

The Dawn Of Online & Artificial Intelligence Enabled Education System And Their Implications On The Right To Education In India: A Critical Analysis

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Abstract

Education occupies a pivotal role in any society and has turned out to be a basic human right under many international and national legal frameworks including the Constitution of India. Imparting more quality education is equated with a more civilized society. Keeping pace with the ever-changing society in the technology-driven globalized world, the manner of imparting education has witnessed a paradigm shift from the physical face-to-face education system to technology driven mode of education. Especially during the worst time of Covid-19 pandemic situations throughout the whole world many restrictions including long term lockdowns, curfews, and other limitations on the movement of the people were imposed leading towards impossibility in imparting physical education and in such scenario the only available, reliable and suitable medium of education was online education done through modern electronic gadgets. Data shows that online education has already gone one step ahead with the widespread introduction and adoption of artificial intelligence in education sector. But as the world was hit by financial crisis amid Covid19 pandemic where the poor became poorer and as in a developing country like India where a big size of population are yet to become techno savvy and skilled then the issue comes into play as to whether the basic rights of quality education of the vulnerable, disadvantaged, and poor strata of people are secured in the era of online & AI driven education in contemporary time. This research paper, keeping in view the contemporary online and AI driven education system, will undertake to highlight the available legal provisions providing basic right of quality education to the people of India, the approach of Indian Governments to ensure inclusive and universal access of quality education and the persisting problems & challenges encountered by various segments of people along with putting forward few recommendations for future course of action.

Keywords: Right to education, online education, Artificial Intelligence, disadvantaged people, problems & challenges, initiatives by governments, recommendations.

1. INTRODUCTION

“When access to education is shackled, it definitely retards human development and stifles social harmony.”¹

Education nurtures the brains of human beings and acts as the yardstick to ensure their physical, intellectual, and emotional wellbeing. For long there have been many efforts on the part of the Governments, International authorities, political leaders, and the Judiciary to make education gradually a basic human right. Quality education also awakes generations to fight against injustices, gender gap, oppressions, and exploitations and helps the socially excluded people to come out of poverty and be a part of mainstream society. In India, the education system has witnessed a considerable change from time to time. During ancient times, education was provided by gurus

¹ Justice Asok Kumar Ganguly in his book *The Landmark Judgments that changed India*, Kindle Edition, 3rd August, 2015.

(teachers) in their places known as Gurukuls. Students had to stay there for obtaining an education and they were taught all possible subjects including Mathematics, Science, Sanskrit, Language, and History, etc. Then gradually, the modern education system was introduced where students have been taught in confined classrooms with the help of textbooks and available works of literature, and thus slowly the linkage of education with nature got drifted away.² Afterward, with the advent of technology and internet facility, the education system got revolutionized where the online education or virtual education or e-learning was introduced which got popular in course of time especially amid the worst situations created by the Covid-19 pandemic throughout the world. All educators opt for this new transition of the education system with varying degrees of concern and enthusiasms³ and the students also have found it as an alternative means of physical education but simultaneously it raises many issues about its availability to every aspirant at every nook and corner along with creating hardships for the less techno-friendly educators which causes serious concern into the omnipresent availability and affordability of the same.

2. RESEARCH QUESTION

What are the issues pertaining to online education in India with special reference to people's basic right of education and the initiatives taken by the respective governments to address the same?

3. OBJECTIVES OF THIS STUDY

- 1) To find out the international and national legal provisions making the right to education a basic right.
- 2) To check the efficacy of online education.
- 3) To discover the issues pertaining to online education in India.
- 4) To identify the hardships encountered by the disadvantaged segment of people in obtaining and imparting online education in India.
- 5) To evaluate the initiatives taken by the respective governments in ameliorating the found issues of online education in India.
- 6) To put forward suggestions and recommendations, if any, to ensure the better reaping of online education system in India.

4. Research Methodology

For showing this work light of the day, doctrinal research methodology was observed. Various sources, information and materials have been gathered from many books, articles, journals, international agreements and treaties, landmark judgments, reports of authorities. Both physical/manual and online mode of collecting data was followed throughout this work. Moreover, the analytical research methodology has also been observed.

5. Right of Education

Right to education refers to the legally vested rights to obtain education by all without any sort of discrimination and the responsibility to ensure the same lies on the State. The UN committee on the Economic, Social and Cultural Rights holds the view that right to education to be meaningful to its full extent should exhibit four essential and interrelated features (**4 A's**) viz., **available, accessible,**

² Retrieved from <https://aryagurukul.in/blog/evolution-of-education-in-india/>, last accessed on 15/12/2021

³ Retrieved from <https://www.uis.edu/ion/resources/tutorials/online-education-overview/strengths-and-weaknesses/>, last accessed on 15/12/2021

acceptable and adaptable.⁴ The right of education being considered as a universal entitlement of all has been acknowledged and recognized time and again by international as well as by national laws and authorities so that all people throughout the world and India may get education as a basic right and in such manner they can avail and unlock other available human rights as the education is deemed to be the key to open many other human rights also such as right to speech and expression etc. The following headings deal with education as an existing right available both at the international and the national level.

5.1. International level

The UN Universal Declaration of Human Rights (**UDHR**), 1948 under **Article 26** provides that “Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit....”⁵

In addition to the UDHR, 1948, the educational right is acknowledged, confirmed, ensured, promoted and safeguarded in various special international treaties covering girls & women, children, refugees, war victims, persons of disabilities etc. as follows:⁶

- i. The Convention relating to Discrimination in regard to Employment & Occupation, 1958, (Article 3)
- ii. “The Convention against Discrimination in Education, 1960”.
- iii. The International Covenant on Economic, Social and Cultural Rights, 1966 - Article 13.
- iv. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1981- Article 10.
- v. The United Nations Convention on the Rights of the Child, 1989 – (Articles 28 and 29) etc.

Thus, the right to education finds its recognition and acknowledgement time and again since long time in international level through various international treaties encompassing not only access to educational provision, but also lays down the duty of the State parties to eradicate discrimination at all the levels of the educational system, to set minimum standards and to improve quality. With respect to applicability of these treaties in India, it is pertinent to mention that India is a State party to the ICESCR, the CERD Convention, the CEDAW Convention and the Convention on the Rights of the Child as well.⁷

5.2. Indian perspective

In India, education as a right has been guaranteed by the apex law of the land i.e., the Constitution of India. In tune with the same there are few landmark judgments of the Supreme Court of India ensuring education as a right at various levels of education. In pursuance and addition to these, there is a central legislation namely, ‘The Right to Education Act, 2009’ which provides for the free and

⁴ The 4As were developed by the first UN Special Rapporteur on the right to education, Katarina Tomasevski, and adopted by the Committee on Economic, Social and Cultural Rights in its General Comment 13 on the right to education (1999, para.6).

⁵ Retrieved from https://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf, last accessed on 16/12/2021

⁶ This list is only illustrative in nature and not exhaustive. In pursuance of these treaties, majority of the nations have adopted right to education as a constitutionally guaranteed right through their respective national Constitutions.

⁷ Retrieved from <http://www.legalservicesindia.com/article/1925/Right-to-Education.html>, last accessed on 11/12/2021

compulsory education for the children falling in between the age group of six years to fourteen years. This right has also been made as a fundamental right by virtue of Article 21A of Indian Constitution.⁸

The Apex Court of India's judgment in the case of *Miss Mohini Jain V/s State of Karnataka*⁹ for the first time recognized right to education as a fundamental right under the right to life enshrined in Article 21 of the Constitution. The Ld. Court observed that: "the right to education flows directly from the right to life. The right to life and the dignity of an individual cannot be assured unless it is accompanied by the right to education." The rationality of this judgment was again examined by a five judge bench in the famous case of *J.P. Unnikrishnan V/s State of Andhra Pradesh*¹⁰ where the enforceability and the extent of the right to education was clarified and the Court held that: "The right to education further means that a citizen has a right to call upon the State to provide educational facilities to him within the limits of its economic capacity and development." The said position had also been reiterated by the Hon'ble Supreme Court in *Bandhua Mukti Morcha V/s Union of India*¹¹. Further, In the case of *Maharashtra State Board of Secondary and Higher Education V/s K.S. Gandhi*¹², the Apex Court held that: "right to education at the secondary stage was also a fundamental right. It would be therefore incumbent upon the State to provide facilities and opportunity as enjoined under Article 39 (e)¹³ and (f)¹⁴ of the Constitution and to prevent exploitation of their childhood due to indigence and vagary."¹⁵

6. Online education system

"Online education is an electronically developed, supported and run learning system that relies on the internet connectivity for teacher/student interaction and the distribution of class materials."¹⁶ In the realm of online or electronic education, learning happens to be either synchronous or asynchronous or even can be both which are run by technologically developed means such as Internet. Synchronous learning implies to that learning through technology which takes place simultaneously. Whereas asynchronous learning is that online learning which does not take place simultaneously. Online education is variously termed as "distance education" "e-learning," "online learning," "blended learning," "computer-based learning," "web-based learning," "virtual learning," "tele-education," "cyber learning," "Internet-based learning," "distributed learning," etc.¹⁷

⁸ This Article was inserted in the Constitution of India through the 86th Constitutional Amendment Act, 2002.

⁹ (1992 AIR 1858)

¹⁰ 1993 AIR 217

¹¹ (1997) 10 SCC 549

¹² (1991) 2 S.C.C. 716

¹³ Art. 39 (e) mandates that the health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength.

¹⁴ Art. 39 (f) provides that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material. abandonment

¹⁵ Supra note 7

¹⁶ Retrieved from <https://www.indiaeducation.net/online-education/articles/what-is-online-education.html>, last accessed on 17/12/2021

¹⁷ Anna Sun and Xiufang Chen, Rowan University, Glassboro, NJ, USA, Online Education and Its Effective Practice: A Research Review, Journal of Information Technology Education: Research Volume 15, 2016

Online education system got started in the late twentieth century and at that time maximum programmes were synchronous and were conducted through various modes of instant messaging like chat rooms and texting. The emergence of the symbol in the year 1972 for the purpose of email¹⁸, the introduction of the World Wide Web (www) in the year 1991 for the Internet connectivity¹⁹ and the emergence of video conferencing and virtual/online hangouts have been the driving force behind the escalation of the online education system throughout the world including India. The physical education system was one among the top sectors which were hit by the unavoidable and pathetic restrictions, lockdown and curfew for a long time standing which got imposed due to the havoc created by Covid-19 deadly virus across the world have proved to be a catalyst in the popularization and omnipresent spread of online education system.

6.1 Online education during Novel Corona Virus (Covid-19) pandemic

The Novel Corona Virus (Covid-19) deadly virus adversely affected the education segment of the globe to a great extent as due to the same major part of the world was kept on quarantine, lockdown and curfew apart from other sort of restrictions including social distancing and thus cities were converted to phantom cities. This situation made the conduction of the physical classes/ in person classes impossible in as much as the schools, colleges, universities and other educational institutions were forced to shut down temporarily but for a long time. Because of this, the career of the students, learners, teachers and other educators were at stake and uncertainty crept into the world of academics. Amid this crisis the educational sector saw a ray of hope and found a panacea in the form of online education by way of using online platforms which could be used to impart, obtain and disseminate education and thus a paradigm shift or transition took place in the education sector which turned the offline mode of education in offline mode of education.

The technological innovations and discoveries through which online education is carried on are manifold, such as Email, Google Classrooms, Google hangouts, Google meet, Zoom App, Youtube, Google forms, Google Drives, Google forms, Open Board Software, Google Jam Board and the drawings, telegrams, Whatsapp, etc. This list is not exhaustive rather illustrative in nature, there are many other ways to conduct online classes and ensure online learning or electronic education.²⁰

6.2 Barriers and issues in imparting and obtaining online education in India

India is a developing country that encounters a mountain of problems and issues while imparting and obtaining online education. The major issues are of course pertaining to electricity, internet connectivity, and availability of devices like computers and smartphones, and the lack of required skills among the educators.

i. Poor Electricity: As per the World Bank Report on Global Electricity Index, about 97.8% of Indian households have electricity connections as on 2019²¹ and as per the Ministry of Power, Govt. of India Report India has 100% electrification ²²(it means electricity has reached all the villages of India but does not ensure that it has reached all the households of India). But the sad reality is that there remains frequent power cuts throughout the country. As per a survey conducted by the

¹⁸ Maloney-Krichmar & Abras, 2003

¹⁹ Harasim, 2000

²⁰ Dhawan Shivangi, Online Learning: A Panacea in the Time of COVID-19 Crisis, Journal of Educational Technology Systems 2020, Vol. 49(1) 5–22

²¹ Retrieved from <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=IN>, last accessed on 17/12/2021

²² Retrieved from <https://powermin.gov.in/en/content/saubhagya>, last accessed on 17/12/2021

Ministry of Rural Development, per day, 20% of India's households receive less than 8 hours of electricity while only 47% of households receive more than 12 hours of electricity.

ii. Poor Internet Connectivity: The Internet has been termed as a fundamental right subject to restrictions under Indian Constitution by the Supreme Court of India in the case of *Anuradha Bhasin V/s Union of India*²³ and further in the same case it has been found to be intrinsic to fulfil the mandate of right to education in the present context. But when one sees at the number of internet users in India then it is found that the internet penetration rate in the year 2020 is about 50% in India, that is to say that 50% population of India is using internet but the rest 50% is still not using internet of any kind.²⁴ Amongst the poorest 20% households, only 8.9% and amongst top 20% households, 50.50% have the access to internet facility of any kind in the year 2020.²⁵

iii. Lack of sufficient devices: Internet can be used only through devices, be it computer or mobile phone or tablet or anything as such. So it carries few questions such as: i. whether phones are available for students? ii. Whether there is extra phone in the family? iii. Whether these phones have sufficient internet buffering data? iv. Whether there is capacity of extra data pack affordability? If the answers are in negative then there are problems and if the problems persist then internet cannot be used and if internet cannot be used then the online education is bound to be hampered. As per a research in the year 2020, amongst the poorest 20% households, only 2.7% and amongst top 20% households, 27.60% have the access to computer systems in the year 2020.²⁶ Further, SpeedTest, a site meant for internet access performance in the world, in its recent report on finding COVID-19's which was published on 15th April, 2020, on the impact on speeds around the world showed a 6% decline in fixed line speeds and 18% in mobile speeds when compared to the week of March 2 of 2020. As per this report, India's current broadband speed is an average of 36.17 mbps and mobile download speed is 9.67 mbps.

iv. Lack of required skills to adapt new technology: A considerable number of teachers never taught online and a huge number of students never learned online. Further, a lot of discipline is required to impart and to obtain online education. So, they lack technical knowledge and thus there is immense need of skill development for them in order to ensure efficient online education system.

v. Non availability of peaceful environment and separate rooms: Imparting and obtaining of education requires peaceful environment as it requires one to one interaction among teachers and students which can basically be ensured in online mode by using separate rooms where the concerned student and the teacher can sit and can impart or obtain education respectively. India is a developing country, many people are not even having rooms for staying and 37% of Indian households have only one dwelling room so it would be luxury for many people to attend the classes and pursue in a peaceful and conducive environment.²⁷

vi. Dream for poor students: Online education got its omnipresence overnight in India because of the outbreak of the Covid-19 deadly virus. As per a report issued in the year 2020 by the UNICEF, about 1.57 billion children throughout the world have been affected because of shut down of the

²³ 2019 SCC Online SC 1725

²⁴ Retrieved from <https://www.statista.com/topics/2157/internet-usage-in-india/>, last accessed on 19/12/2021

²⁵ Retrieved from https://www.niti.gov.in/sites/default/files/2021-11/National_MPI_India-11242021.pdf, last accessed on 19/12/2021

²⁶ Ibid

²⁷ Protiva Kundu, DIGITAL DIVIDE, Scroll.in

physical classes. When one sees at India the one finds that a large number of its students belong to below poverty line and are pursuing their education from regional or local languages so it becomes tougher for them to continue their education through online medium. That position gets more severe when their families fight to meet both the ends and in that circumstance having a device or internet or even thinking about education becomes unrealistic because the provision of free mid-day meal was also affected due to the closure of physical classes. In such circumstances, the accessibility and affordability of online education becomes a dream for the poor students, particularly for the students pursuing education in Schools (i.e., from Class I to Class XII).

6.3 Government's initiatives to ensure efficient and ubiquitous online education system in India

The Government of India and the respective State Governments have been working and taking initiatives from time to time at their end from many years to strengthen and enhance the availability, accessibility and productivity of online education in India. As per RedSeer Consulting²⁸, the on-line higher education market in India is predicted to reach 5 billion US Dollar by way of 2025, driven through the government's focal point on designing on-line education programmes, strengthening digital infrastructure throughout the country, and catering to the rising demand for up-skilling amongst students.

The Indian authorities additionally launched the 'Digital India' initiative in July 2015, to give a boost to digital infrastructure in order to make bigger internet accessibility among citizens (for example, connecting rural areas to high-speed net networks). As phase of the 'Digital India' initiative, the authorities also started out the e-Education initiative to supply online training in far off and urban areas the use of smartphones, apps, and web services. Further, amid the pandemic, the Indian government has taken various initiatives to make it at par with some global on-line schooling fine practices and at ease policies for universities and faculties to provide distance and online/digital gaining knowledge of opportunities to students.²⁹ The following initiatives have been taken by the Indian Government in the 21st century so as to to boost up digital/online education in India:³⁰ **National Digital Educational Architecture (NDEAR)** (introduced in the 2021-22 Annual Union Budget), **PM eVIDYA Programme (introduced in May, 2020)**, **DIKSHA (introduced in September, 2017)**, **SWAYAM (introduced in 2017)**, **SWAYAM PRABHA (introduced in 2017)**, **ePathshala Portal (introduced in 2015)**, **NISHTHA, OLabs (introduced in the year 2021)**, **Virtual Labs (introduced in 2009-10)**. These abovementioned are not exhaustive but only illustrative in nature. Apart from these initiatives, various State Governments also took initiatives on their own to strengthen their people, for instance, the Government of Assam provided free smart mobile phones to the students of Class IX and X.

7. AI's Impact on Education³¹

AI has revolutionized the education sector. A few AI-based technologies that have already had an impact on education and will continue to do so are as follows:

²⁸ Retrieved from <https://redseer.com/newsletters/online-higher-education-lifelong-learning-10x-growth-potential-a-5bn-opportunity/>, last accessed on 21/12/2021

²⁹ <https://www.ibef.org/blogs/digital-education-initiatives>, last accessed on 21/12/2021

³⁰ Retrieved from <https://www.ibef.org/blogs/digital-education-initiatives>, last accessed on 23/12/2021

³¹ "Artificial Intelligence in Education." *Times of India Blog*, 10 Dec. 2021, timesofindia.indiatimes.com/readersblog/newtech/artificial-intelligence-in-education-39512.

Chatbots

One example of an artificial intelligence (AI) educational tool that students may soon use is a chatbot. These are increasingly being used in schools where students utilise iPads or computers to talk with chatbots created to aid in the understanding of particular concepts, such as math or reading comprehension. There's a chance that chatbot tutors could do more than just assist pupils in learning new ideas; they might even show up when analysis is required. In all technological fields, chatbots are the future. Less work is given to teachers on a regular basis. During parent-teacher conferences, chatbots in the classroom could take the place of electronic correspondence between the two parties.

Virtual Reality

Virtual Reality (i.e., VR) is a great tool for inspiring students. While using the same virtual reality programme in various classrooms, they could safely communicate even though they are still separated by distances. Students can experience things in virtual reality that they might never get the chance to see or learn about in the real world. Teachers are similarly affected. Teachers can come up with much more interesting techniques to instruct their pupils. Anyone who has used virtual reality (VR) would know that it is significantly more immersive than watching a video or being within a computer-generated setting. For students and teachers, personal interaction and thorough knowledge are just two advantages.

Learning Management System (LMS)

AI has made it easier for the stakeholders to manage the learning system through technological interventions only. Certain examples in this regard may be a. assigning assignments or coursework, b. tracking the progress of the students, c. generating automatic reports on the performance of the students, d. communicating with students and parents through automatic messaging system, eg., email, whatsapp etc. Further, AI makes it possible for all elements of a course from lessons and assignments to tests and grading to be housed in a single location/platform/space. This implies that instructors are always free to offer input on any project or test. Without having to wait until the conclusion of the semester, students may view their marks right away. Again with the aid of AI learning of a wide range of subjects can be ensured. An AI-powered intelligent digital teacher can assist a learner by giving them the solution to their problem as well as assistance with their problems. Artificial intelligence can even be used to create learning management systems that can analyse student thought processes and improve student learning. Today's LMS systems can assist teachers in content creation, support parents in tracking their child's progress in the system, and evaluate students using an AI engine. This has helped teachers manage the classroom more effectively while also reducing their workload and helping parents better understand their child's progress. LMSs are a wonderful resource for both educators and learners.

Robotics

The current state of AI development makes robotics in education unavoidable. Robots may be a fantastic learning tool for both students and teachers, providing an engaging method to delve deeply into a subject. This means that robots can give teachers a method to spend more one-on-one time with children who need extra assistance. Additionally, it enables them to test out novel teaching techniques, which is crucial when attempting to engage various student types. For students, it's an opportunity to learn something new on their own without feeling under pressure from being the only student in the class or from having their peers criticise them when they make mistakes. Robots can provide a place for people to feel comfortable if they don't immediately understand something. For students, robotics is essential because it can show them that engineering is more than just problem-solving on paper or sketching on a mat. They are able to observe the results of their work and the end result. Additionally, teachers can employ robotics as a teaching tool to impart lessons on current

affairs or even math principles like fractions. Technology will surely continue to play a crucial part in people's lives as it develops.

7.2 Challenges

For both students and teachers, understanding how to apply technology is a problem. Throughout most cases, the issue is that teachers lack the training necessary to effectively utilise the latest technology in their classes. They must therefore either figure it out on their own or find someone they already know. In order to give students an engaging educational experience, teachers need assistance in understanding how these technologies might be used.

7.3 Artificial intelligence in Education: Benefits and drawbacks

The benefits and drawbacks of AI in education are not as clear-cut, though. Each side has benefits and drawbacks, but both sides also have advantages. In an expanding number of industries, including education, AI is taking the place of people. Along with teaching, it involves grading papers, composing essays, and advising students on their next course of study. Should it be? is the pertinent query.

7.3.1 Benefits:

The use of artificial intelligence in education is currently a hotly debated issue. The question of whether AI should indeed be utilised to educate pupils is a contentious issue. Many claim that instructors will be replaced by AI, eliminating the human component of education. However, using AI in education has a lot of benefits. Writings and papers can be graded by AI far more quickly than by humans. As a result, teachers will have more time to work with pupils on developing their critical analysis and thinking skills. Additionally, it would enable teachers to concentrate on specific pupils who would gain from their direction. Insights into student learning preferences and practical feedback for students who need more practise with a particular subject or ability can be provided by AI to support human teachers. AI doesn't get tired, has no mood swings, and only exists to support learning.

7.3.2 Drawbacks:

However, there are also potential drawbacks to artificial intelligence in the classroom. Perhaps a human teacher can teach better than a robot. The drawback of artificial intelligence in education is that it could not always be effective as a teaching tool. Artificial intelligence is emotionless. When being lectured at, when they have a query, or when the AI doesn't respond to them, students don't feel like the AI is looking out for them. This is a burgeoning topic, and professors are working to create AI technologies that enhance human lives at institutions all across the world. In order to give pupils adaptive learning, artificial intelligence could also be utilised to modify the level of instruction according to how individual student is doing. Conversely, some people are concerned about the influence of AI in a world in which human interaction is dwindling.

7.4 Guaranteeing inclusion and parity in AI in education

AI has a wide range of potential applications, but it can also be a disruptor that exacerbates inequalities and divides already present since those who are marginalised and poor are more inclined to be excluded from AI-powered education. As a result, there is a new type of digital divide: one in the application of data-based knowledge to support informed decision-making. When creating AI in education policies, equity and inclusiveness should be the guiding principles. Thus, when creating policies, policymakers should consider a number of inclusion and equity-related issues. What critical infrastructure requirements, for instance, exist in developing nations to enable AI in education? What can we learn from past mistakes in order to create long-lasting and fair conditions for digital rights in terms of internet access? How might AI benefit the education given to

underprivileged communities and groups? How can AI and digital education expand more quickly in underdeveloped nations to address the global achievement gap between affluent and poor students? What are effective AI strategies for women and girls to eliminate gender disparities? The challenges of implementing AI in education in developing nations have been mapped in recent studies. The key ones are: (1) Access to ICT gear; (2) Electricity; (3) Reliability of the Internet; (4) Data charges; (5) Students' fundamental ICT abilities; (6) Language; and (7) Lack of culturally suitable content. A new digital divide in the application of data-based knowledge for reasoned intelligent decision-making is created by the absence of basic infrastructures, according to additional reviews on the introduction of big data in developing nations. There must be numerous policies in place in order to remove these barriers. It is crucial to begin by outlining the internet as a human right and forming numerous multinational partnerships to establish infrastructure in the developing world's most impoverished areas. One glaring illustration of this is the work done by the United Nations Broadband Commission.

8. Conclusion and suggestions

To quote Justice PN Bhagwati, the 17th Chief Justice of the Supreme Court of India: “The child is a soul with a being, a nature and capacities of its own, who must be helped to find them, to grow into their maturity, into a fullness of physical and vital energy and the utmost breadth, depth and height of its emotional, intellectual and spiritual being; otherwise there cannot be a healthy growth of the nation.”³²

Education being an integral right of human's lives cannot be compromised under any circumstance. India has multiple issues in imparting and obtaining online education. Education is an integral part in one's life. India is on the path to achieve universal literacy for youth population by 2030. Education is a fundamental right in India till the age of fourteen years but after fourteen years also it remains a basic right to the people not only under Indian laws but also under the international laws and treaties. Whether it is fundamental right or basic right, it becomes the primary responsibility of the State to ensure quality of education to its people, be it online or offline. The factors which the government and nation should consider while achieving literacy is to provide quality of education, digital literacy and skilling and to ensure proper and efficient digital infrastructure and strive to reduce the so called digital divide or digital gap between rich and poor segment of people of the country by empowering the disadvantaged and poor people both technologically and financially. The country must also ensure that the younger generation is able to gain plethora of opportunities from digitalization with minimum or no post suffering. **As per the report of the IAMAI Kantar Cube³³**, the numbers of active net consumers in India are expected to achieve 900 million via 2025; up 45% over 622 million lively net customers in 2020 which if attained would be a step forward towards achieving this end. All generations look up to the upcoming generation that they will frame a better nation tomorrow than today.

Further, parents who are constantly worried about their children's social lives would profit from AI. They may now keep a closer eye on their child's internet activity than ever before thanks to AI technology. Schools employ software that analyses data points, such as the degree to which different pupils learn content, and then assigns students to groups depending on their individual needs. With AI, students will be able to access instructors and lessons around-the-clock from any location. AI

³² Lakshmi Kant Pandey v. Union of India, 1984 AIR 469

³³ Retrieved from <https://www.afaqs.com/news/mktg/indias-active-internet-population-likely-to-touch-900-million-by-2025-iamai-kantar-icube-2020-report#:~:text=According%20to%20the%20new%20IAMAI,in%20the%20next%20five%20years,> last accessed on 22/12/2021

can be used in education to help students achieve their goals by giving them individualized feedback on their assignments, tests, and other assignments based on AI algorithms. Because it can perform trivial jobs, such as organizing emails or finding things, artificial intelligence has the potential to make everyone's life easier through automation. The age of AI is in prevalence and is regarded as a key force behind changes in education. AI offers so many advantages. Irrespective of their learning capacity or disability, every student will have equal access; this is extremely important because not all kids develop their skills or knowledge at the same rate. Students can brighten their future with the aid of AI.

Lastly, the education being a weapon for future generation should be given at most priority and the students who are found unable to reap the benefit of this online system of education should be helped by the respective governments (both Central and the State governments as education is a concurrent subject under India Constitution) by all possible means without fail otherwise the whole education structure would be at stake.
