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GENERATIVE AI IMPROVES LEARNING BUT RAISES IMPORTANT ETHICAL CONCERNS

An Educational and Sociological Perspective

Daisy Aujla

Head, UG & PG Department of Sociology, Guru Nanak Girls College, Model Town, Ludhiana, Punjab, India

ABSTRACT

Generative Artificial Intelligence (GenAI) is transforming contemporary education by introducing innovative approaches to teaching, learning and academic research. AI-based applications such as ChatGPT, Google Gemini and Microsoft Copilot provide students with personalised explanations, immediate feedback, language assistance and access to educational resources. These technologies can improve learning experiences, promote independent study, support creativity and assist teachers in developing instructional materials. They also offer opportunities to make education more flexible, interactive and accessible. However, the increasing integration of Generative AI into educational institutions raises significant ethical and social concerns. Academic dishonesty, plagiarism, misinformation, excessive technological dependence, algorithmic bias, data privacy and unequal digital access are among the major challenges. Such concerns are particularly relevant in developing countries like India, where socioeconomic differences influence access to digital infrastructure and educational opportunities. The present paper examines the educational benefits and ethical implications of Generative AI through a descriptive and analytical review of secondary sources, including academic publications and international policy documents. It also analyses the issue from a sociological perspective, focusing on educational inequality, social stratification, human interaction and the changing role of teachers. The study argues that although Generative AI can strengthen educational processes, its benefits are not automatic and depend upon responsible implementation, digital literacy and appropriate institutional regulation. It recommends developing clear academic policies, protecting personal data, promoting equitable technological access and strengthening teachers' capacity to integrate AI into classroom practices. The paper emphasises that Generative AI should function as a supportive educational resource rather than a replacement for human intelligence, independent thinking and professional teaching. It concludes that a balanced, inclusive and human-centred approach is essential to ensure that technological innovation contributes to meaningful learning, academic integrity and social development.

Keywords : Generative Artificial Intelligence, Education, Personalised Learning, Academic Integrity, Ethical Concerns, Digital Inequality, Higher Education, Digital Literacy.

Introduction

Education is an important instrument of individual development, social transformation and national progress. Technological advancement has continuously influenced educational systems, from printed learning materials and radio education to computers, the internet and digital classrooms. In recent years, Generative Artificial Intelligence has introduced another significant transformation in the teaching-learning process.

Generative AI refers to artificial intelligence systems capable of producing new content, including text, images, summaries, presentations and computer code. Applications such as ChatGPT, Gemini and Microsoft Copilot can answer questions, explain difficult concepts and provide academic assistance.

These developments have created opportunities for personalised and interactive learning. Students can receive explanations according to their individual needs, while teachers can prepare educational materials and assessment activities more efficiently.

However, the growing use of AI also raises concerns about plagiarism, academic honesty, inaccurate information, privacy and overdependence on technology. Therefore, Generative AI represents both an educational opportunity and an ethical challenge. The present paper examines these two dimensions and argues

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that responsible human-guided use is essential for ensuring that AI strengthens rather than weakens the educational process.

OBJECTIVES OF THE STUDY

- To understand the concept and significance of Generative AI in education.
- To examine its contribution to teaching and learning.
- To analyse its major ethical and social challenges.
- To understand the implications of AI for teachers and students.
- To examine digital inequality in the Indian educational context.
- To suggest measures for the responsible use of Generative AI.

RESEARCH METHODOLOGY

The study adopts a descriptive and analytical research approach based on secondary data. Information has been collected from academic research articles, published literature, international reports and policy documents, particularly those published by UNESCO and educational research journals.

The available literature has been analysed thematically, focusing on educational benefits, ethical challenges and sociological implications. The study does not claim primary survey findings or experimental results.

GENERATIVE AI AND ITS CONTRIBUTION TO LEARNING

Personalised Learning

One of the major contributions of Generative AI is personalised learning. Students differ in their abilities, interests, educational backgrounds and levels of understanding. Traditional classroom teaching may not always address these individual differences.

AI applications can provide explanations according to students' requirements. For example, a student studying Sociology can request simple explanations of social stratification, social mobility or conflict theory. The same concepts can also be explained through detailed academic discussions and practical examples. This flexibility encourages student-centred learning and allows learners to progress according to their individual needs.

Immediate Feedback and Academic Support

Generative AI provides immediate responses to students' questions. It can assist with grammar, vocabulary, sentence construction, mathematical problems and academic writing. Such feedback helps students identify mistakes and improve their understanding. It is particularly useful for learners who hesitate to ask questions in traditional classrooms.

Development of Independent Learning

AI-based applications allow students to explore subjects beyond classroom hours. They can clarify doubts, prepare revision notes and obtain additional explanations without depending entirely on teachers or textbooks.

This encourages self-directed learning. However, independent learning develops meaningfully only when students evaluate AI-generated information and formulate their own conclusions.

Language and Communication Skills

Language barriers frequently affect educational participation, especially among students studying in a language other than their mother tongue.

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Generative AI can support translation, grammar correction, vocabulary development and academic writing. In a multilingual country like India, these facilities may help students from different linguistic backgrounds participate more effectively in education.

Support for Teachers

Generative AI can assist teachers in preparing lesson plans, presentations, classroom activities, assignments and assessment questions. It can reduce repetitive work and provide more time for student interaction and academic guidance. Nevertheless, teachers must verify AI-generated content before using it in classrooms.

Creativity and Research Development

AI can support brainstorming, project planning, research outlines and the exploration of alternative perspectives. It may help postgraduate students understand complex theories and identify possible research themes.

However, genuine creativity requires independent judgement, critical evaluation and original intellectual contribution. AI should therefore assist research rather than replace the researcher's responsibility.

Research evidence also suggests educational potential. Deng et al. (2025), in their systematic review and meta-analysis of experimental studies, reported positive effects of ChatGPT interventions on academic performance, affective-motivational outcomes and higher-order thinking propensities. However, the authors also highlighted methodological limitations and the need for further research.

ETHICAL CONCERNS ASSOCIATED WITH GENERATIVE AI

Academic Dishonesty and Plagiarism

One of the major ethical challenges is the possibility of submitting AI-generated assignments, essays and research papers without meaningful personal contribution. Such practices raise questions about authorship, originality and academic integrity. Educational institutions need clear guidelines explaining acceptable AI assistance and the acknowledgement of its use.

Overdependence on Technology

Excessive dependence on AI may reduce students' motivation to read, analyse, remember and solve problems independently. When ready-made answers replace intellectual effort, the development of critical thinking may be affected. Education should encourage questioning, reflection and independent reasoning rather than simply producing correct answers.

Misinformation and Inaccurate Content

Generative AI may produce incorrect information, fabricated references and misleading explanations. Such responses can appear convincing, making it difficult for students to identify errors.

Students must verify important information through textbooks, peer-reviewed journals, official publications and reliable databases.

Data Privacy and Security

Students may share personal information, educational records and institutional details while using AI applications. Inadequate data protection may create risks relating to confidentiality and security.

UNESCO (2023) emphasises the importance of protecting personal data and developing a human-centred approach to Generative AI in education.

Algorithmic Bias

AI systems may reproduce social, cultural and gender-based biases present in their training data. This may lead to stereotypical representations of particular communities, occupations or social groups.

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From a sociological perspective, such bias is important because education should promote equality, diversity and social justice rather than reinforce discrimination.

Digital Divide and Educational Inequality

Access to AI technology is not equally distributed. Students from economically privileged backgrounds may have better internet facilities, digital devices and access to advanced applications.

Students from rural and economically disadvantaged communities may face limitations in accessing these resources.

Consequently, AI may create new forms of educational inequality unless affordable and inclusive access is ensured.

Reduction in Human Interaction

Education is not merely the transfer of information. It is also a social process involving emotional support, cooperation, discipline and the development of human relationships. Teachers provide personal guidance, motivation and moral direction that AI systems cannot fully replace. Therefore, technology must strengthen rather than weaken teacher-student relationships.

A Sociological Perspective on Generative AI

Generative AI is not merely a technological development; it is also a social phenomenon influencing educational institutions, opportunities and relationships.

Functionalist Perspective

Education contributes to social integration, skill development and social stability. Generative AI can support these functions by improving knowledge access and preparing students for technological changes. It may help educational institutions respond to the demands of a technologically advanced society.

Conflict Perspective

Conflict theorists emphasise unequal distribution of resources and opportunities. Students with greater economic resources may benefit more from advanced AI technologies, while disadvantaged groups may remain excluded. Thus, AI can reproduce existing class inequalities.

Human Capital Perspective

Human capital theory emphasises the importance of education, knowledge and skills in improving productivity and employment opportunities. Responsible use of AI can strengthen digital literacy, communication and problem-solving abilities. These perspectives demonstrate that the educational impact of AI must be examined in relation to wider social structures and inequalities.

Generative AI in the Indian Educational Context

India has a diverse educational structure characterised by differences in language, income, geographical location and institutional resources.

Generative AI can support Indian students through academic explanations, language assistance, online learning and research guidance. It can also help teachers develop educational resources and improve digital teaching practices.

However, unequal internet connectivity, limited digital infrastructure and differences in technological knowledge may restrict its benefits.

The integration of AI should therefore be accompanied by digital literacy programmes, teacher training, affordable technological resources and institutional policies. Special attention should be given to rural students and economically disadvantaged communities.

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Major Findings and Discussion

The analysis indicates that Generative AI offers significant opportunities for improving learning through personalised explanations, immediate feedback, language support and research assistance.

It can also support teachers and encourage independent learning when used appropriately. However, academic dishonesty, misinformation, privacy risks, algorithmic bias and excessive dependence remain serious concerns.

The sociological analysis further suggests that unequal access to technology may reinforce existing educational inequalities.

Therefore, the effectiveness of Generative AI depends not simply on its availability but on responsible implementation, student participation, teacher guidance and institutional preparedness.

Suggestions and Recommendations

Institutional policies: Educational institutions should develop clear guidelines regarding acceptable AI use in assignments, examinations and research.

AI literacy: Students should understand the capabilities, limitations and ethical implications of Generative AI.

Teacher training: Teachers should receive appropriate training to integrate AI into classroom practices.

Academic integrity: Students should acknowledge significant AI assistance and maintain originality in academic work.

Data protection: Personal and confidential information should not be shared through unapproved AI platforms.

Equal access: Affordable devices, internet facilities and digital learning resources should be made available to disadvantaged students.

Critical thinking: Students should compare AI-generated information with authentic academic sources.

Human-centred education: Personal interaction, emotional development and professional teaching should remain central to education.

Assessment reforms: Oral examinations, classroom writing, presentations and practical activities should complement conventional assessments.

Continuous evaluation: Institutions should regularly review AI policies and evaluate their impact on actual learning outcomes.

CONCLUSION

Generative Artificial Intelligence represents an important development in contemporary education. It provides opportunities for personalised learning, immediate feedback, language assistance, creativity and academic research. It can make educational processes more flexible and accessible.

However, its growing influence also raises significant ethical and social concerns, including plagiarism, misinformation, privacy violations, algorithmic bias and digital inequality.

From a sociological perspective, the impact of AI extends beyond individual learning. It influences social relationships, educational institutions and the distribution of opportunities. If access remains unequal, technological advancement may reproduce existing social inequalities.

Therefore, Generative AI should be treated as a supportive educational resource rather than a substitute for teachers or independent intellectual effort. Students must develop the ability to question, analyse and verify AI-generated information, while teachers must continue providing academic and moral guidance.

The future of education requires a balanced relationship between technological innovation and human values. Ultimately, **Generative AI can improve learning, but its true educational value depends on responsible use, ethical regulation, equal access and human guidance.**

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