the independence was achieved education was basically lopsided with mainly male dominance and a slow growth in the female section and apart from this issue another prominent problem was the accessibility of the education to the remote areas. People from the remote areas were facing difficulties in having education due to multiple hurdles which they had to face every day. Such as harsh climatic conditions, poverty, improper infrastructural facilities, immobility and others. In this article, a proper focus has been put into the region of Leh & Ladakh to show the concerns of a remotely situated areas. In today's time, Leh and Ladakh has developed its literacy level but still there are plenty of villages where people are unable to provide proper and flexible education for their children. After the application of the artificial intelligence in the education sector the students from the remote areas find it easier to get their education without much hassle. Now they don't have to compromise their future prospects because of the environment they are living in. They can now have many ways of having an easier & comfortable teaching and learning which can build their future opportunities.

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