

Revolutionising the Indian Government School System with the Help of AI and other New Age Technological Developments

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Abstract:- Education is essential for individuals to participate in a democratic society, enjoy their rights and fulfil their responsibilities.

-John Dewey

For a man to be able to negotiate a community life in fulfilling ways and develop a sense of autonomy is the elementary purpose of education. Hence a strong public education system is a requisite for the needs of all, even for the poor and marginalised sections of the society.

The norm followed in India is to run behind private education institutes and run away from government schools because of the inadequate infrastructure and demotivated staff. Hence to break these shackles of stereotype mindset, implementing AI at government schools to maximise the quality of education and reach every part of the number one populous country stands important. Not just reaching a large number but also to alter the age-old pattern of learning, with the aid of new technologies and AI the learning process could be given a new direction where the needs of each learner will be met based upon their grasping and understanding of the subject. AI will also play a crucial role in beating the shortage of staff. Private organisations have adopted VR and AR to create immersive and engaging learning experiences, while other new-age technologies such as cloud computing, learning analytics, and blockchain are also used to achieve monopoly in the private education industry.

The Indian government should invest in developing and implementing AI-powered learning platforms and other new-age technologies in government schools to serve every Indian who can not afford private institutions. The government should also provide training to teachers on how to use these technologies effectively with certification. By doing so, the Indian government can help to ensure that all students have access to a high-quality modern education. For a country as massive as India in terms of population and democracy both, implementing it is not an easy task, but if changes are made in the legislation to revolutionise the Government school system in India , days are not far where AI will take the whole education system on to an affirmative path.

This whole research paper is an analysed perspective of the same topic.

I. INTRODUCTION

There has been a rising recognition of the need to improve the quality of education in government schools among the general public and non government organisations. This led to the Indian government's several initiatives aiming at addressing the challenges faced by these schools, including the Right to Education Act (2009) and the Sarva Shiksha Abhiyan (Education for All Movement). However, despite these efforts, progress has been slow, and government schools continue to lag behind their private competitors. We hardly witness children of popular politicians and leaders studying in government schools even after the implementation of such schemes by themselves. This is an evident standard of those schemes and policies.

Government schools lack funds and resources unlike private institutions which are backed by rich businessmen and entrepreneurs. This will make the general public choose private schools over government schools. The rise in new age Technologies like AI will surely help in improving the standard of education in government schools by implementing them. This can solve the major problems Faced by the government schools.

II. PROBLEMS FACED BY GOVERNMENT SCHOOLS IN INDIA

➤ *Resource Constraints:*

Unlike the modern and sophisticated private institutions, Government schools often lack adequate infrastructure, educating materials, and basic technology. This makes it difficult to provide a quality education for the larger studying population who cannot afford private education institutes. Even after the allocation of basic resources and requirements, due to the prevailing corruption in the administration, the government schools suffer from lack of resources. Thousands of government schools lack a library, laboratories and other facilities.

➤ *Rural Population:*

The students of government schools are majorly from rural areas and are less exposed to the technologies and new age learning methods. This is one more challenge faced by the government schools unlike the private schools where

students are from urban arc. Students studying in government schools tend to distract themselves towards labour due to family's financial issues.

➤ *Staff Shortages:*

The ratio of teacher-student in government schools is often high in comparison to private education institutes, leading to overburdened teachers and less personalised attention for students. In most of the government schools there are teachers who teach for all the students irrespective of their class and subjects. This will often lead to inefficient teaching and will not create any impact on the student's learning. Due to this, the teaching staff tend to get demotivated and lead to staff Shortages. Shortage of teachers can also be due to the irregular salary payments.

➤ *Outdated Pedagogical Practices:*

In a fast running modern society, traditional teaching methods often fail to create impact on students and cater to their different learning styles. Private schools often have adapted to new teaching styles which grab the student's attention and help in understanding the subjects much better and precisely.

III. THE ROLE OF AI AND NEW-AGE TECHNOLOGIES IN OVERCOMING THE ABOVE MENTIONED PROBLEMS

AI and other new-age technologies have great potential to revolutionise the Indian government school system, by transforming the way students learn and teachers teach. AI-powered tools can be used to overcome challenges abovementioned and create a more personalised, engaging, and effective learning environment for the largest studying Indian population.

➤ *Personalised and Adaptive Learning; can be more Effective in Government Schools in Comparison to Private Schools*

Government schools can easily adapt AI algorithms which analyse an individual student's performance data to identify his/her strengths, weaknesses, learning style and pace unlike the private schools, because the number of students in government schools are less in comparison to the private schools which are often populous. This can improve the efficiency of students and will improve the performance of the students.

➤ *Online and Recorded Tutoring System; School will reach the Students who can't reach the Schools*

Government schools have faced the shortage of teachers for a long time. To tackle this problem schools should implement online and recorded tutoring methods which helps the students to learn from the teachers who can volunteer or be employed on a contract basis.

The recorded videos can be shared to the students through any platforms which are designed by the government. This will also serve the interested individuals living in remote areas who are facing problems to reach the schools.

➤ *E-Learning Platforms; Levelling the Field for all*

Adaptation of E-learning platforms in the private schools is the main edge over government schools who lack such tools. These E-learning platforms can provide access to a variety of educational resources, including interactive multimedia content, simulations, assignments, tests and online courses. This can supplement classroom learning and provide opportunities for self-paced learning. Implementation of such platforms in private schools is comparatively easier as they have enough funds but implementing the same in government schools is challenging. To tackle this the government should collaborate with notable platforms like; Byjus, unacademy or it can even create its own E-learning platform which is available for the studying population from rural areas also. Government can also encourage young app developers in designing a reliable e learning platform for the government schools.

➤ *Virtual Reality and Augmented Reality; Attracts the Studying Population*

Virtual reality (VR) and augmented reality (AR) are newest technologies that can be used to create immersive and engaging learning experiences. VR can take students to different places and times, while AR can overlay digital information onto the real world. VR and AR can be used to teach students about a variety of subjects, including science, history, and geography in a much better fashion unlike the traditional parrot fashioned education.

For example a kid of 5 years old who has never seen a tiger in real life can not imagine a tiger by just reading the word *tiger*, the metaverse can transport a kid into a virtual reality to teach various things. This memory lasts longer than anything else taught in a conventional classroom method.

➤ *AI based Attendance of Students and Teachers; to Increase Regularity*

By using AI based face recognition systems in schools, the Government can monitor the Regularity of the staff and also the students. This will save the time of roll calls and also will improve the efficiency of the schools directly or indirectly. Biometric and finger print attendance collection is also one such example of technology which enhances the efficiency of government schools.

IV. BREAKING THE STEREOTYPE

The privatisation of education has created an unhealthy discrimination among the poor and rich, financially capable and non capable, rural and urban etc.

The government's public education system is the one such tool to tackle the same and so it's very important to strengthen the government schools by adapting AI and other new age Technologies.

➤ *Here are few Examples of Recent Developments for the same;*

- *Ideal Delhi Government Schools; Inspiration for other States*

This has been successfully implemented by the Delhi government which has produced a number of top notch schools for its students irrespective of their financial status.

Online tutoring, technology based teacher training, E-learning and implementation of smart classes to deeply enhance the learning experience of the students has been some stand out works by the Delhi government. Delhi government has collaborated with the International Baccalaureate to provide workshops for teachers and also a direct bridge between the DBSE (Delhi Board of school education) and IB. By this agreement IB is now the knowledge partner of DBSE. The experts from foreign countries will come here to improve the education standards.

This is an inspiration for all other states to break the stereotype about government schools.

- *The Great First Step; Telangana Government Schools*

Telangana government has introduced AI based automated facial recognition system which records the attendance of the students. The time taken for the traditional method of roll calls will be saved and can be used for learning. The state government has also collaborated with IIT Hyderabad to implement the AI in the state's government educational institutions. By doing this, Telangana is India's first state to implement AI in the government schools and colleges. Government of Telangana has also Inculcated AI in its new curriculum which is going to be introduced in coming months.

V. RECOMMENDATIONS

➤ *To Effectively use the Power of AI and other New-Age Technologies, the following Recommendations are Proposed:*

- *Invest in Building an Efficient E-Learning Platform:*

Government schools should be provided with reliable internet connectivity and should have an efficient E-learning platform which will be available to the studying population which cannot afford private education institutes. Government can also collaborate with prominent private e-learning platforms.

- *Teacher Training:*

Teachers should be trained to use AI tools and e-learning platforms to efficiently include in their teaching. AI courses for teachers from the government. Adding AI in the curriculum of the students who are pursuing their education to educate other people further. Training should begin at their learning stage so they can be efficient while operating AI tools whilst recruitment. For the already existing teachers training can be done by collaborating with International organisations dealing in the field of AI and ed-tech.

- *Content Development:*

High-quality educational content tailored for the Indian context should be developed on such platforms. This should be appealing to the majority of the students. Online tutoring and recorded classes by volunteers can cater to shortage of staff and will make learning available post the class hours. With high quality of content even the language of the content should be in the local dialects for better understanding. For example general educating organisation called NAS daily has tremendously showcased the art of content creation through which wider audience can be educated in impactfull way.

- *Creative and Attractive Marketing Campaigns:*

Like The private schools, government schools should also advertise and market in a creative and appealing manner. The mid- day meal scheme with a detailed menu and attractive pictures should be advertised on the platforms and government websites which creates an urge in students to opt the government schools.

- *Collaborations*

Government should collaborate with various institutions, state governments, international organisations, and the private sector to easily adapt and implement AI. With the help of scholars and educationists transformation of government schools will be easier and efficient. Collaboration can also be with the alumni of government schools who are willing to serve back to their schools and for its upliftment.

- *E-Learning Centres in Accessible Locations:*

To cater the E-learning service to all, even for the marginalised and financially backward students, E-learning centres should be made for the ones who have no gadget or e-devices. These centres shall be made available to the students of the government schools to access the facility of e-learning and other new age learning methods which are currently found only at private institutions. These centres should be located in convenient locations which can be reached by students travelling from remote rural areas also.

VI. CONCLUSION

AI and other new age technologies have a great potential in uplifting any field, one such is the Indian government school system which serves the largest number of students. To break the stereotype about the Indian government schools and to revolutionise the same it's very important for the government to implement and invest on such technologies. This will help in competing with its private counterparts who are way more modern and sophisticated than government schools. Government should make sure that AI and such technologies should not only be available to the financially muscled public but also to be available to financially backward and rural arc. Implementation of above-mentioned recommendations will surely benefit the country in large and will uplift the world's largest education system as a whole. By addressing these factors and ensuring a comprehensive and well-planned approach, the Indian government can effectively harness the power of AI and e-learning to improve the government school system and provide quality education

to all children, regardless of their background or socioeconomic status. This transformation will not only benefit individual students but also contribute to the overall social and economic development of India.

REFERENCES

- [1]. <https://indiaai.gov.in/news/ai-to-aid-telegana-public-schools>
- [2]. <https://www.unesco.org/en/digital-education/artificial-intelligence>
- [3]. <https://www.tribuneindia.com/news/amritsar/breaking-stereotypes-about-govt-school-education-230198>
- [4]. <https://www.thehindu.com/news/cities/Delhi/govt-schools-to-get-world-class-education/article35867077.ece>