

ARTIFICIAL INTELLIGENCE IN EDUCATION AND HUMAN RIGHTS: PRIVACY, EQUALITY AND ACCESS TO EDUCATION

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Abstract

Artificial Intelligence (AI) is now being used in different areas of education. It is used for online learning, personalised teaching, assessment and other educational activities. AI can help teachers understand the learning needs of students and provide appropriate support. It can also make education more accessible for students with disabilities and for those who need flexible learning methods.

At the same time, the increasing use of AI raises concerns about privacy, equality and access to education. AI-based educational systems may collect and use students' personal and academic information. If the data used by these systems is biased, it may result in unfair treatment of some learners. Students from rural and economically weaker backgrounds may also face difficulties in benefiting from AI because of limited access to digital devices and internet facilities.

This article examines the use of AI in education from a human rights perspective, with particular focus on privacy, equality and access to education. It discusses the Indian constitutional framework and the Digital Personal Data Protection Act, 2023. The article argues that AI should support teachers and students rather than replace them, while its use must protect privacy, promote fairness and transparency, and ensure equal opportunities in education.

Keywords: *Artificial Intelligence, Education, Human Rights, Right to Education, Privacy, Equality, Digital Divide, Algorithmic Bias, Data Protection, Educational Technology.*

1. Introduction

Education plays an important role in the growth of individuals and society. It provides knowledge, develops the ability to think critically and helps people take part in social life. The rapid development of digital technology has brought changes in traditional teaching and learning methods, and Artificial Intelligence (AI) is now becoming a part of this development. AI can examine information, recognise learning patterns, create educational material and support different academic activities.

The use of AI in education is no longer limited to experimental purposes. Educational institutions are increasingly using it for online learning, automated assessment, personalised learning, virtual assistance and academic support. These technologies can affect how students learn, how their performance is evaluated and, in some situations, how decisions related to education are taken.

AI can offer a number of benefits in the field of education. It can help teachers recognise students who need additional assistance and provide learners with explanations and practice material according to their needs. Tools such as speech-to-text, text-to-speech and automated captions can make learning easier for persons with disabilities. AI-based translation can also help students who experience difficulties because of language differences. UNESCO has acknowledged the possible contribution of AI to educational development while emphasising the need for inclusion and equality.

However, the use of AI also creates several concerns. The collection of students' personal information can affect their privacy, while biased algorithms may lead to unequal results. Students living in rural areas and those from economically weaker backgrounds may face greater difficulties because of limited internet connectivity and lack of suitable digital devices. UNESCO has also cautioned that existing digital inequalities may increase the gap in access to AI-based education.

For these reasons, the use of AI in education needs to be considered from a human rights perspective. The focus should not be only on making education more efficient. AI should be used in a way that safeguards privacy, supports equality and ensures that technological progress does not create barriers to meaningful access to education.

2. Understanding Artificial Intelligence in Education

Artificial Intelligence refers to computer systems that are capable of carrying out tasks that generally require human abilities, including learning, reasoning, analysing information and identifying patterns. In the field of education, these abilities are increasingly being used to assist teaching, learning, assessment and other academic activities.

AI is being used in several ways by educational institutions. Personalised learning systems can recommend study material based on a student's performance and individual requirements. Automated tools can support the assessment process and provide quick feedback. AI-based virtual assistants can respond to common academic queries, while generative AI can assist teachers and students in preparing explanations, summaries and other learning materials. Assistive technologies, including speech recognition, text-to-speech and automated captions, can also help make education more accessible to students with disabilities.

The increasing use of AI has changed the traditional relationship between teachers, students and learning resources. Students are no longer dependent on a single approach to learning and can receive support based on their particular needs. However, AI should be considered a means of supporting teachers rather than replacing them. Human involvement continues to be necessary because education also involves communication, critical thinking, creativity and social development, which cannot be fully managed through automated systems.

The usefulness of AI in education therefore depends not only on what the technology can do but also on the manner in which it is used. Its application should be directed towards improving the learning process while respecting the rights, dignity and interests of students.

3. AI and the Human Right to Education

Education is recognised as a basic human right and plays an important role in individual development and social progress. Article 26 of the Universal Declaration of Human Rights recognises the right to education, while the International Covenant on Economic, Social and Cultural Rights also provides for this right.¹ In India, Article 21A of the Constitution guarantees free and compulsory education for children between six and fourteen years of age.

Artificial Intelligence can support this right by providing personalised learning, quick feedback, digital educational resources and assistive tools for students with disabilities. AI-based translation can also help reduce language-related barriers in education.

However, equal access to AI-based education cannot be achieved without adequate digital infrastructure. Students from rural and economically weaker backgrounds may have limited access to smartphones, computers, internet services and digital skills. UNESCO has therefore highlighted the possibility of a growing “AI divide” alongside the existing digital divide.

AI should consequently be used to support teachers and expand educational opportunities, rather than replace human teaching. Its development must focus on accessibility, equality and inclusion so that technology strengthens the right to education instead of creating new educational inequalities.

4. Artificial Intelligence and the Right to Privacy

The growing use of Artificial Intelligence in education has raised serious questions about the privacy of students. AI-based educational platforms can collect different types of information, including academic records, attendance details, learning patterns, online activities and other personal information. When this data is collected and examined on a wider scale, it can reveal considerable information about the behaviour, performance and preferences of individual students.

In India, the right to privacy forms an important part of the right to life and personal liberty guaranteed under Article 21 of the Constitution. The Supreme Court, in *K.S. Puttaswamy (Retd.) v. Union of India*², recognised privacy as a constitutionally protected right. This principle has particular importance in the educational context because students may not always have sufficient knowledge or control regarding the collection, storage and use of their personal information.

The Digital Personal Data Protection Act, 2023 provides a statutory framework for the processing of digital personal data. The provisions concerning consent and the processing of children’s personal data are particularly relevant where AI systems are used in educational institutions.³ Institutions using such

¹ Universal Declaration of Human Rights, 1948, Art. 26; International Covenant on Economic, Social and Cultural Rights, 1966, Arts. 13–14.

² *K.S. Puttaswamy (Retd.) v. Union of India*, (2017) 10 SCC 1.

³ Digital Personal Data Protection Act, 2023, particularly Section 9 concerning the processing of personal data of children.

technologies should, therefore, ensure that only information necessary for a legitimate educational purpose is collected and that students or their parents, where applicable, are informed about the purpose and manner of data processing.

The use of AI for monitoring and surveillance may create further privacy concerns. Facial recognition, behavioural tracking and similar technologies can interfere with students' sense of personal freedom if adequate safeguards are not maintained. There is also a possibility that automated systems may use personal information to produce assessments or recommendations without students having a clear understanding of how such outcomes are determined.

The responsible use of AI in education should therefore be based on data minimisation, transparency, security, informed consent and appropriate human supervision. Technological progress in education must be pursued without compromising the privacy, autonomy and dignity of students.

5. Surveillance and Student Autonomy

The use of Artificial Intelligence to monitor students has raised concerns regarding privacy and individual freedom. Educational institutions may use facial recognition, online activity monitoring and other automated systems to track attendance, examination conduct or academic performance. While such technologies can make certain administrative tasks easier, excessive monitoring may make students feel that they are being observed at all times.

Constant monitoring can also influence students' independence and their ability to learn freely without unnecessary pressure. AI systems may interpret student behaviour on the basis of the data collected, and inaccurate information or system errors may sometimes result in incorrect or unfair assessments.

AI-based monitoring should therefore be limited to genuine educational requirements and should be used in a reasonable and proportionate manner. Students should be made aware of the purpose of monitoring; the type of information being collected and the manner in which it will be used. Proper human oversight, transparency and adequate privacy measures are essential to ensure that the use of technology improves education without creating an environment of continuous surveillance.

6. AI, Equality and Algorithmic Bias

Equality is a significant issue in the growing use of Artificial Intelligence in education. AI systems are often developed using large sets of data. If the data contains social, economic or cultural prejudices, the system may also produce results that are unfair to certain students. In such situations, an algorithmic decision may seem objective but may have a discriminatory effect on groups.

In the educational context, bias in AI can influence assessment, learning suggestions and the way students are categorised or evaluated. Students living in rural areas, belonging to economically weaker sections, facing language barriers or coming from disadvantaged communities may not have equal access to the benefits of

AI-based education. Similarly, students with disabilities may be excluded when educational technologies are not properly designed to meet their accessibility requirements.

Article 14 of the Constitution of India embodies the principle of equality and protects individuals against arbitrary and discriminatory treatment. The use of AI in educational institutions should therefore be assessed regularly to identify possible bias and unequal consequences.

AI-based educational systems should be designed and implemented with fairness, transparency and inclusiveness. Where an automated decision can substantially affect a student's educational opportunity, there should be an opportunity for human examination and intervention. Technology should be used to address existing inequalities rather than reproduce them through digital systems.

7. AI, Equality and the Digital Divide

Artificial Intelligence has the potential to expand educational opportunities through personalised learning, access to digital study materials and quick academic support. However, the usefulness of these technologies largely depends on the availability of basic digital facilities. Students who do not have an appropriate device, reliable internet connection, regular electricity supply or adequate digital skills may find it difficult to make effective use of AI-based learning tools. As a result, the existing digital divide may also develop into a form of inequality in access to education.

Digital Divide and Access to AI-Based Education

The Indian situation demonstrates this difference between availability and actual access. According to **ASER 2024**, among children aged 14–16, 96.7% had a smartphone available at home and 94.3% could use a smartphone, but only 35% personally owned one.

Smartphone Access among Children Aged 14–16, India, 2024

Indicator	Percentage
Smartphone available at home	96.7%
Can use a smartphone	94.3%
Can bring smartphone for digital tasks	83.4%
Personally own a smartphone	35.0%

Source: ASER 2024.

This data indicates that household access does not necessarily mean individual access. A student who shares a device with other family members may have less opportunity to use AI-based learning applications than a

student with a personal device. The problem can become more significant for families with limited income, poor connectivity or inadequate digital literacy.

Gender can also influence access. ASER 2024 reported personal smartphone ownership of **36.2% among boys and 26.9% among girls** aged 14–16. If AI-based learning increasingly depends upon personal devices, such differences may influence educational opportunities.⁴

The issue is not limited to India. UNESCO reported that around **2.6 billion people remained offline in 2024** and warned that the existing digital divide could develop into an AI divide. This demonstrates that technological advancement cannot by itself guarantee equal educational participation.

Governments and educational institutions should therefore focus on affordable internet, access to devices, public digital facilities and digital literacy. AI should expand educational opportunities rather than become a new requirement for accessing them.

8. AI, Disability and Linguistic Inclusion

AI can make education more accessible to students who experience physical, learning or communication barriers. Speech-to-text systems can assist students who have difficulty typing, while text-to-speech technology can support learners with visual impairments. Automated captions can improve access to audio-visual educational material for students with hearing difficulties. AI can also simplify complex content and present information in alternative formats.



⁴ ASER Centre, *Annual Status of Education Report (Rural) 2024*, ASER Centre, New Delhi, 2025, section on “Digital Literacy: For Children Aged 14–16.”



Figure: AI-Based Assistive Technologies for Inclusive Education

However, accessibility should be incorporated into the design of educational technology from the beginning. If AI systems are developed without considering the experiences of persons with disabilities, technology may reproduce existing educational barriers. Students with disabilities should therefore be included in the testing and evaluation of such systems.

Language is another important aspect of educational equality. AI systems generally provide better results in languages for which substantial digital training material exists. In a multilingual country such as India, this may create disadvantages for students who depend primarily on regional languages.

AI-based education should therefore support multilingual learning and encourage the development of reliable educational resources in Indian languages. Technological development should respect linguistic diversity rather than strengthening the dominance of already well-supported languages.

9. AI, Student Autonomy and the Role of Teachers

Education requires independent thinking, creativity and the ability to assess information carefully. Generative AI can assist students in understanding difficult topics, finding explanations and considering different ways of approaching a problem. However, depending too heavily on AI-generated responses may discourage students from thinking and conducting research on their own.

The possibility of receiving incorrect information is another concern. AI systems can sometimes provide inaccurate or misleading answers, which students may accept without checking their reliability. AI literacy should therefore also involve the ability to question, verify and critically assess information produced by AI.

Teachers continue to have an important role in this process. They understand the academic and social needs of their students and provide motivation, guidance and personal interaction. AI can support teachers by helping prepare initial learning materials, identifying common difficulties faced by students and reducing repetitive administrative work.



Human–AI Collaboration in Education

The better approach is not to replace teachers with AI but to use it as a tool that supports their work. UNESCO's AI competency framework also gives importance to human involvement and encourages the development of AI-related skills among both teachers and learners.

10. Algorithmic Bias, Transparency and Accountability

AI systems are increasingly being used in assessment, student profiling, learning recommendations and other educational decisions. While decisions produced by algorithms may seem neutral and objective, they can still be influenced by biases present in the data on which the systems are developed. Where certain social, economic, linguistic or geographical groups are not adequately represented in the data, the use of AI may result in unequal outcomes.

This concern is closely related to Article 14 of the Constitution of India, which guarantees equality before the law and equal protection of the laws. An educational decision should not be considered beyond review simply because it has been made through an automated system.

Rights-Based AI Decision Process

Student Data → AI Analysis → Automated Decision → Human Review → Explanation/Challenge →
Corrective Action

Transparency is therefore necessary when AI is used in education. Students and teachers should be given clear information about the purpose of an AI system and the possible effects of its use. If an automated decision has a significant impact on a student's educational opportunity, there should be a proper opportunity for human review.

Responsibility should also remain with the institution or authority that uses the AI system. An algorithm cannot independently be held legally or morally responsible for its decisions. Educational institutions and technology providers should therefore have suitable mechanisms to detect errors or discriminatory results and take corrective measures when required.

11. Indian Legal and International Human Rights Framework

The Constitution of India provides a basic framework for examining the use of AI in education. Article 14 guarantees equality, Article 21 protects life and personal liberty, and Article 21A provides for free and compulsory education for children between six and fourteen years of age.⁵

The Supreme Court, in *K.S. Puttaswamy (Retd.) v. Union of India*⁶, recognised the right to privacy as a constitutionally protected right. This principle becomes particularly important in the educational context where AI-based systems may collect and process students' academic records, behavioural information and online activities.

The Digital Personal Data Protection Act, 2023 establishes a legal framework for the processing of digital personal data. Its provisions relating to the personal data of children are particularly relevant to educational AI systems, as a significant number of users of educational technologies may be minors.⁷

The international human rights framework also provides useful guidance in this area. Article 26 of the Universal Declaration of Human Rights recognises education as a human right, while the Convention on the Rights of the Child contains provisions relating to children's development, privacy and protection against discrimination.^{[4][5]}

UNICEF's *Guidance on AI and Children, Version 3.0 (2025)* highlights privacy, safety, fairness, non-discrimination, transparency, accountability and inclusion as important principles for the responsible development and use of AI affecting children.^[6] UNESCO has also supported a human-centred approach towards the use of AI in education.^[7]

These principles indicate that the introduction of AI in education should not be based solely on technological possibilities. Its use should also be evaluated in terms of its effect on students' rights, dignity and access to educational opportunities.

12. Challenges, Measures and Conclusion

The principal challenges of AI in education can be summarised as follows:

Challenge	Human Rights Concern	Appropriate Response
Excessive data collection	Privacy	Data minimisation and security
Algorithmic bias	Equality	Regular bias assessment
Digital divide	Unequal access	Affordable infrastructure

⁵ Constitution of India, arts. 14, 21 and 21A.

⁶ *K.S. Puttaswamy (Retd.) v. Union of India*, (2017) 10 SCC 1.

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Challenge	Human Rights Concern	Appropriate Response
Automated decisions	Loss of human agency	Human oversight
Lack of AI literacy	Misuse and misinformation	Teacher and student training

A rights-based approach requires educational institutions to collect only information that is necessary for a legitimate educational purpose. Students and parents should receive understandable information about how personal data is processed. AI systems should also be examined regularly for discriminatory outcomes.

Public investment is equally important. Rural and economically disadvantaged students require access to reliable connectivity, suitable devices and digital learning resources. Without such measures, AI may increase rather than reduce educational inequality.

Teachers should receive training in AI literacy, privacy protection and ethical technology use. Students should also learn how to evaluate AI-generated information, identify unreliable outputs and protect their personal data.

The analysis demonstrates that Artificial Intelligence can contribute significantly to education through personalised learning, accessibility, translation and teacher support. At the same time, its use can create serious concerns relating to privacy, discrimination, surveillance, unequal access and loss of human agency.

The appropriate response is neither complete acceptance nor rejection of AI. Instead, educational AI should be governed through privacy, equality, accessibility, transparency, accountability and human oversight. Technology should assist teachers rather than eliminate them and should provide greater opportunities to disadvantaged learners rather than create new barriers.

Ultimately, the success of AI in education should not be measured only by technological efficiency. It should be assessed by whether it strengthens the right to education while protecting dignity, privacy and equality. The objective should therefore be a human-centred and rights-based educational system in which AI remains a tool for human development rather than a substitute for it.

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