



SWARNRUDRA: An International Multidisciplinary Journal of Academic Research

<https://swarnrudrajournal.com/>

e-ISSN: 3140-0108

Publisher: Swarnrudra Publication

Vol. 1, Issue 2, August-September 2026

DOI: <https://doi.org/10.5281/zenodo.23276531>



RESEARCH ARTICLE

Artificial Intelligence in Social Sciences and Humanities: Opportunities, Challenges, Ethical Issues, and Future Perspectives

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ABSTRACT

Artificial Intelligence (AI) is increasingly becoming part of the intellectual, educational, cultural, and institutional environment in which knowledge is produced and communicated. Its development has moved beyond conventional automation toward systems capable of processing large collections of text and data, recognizing patterns, generating language, supporting translation, and assisting decision-making. These capabilities create new possibilities for social sciences and humanities, disciplines that frequently work with complex information about people, societies, languages, cultures, institutions, and historical records. At the same time, the adoption of AI raises questions about privacy, bias, academic integrity, intellectual property, unequal access, transparency, and the continuing role of human judgement.

The significance of AI becomes greater when its applications are considered in relation to sustainable development. AI-supported systems may contribute to education, inclusion, public services, cultural preservation, research efficiency, and evidence-informed decision-making. In education, for example, AI can support adaptive learning, feedback, language assistance, learning analytics, and teacher professional development. However, these benefits cannot be separated from questions of equity and responsible governance. UNESCO has emphasized that AI in education and research should follow a human-centred approach, with attention to data protection, ethical validation, inclusion, and meaningful educational use (Miao & Holmes, 2023). UNESCO's broader Recommendation on the Ethics of Artificial Intelligence also places human dignity, human rights, fairness, transparency, diversity, privacy, and human oversight at the centre of AI governance (UNESCO, 2021).

This conceptual paper reviews relevant literature and policy documents to examine the emerging role of AI in social sciences and humanities. It discusses disciplinary applications, research opportunities, educational implications, ethical challenges, the Indian context, and future directions. The paper argues that the value of AI in these fields should not be judged only by computational efficiency. Its long-term contribution will depend on whether institutions can combine technological capability with critical thinking, disciplinary expertise, ethical responsibility, digital inclusion, and meaningful human oversight.

KEYWORDS :

Artificial Intelligence, Social Sciences, Humanities, Generative AI, AI in Education, Ethics, Digital Humanities, Academic Integrity, Human-Centred AI

ARTICLE HISTORY:

Received: 25.08.2026

Revised: 05.09.2026

Accepted: 15.09.2026

Published Online: 25.09.2026

CITATION

Rathod, H., (2026). Implementing color-coding for DDC main classes in the academic library to improve shelf management and reduce the problem of misplaced books. *SWARNRUDRA: An International Multidisciplinary Journal of Academic Research*, 1(2), 60-72. <https://doi.org/10.5281/zenodo.23276531>

Introduction

Artificial Intelligence has moved from being primarily a subject of computer science to becoming a technology with implications across education, research, communication, governance, culture, economics, and everyday life. Developments in machine learning, natural language processing, computer vision and generative AI have expanded the range of tasks that computational systems can perform. In the social sciences and humanities, this transformation is particularly significant because these disciplines deal with language, human behaviour, institutions, culture, values, identity, history and social relationships.

The recent expansion of generative AI has accelerated this change. AI systems can assist users in summarizing information, translating text, organizing documents, generating preliminary drafts, identifying patterns in large datasets and supporting certain research activities. Such capabilities may reduce the time spent on routine information-processing tasks and allow researchers to

devote greater attention to interpretation and theoretical work. However, efficiency does not necessarily imply accuracy. AI-generated outputs can contain errors, misleading statements, inappropriate generalizations and fabricated references. Consequently, human verification remains essential.

The emergence of AI also changes the relationship between technology and academic knowledge. In social sciences and humanities, evidence is rarely interpreted in isolation from social and cultural context. A linguistic expression may carry different meanings in different communities; a historical document may require knowledge of its political context; and a psychological or sociological observation may be influenced by culture, age, social structure and circumstances. These characteristics make purely automated interpretation problematic.

UNESCO's Recommendation on the Ethics of Artificial Intelligence recognizes that AI has implications for education, science, culture, communication, health and other areas of social life. Its framework places human dignity and human rights at the centre and emphasizes principles such as fairness, transparency, privacy, diversity, inclusion and human oversight (UNESCO, 2021). These principles are especially relevant to social sciences and humanities because research in these fields frequently involves people, personal information, cultural materials and interpretations of human experience.

AI is also increasingly important to education. UNESCO's guidance on generative AI emphasizes that institutions need policies and human capacity to ensure safe, equitable and meaningful use of these technologies (Miao & Holmes, 2023). The UNESCO AI Competency Framework for Teachers further identifies human-centred thinking, AI ethics, AI foundations and applications, AI pedagogy, and AI-supported professional learning as important areas of teacher competence (Miao & Cukurova, 2024).

The central issue, therefore, is not whether AI should simply be accepted or rejected. The more important question is how AI can be incorporated into social sciences and humanities while protecting academic integrity, human agency, cultural diversity, privacy and critical judgement. This paper addresses this question through a conceptual review of the opportunities, challenges, ethical dimensions and future possibilities of AI in these fields.

Objectives of the Paper

The paper has the following objectives:

1. To explain the changing concept and applications of Artificial Intelligence in social sciences and humanities.
2. To examine the contribution of AI to selected disciplines within social sciences.
3. To discuss emerging applications of AI in humanities and digital humanities.
4. To examine the use of AI in education and academic research.
5. To identify opportunities created by generative AI and related technologies.
6. To analyse major technological, social and ethical challenges.
7. To examine issues of academic integrity, privacy, bias and intellectual property.
8. To discuss the Indian context of AI development and application.
9. To explore the relationship between AI and sustainable development.
10. To identify future directions for responsible and human-centred AI adoption.

Methodological Approach

The present paper is a conceptual and literature-based review. It does not report primary survey or experimental data. Relevant academic literature, international policy documents and Indian policy reports were examined to develop a broad understanding of AI applications in social sciences and humanities.

The review particularly considered literature relating to:

- Artificial Intelligence and generative AI;
- AI in education;

- computational social science;
- digital humanities;
- AI ethics;
- academic integrity;
- human-AI collaboration;
- AI and sustainable development; and
- Indian AI policy and skill development.

Recent publications were given greater attention because generative AI has developed rapidly in the last few years. Foundational policy documents were also included where they provided important conceptual or regulatory guidance. The analysis was organized thematically rather than statistically. The major themes were applications, opportunities, educational implications, ethical concerns, Indian developments, sustainability and future directions.

Understanding Artificial Intelligence

Artificial Intelligence can be broadly understood as a collection of computational approaches that enable machines to perform functions associated with aspects of human intelligence. These functions may include learning from data, identifying patterns, making predictions, processing language, generating content and supporting decisions.

Contemporary AI is strongly influenced by machine learning. Rather than programming every possible response explicitly, machine-learning systems can identify statistical patterns from data and use them for prediction or classification. Generative AI represents another significant development because it can produce new text, images, audio, video and computer code.

Generative AI has particular relevance to social sciences and humanities because language and symbolic communication are central to these fields. Large language models can support activities such as preliminary summarization, translation, text classification, brainstorming and language editing. However, their outputs are generated probabilistically and should not automatically be treated as verified knowledge.

For academic research, this distinction is critical. A researcher may use AI to assist with an initial task, but the researcher remains responsible for checking evidence, confirming references, interpreting findings and making the final intellectual judgement.

Artificial Intelligence in Social Sciences

Social sciences examine individuals, groups, institutions, organizations and societies. AI can extend the scale and speed of social science research, particularly where large digital datasets are available.

Sociology

AI-supported text and network analysis can assist sociologists in examining social interaction, online communities, public discourse, migration narratives, inequality and patterns of collective behaviour.

Large collections of social media posts, public documents and digital communications can be processed more rapidly than would be possible through manual examination alone. Social network analysis can also be supported by computational methods that identify connections and structural patterns within large networks.

Nevertheless, social data should not be treated as ethically neutral. Questions concerning consent, privacy, surveillance, representativeness and algorithmic discrimination remain important. A large dataset may contain millions of observations while still failing to represent particular communities.

Thus, AI can strengthen sociological research, but interpretation must remain sensitive to social context.

Artificial Intelligence and Psychology

Psychology is another area in which AI-assisted methods are becoming increasingly relevant. Natural language processing can be used to examine linguistic characteristics, behavioural patterns, attitudes and other forms of textual data.

AI may assist psychological researchers with large-scale behavioural datasets, questionnaire responses, educational records and human-computer interaction studies. Machine-learning techniques may also be used for prediction and classification.

However, prediction should not automatically be equated with psychological understanding. Human behaviour is influenced by developmental, cultural, interpersonal and situational factors. An algorithm may detect a statistical association without explaining the underlying psychological mechanism.

Therefore, AI-generated predictions should support rather than replace professional interpretation and established psychological methods.

Artificial Intelligence in Education

Education is one of the most visible areas of AI application. AI-based technologies can support personalized learning, adaptive content, automated feedback, language assistance, learning analytics, assessment and educational administration.

Potential applications include:

- adaptive learning systems;
- personalized learning pathways;
- intelligent tutoring;
- automated formative feedback;
- language learning;
- learning analytics;
- educational content development;
- accessibility tools;
- research assistance; and
- teacher professional development.

The educational value of AI depends substantially on how it is integrated into pedagogy. A technologically advanced tool may not improve learning if its use is disconnected from curriculum objectives or teacher judgement.

UNESCO's guidance on generative AI therefore advocates a human-centred approach in which privacy, ethical validation, age appropriateness, educational purpose and institutional responsibility are considered together (Miao & Holmes, 2023).

Research on ChatGPT in education has similarly identified both enthusiasm and concern. Tlili et al. (2023), through a case-based investigation involving social-media analysis, interviews and educational scenarios, identified issues related to cheating, reliability, privacy and manipulation while also recognizing potential educational uses.

Kasneci et al. (2023) also discussed the opportunities of large language models for educational content creation, interaction and personalized learning while emphasizing the need for AI literacy, fact-checking, human oversight and responsible implementation.

These findings are relevant beyond education because the same concerns regarding reliability, privacy, human oversight, and responsible use also arise when generative AI is applied to research and professional practices across the social sciences and humanities.

Artificial Intelligence in Political Science

Political science can benefit from computational analysis of speeches, policy documents, media content and public

communication.

Natural language processing can help researchers identify themes, compare political discourse and analyse large collections of textual material. Sentiment and discourse analysis may also assist in studying public communication.

However, political uses of AI involve serious risks. Automated systems can be used to create misleading information, manipulate audiences or generate highly convincing synthetic media. These risks make source verification, transparency and media literacy particularly important.

AI should therefore be treated as an analytical aid rather than an unquestioned source of political knowledge.

Artificial Intelligence in Economics

Economists increasingly use computational techniques for forecasting, market analysis, labour-market research, consumer behaviour and policy modelling.

The ability of machine-learning systems to identify complex patterns in large datasets can complement conventional statistical approaches. Nevertheless, economic models are only as reliable as their data, assumptions and interpretation.

Issues such as selection bias, missing information, changes in economic conditions and unequal representation can influence AI-based results. Human economic reasoning remains necessary to determine whether an observed statistical pattern has meaningful theoretical or policy significance.

Artificial Intelligence in Humanities

The humanities focus on language, literature, history, philosophy, culture, art, values and human meaning. The application of computational technologies to these fields has contributed to the development of Digital Humanities.

Digital Humanities does not imply replacing human interpretation with algorithms. Instead, it provides computational methods that can complement traditional humanities scholarship.

AI and Literary Studies

AI can assist literary scholars with:

- corpus analysis;
- thematic analysis;
- stylistic comparison;
- authorship studies;
- translation;
- textual classification; and
- identification of recurring linguistic patterns.

For example, large collections of novels, poems or other texts can be analysed to examine changes in vocabulary, themes or stylistic characteristics across periods.

However, literary meaning cannot be fully reduced to measurable patterns. Symbolism, historical context, cultural experience and authorial intention frequently require interpretive judgement.

Consequently, computational analysis should complement close reading rather than eliminate it.

AI and Historical Research

Historical scholarship can benefit from AI-supported digitization, optical character recognition, archival search and document classification.

Large collections of historical documents can become searchable once they are digitized. This can make archival material more accessible and allow researchers to locate relevant sources more efficiently.

Yet historical interpretation requires careful attention to authenticity, authorship, chronology, political context and source bias. An algorithm may recognize words in an archival document without understanding the historical significance of those words.

Human historical scholarship therefore remains indispensable.

AI, Linguistics and Language Studies

Natural Language Processing has created important opportunities for linguistic research.

AI can contribute to:

- machine translation;
- speech recognition;
- corpus linguistics;
- language documentation;
- grammar analysis;
- multilingual education;
- language accessibility; and
- preservation of endangered languages.

This area is particularly important for multilingual societies such as India. AI-based language technologies may help reduce linguistic barriers and expand access to information.

At the same time, language technologies can reproduce biases when training data underrepresent smaller languages or dialects. Therefore, linguistic diversity must be considered during both AI development and implementation.

AI and Philosophy

AI has created a range of philosophical questions concerning intelligence, consciousness, agency, responsibility, autonomy and human identity.

Philosophy also contributes to AI by examining questions that cannot be answered through technical performance alone:

- What should an AI system be permitted to do?
- Who is responsible for an AI-assisted decision?
- Can machine output be considered knowledge?
- What distinguishes human creativity from automated generation?
- How should human values influence AI design?

Thus, philosophy is not simply another field in which AI can be applied. It also provides conceptual tools for examining the meaning and consequences of AI itself.

AI in Social Science and Humanities Research

AI can influence almost every stage of the research process.

1. **Literature Searching and Organization** - AI-supported tools can assist researchers in organizing large numbers of documents, identifying themes and producing preliminary summaries. However, researchers should independently examine the original sources before using information in scholarly writing.
2. **Data Analysis** - Machine-learning and natural language processing techniques can assist with large quantitative and

textual datasets.

3. **Qualitative Research** - AI can support transcription, preliminary coding, categorization and organization of qualitative material. However, coding is not identical to interpretation. The researcher must remain responsible for deciding whether categories are theoretically meaningful and contextually appropriate.
4. **Survey Research** - AI can assist in generating preliminary questionnaire ideas or organizing open-ended responses. Such material should be reviewed by the researcher for validity, cultural appropriateness and clarity.
5. **Translation** - AI translation can facilitate cross-language research. Nevertheless, specialist terminology, cultural expressions and context-sensitive meanings require human review.
6. **Academic Writing** - Generative AI may assist with grammar, language refinement, organization and brainstorming. It should not replace the researcher's intellectual contribution.

The researcher remains responsible for:

- factual accuracy;
- originality;
- citations;
- interpretation;
- research ethics; and
- final authorship decisions.

Opportunities Offered by Artificial Intelligence

1. **Greater Research Efficiency** - AI can reduce the time required for repetitive activities such as document classification, transcription, preliminary summarization and organization of large datasets.
2. **Expansion of Research Scale** - Traditional manual approaches can become difficult when datasets contain thousands or millions of records. Computational methods make large-scale analysis more feasible.
3. **Interdisciplinary Collaboration** - AI creates opportunities for collaboration among education, psychology, sociology, linguistics, philosophy, computer science and other fields.
4. **Personalized Education** - AI can support learning systems that respond to differences in learner performance, pace and needs.
5. **Cultural Heritage Preservation** - Digitization and computational analysis can help preserve manuscripts, archival records, photographs, oral histories and other cultural materials.
6. **Accessibility and Inclusion** - Speech recognition, translation and assistive technologies can help reduce some barriers to educational and cultural resources.

These opportunities, however, should be understood as potential benefits rather than automatic outcomes. Their realization depends on infrastructure, skills, governance and responsible implementation.

Challenges of AI in Social Sciences and Humanities

1. **Algorithmic Bias** - AI systems learn from data. When datasets reflect social or cultural inequalities, algorithms may reproduce or amplify those patterns. Bias is particularly important in social sciences because the data often represent human populations and social behaviour.
2. **Inaccurate or Fabricated Information** - Generative AI can produce fluent statements that are factually wrong. It may also generate references that do not exist. For academic research, this creates a strong requirement for source verification.
3. **Digital Inequality** - AI benefits may be distributed unevenly because institutions and individuals differ in access to devices, internet connectivity, digital skills and advanced AI tools. Thus, technological expansion without inclusion may

deepen existing inequalities.

4. **Privacy and Data Protection** - Social research often involves personal or behavioural data. AI-based processing may increase the risks associated with unauthorized access, profiling or inappropriate secondary use.
5. **Intellectual Property** - Generative AI raises difficult questions concerning ownership, copyright, attribution and the use of protected materials in AI systems.
6. **Dependence on Technology** - Excessive reliance on AI may weaken independent reasoning, writing practice and analytical skills if users accept machine-generated outputs without evaluation.

Ethical Dimensions of Artificial Intelligence

Ethics is central to responsible AI adoption.

UNESCO's Recommendation on the Ethics of Artificial Intelligence places human dignity and human rights at the foundation of AI governance and emphasizes transparency, fairness, privacy, diversity, inclusion, environmental sustainability and human oversight (UNESCO, 2021).

For social sciences and humanities, the following principles are particularly relevant:

1. **Human Oversight** - Important academic, educational and social decisions should not be delegated blindly to AI.
2. **Transparency** - Users should know when AI has been used and, where appropriate, how an AI-assisted decision has been reached.
3. **Accountability** - Responsibility must remain attributable to human individuals or institutions.
4. **Fairness** - AI systems should not systematically disadvantage particular groups.
5. **Privacy** - Personal data should be protected throughout the AI lifecycle.
6. **Informed Consent** - Where research involves human participants and AI-supported data processing, ethical research procedures and appropriate consent must be considered.
7. **Academic Integrity** - Students and researchers should not present machine-generated work as their own intellectual contribution without following applicable institutional rules.
8. **Cultural Diversity** - AI systems should recognize linguistic and cultural differences rather than assuming that one cultural perspective is universally applicable.

Generative AI and Academic Integrity

Generative AI has created a new challenge for higher education because the same technology can support learning and also facilitate academic misconduct.

For example, a student may use AI to:

- understand a difficult concept;
- improve grammar;
- brainstorm ideas;
- translate text; or
- receive formative feedback.

These uses are different from submitting an AI-generated assignment as entirely one's own work or using fabricated references.

The appropriate response is therefore not necessarily a complete rejection of AI. Institutions should establish clear policies distinguishing acceptable assistance from inappropriate substitution of student work.

Research on ChatGPT in education has identified concerns relating to cheating, truthfulness, privacy and manipulation

(Tlili et al., 2023).

Similarly, research on large language models has emphasized the need for AI literacy, fact-checking and continuous human oversight (Kasneci et al., 2023).

The educational priority should therefore shift toward responsible AI literacy. Students need to learn not only how to use AI tools but also how to question, verify and critically evaluate their outputs.

Changing Role of Teachers and Researchers

AI is more likely to transform the responsibilities of teachers and researchers than simply eliminate them.

The teacher's role may increasingly include:

- learning facilitator;
- mentor;
- learning designer;
- evaluator;
- ethical guide; and
- critical user of educational technology.

UNESCO's AI Competency Framework for Teachers identifies 15 competencies across five dimensions: human-centred mindset, ethics of AI, AI foundations and applications, AI pedagogy, and AI for professional learning (Miao & Cukurova, 2024).

The role of researchers is similarly changing. AI may reduce the time spent on some routine information-processing tasks, allowing greater attention to research design, theory, interpretation, ethical judgement and interdisciplinary collaboration.

Therefore, the future of research should be understood as human-AI collaboration, not simply human replacement by machines.

Indian Perspective

India presents an important context for studying AI because of its large population, linguistic diversity, expanding digital infrastructure and differences in socioeconomic access.

The Government of India's National Education Policy 2020 recognizes the importance of technology, digital learning and teacher professional development. The policy also encourages teachers to engage with new developments and innovations through continuous professional development (Ministry of Education, 2020).

India's National Strategy for Artificial Intelligence, released by NITI Aayog, identified education, healthcare, agriculture, smart cities and mobility among priority sectors and adopted the broad vision of "AI for All." It also emphasized research, skilling and reskilling, adoption and responsible AI (NITI Aayog, 2018).

For social sciences and humanities, the Indian context creates opportunities in:

- multilingual education;
- Indian language technologies;
- digital humanities;
- cultural heritage preservation;
- educational technology;
- social research;
- translation;
- inclusive learning; and
- higher education.

At the same time, India must address digital inequality, language representation, data protection, AI literacy and differences in institutional capacity.

Therefore, AI adoption in India should be guided by both technological capability and social inclusion.

Indian AI Ecosystem and Emerging Skill Requirements

India's AI ecosystem has expanded significantly, accompanied by increasing demand for skilled professionals. A 2024 Deloitte–NASSCOM report estimated that India's AI talent demand could increase from approximately 600,000–650,000 to more than 1.25 million by 2027, while the AI market was projected to grow at approximately 25–35% annually through 2027 (Deloitte & NASSCOM, 2024).

These figures are important for social sciences and humanities because AI adoption requires more than technical specialists. Educational institutions also need teachers, researchers and professionals who can understand AI's social, ethical, linguistic and cultural consequences.

Selected Indicators of India's Emerging AI Ecosystem -:

S.No.	Indicator	Reported figure	Relevance to Social Sciences & Humanities
1	Estimated AI talent pool	600,000–650,000	Indicates the existing skilled workforce base
2	Projected AI talent requirement by 2027	More than 1.25 million	Highlights the need for AI education and skill development
3	Projected AI market growth	25–35% CAGR through 2027	Indicates expanding AI adoption across sectors
4	Major national priority	AI for All	Connects AI development with inclusion and social benefit

Note. Figures are reported projections from the Deloitte–NASSCOM *Advancing India's AI Skills* report and should not be interpreted as a current census of AI profession.

The significance of these developments extends beyond technical employment. Social science researchers may increasingly work with AI-supported datasets, digital platforms and computational methods. Humanities scholars may use AI for language processing, digitization and cultural preservation. Education professionals will require sufficient AI literacy to guide students responsibly.

Consequently, India's AI development agenda should include technical skills as well as ethical reasoning, social awareness, interdisciplinary knowledge and critical digital literacy.

AI and Sustainable Development

Artificial Intelligence has potential relevance to several Sustainable Development Goals, particularly when it is used to improve access, efficiency and evidence-informed decision-making.

Relevant areas include:

- **SDG 4** – Quality Education: personalized learning, teacher support and educational accessibility;
- **SDG 5** – Gender Equality: improved access to information and services, subject to bias controls;
- **SDG 8** – Decent Work: skills development and changing labour-market capabilities;

- **SDG 9** – Industry, Innovation and Infrastructure: research and technological innovation;
- **SDG 10** – Reduced Inequalities: accessibility and inclusion, when equitable access is ensured;
- **SDG 11** – Sustainable Cities and Communities: data-supported urban planning;
- **SDG 16** – Peace, Justice and Strong Institutions: information systems and evidence-informed governance.

However, AI cannot automatically be described as sustainable. AI systems also require computational resources, data infrastructure and energy. Furthermore, unequal access can reinforce social inequalities.

Therefore, the sustainability of AI depends on how it is designed, governed, accessed and used.

AI and Sustainable Education

Education provides one of the clearest examples of the relationship between AI and sustainable development.

AI can contribute to sustainable education through:

1. personalized learning support;
2. adaptive assessment;
3. automated formative feedback;
4. language translation;
5. accessibility tools;
6. learning analytics;
7. teacher professional development;
8. digital resource management; and
9. support for lifelong learning.

However, technology alone cannot guarantee educational equity. Students without reliable devices, connectivity or AI literacy may receive fewer benefits.

UNESCO's AI competency framework for students emphasizes a human-centred mindset, AI ethics, technical understanding and responsible AI system design. It also positions students as responsible users and potential co-creators of AI (Miao et al., 2024).

Thus, sustainable AI-supported education should combine access, teacher capacity, student AI literacy, ethical governance and human interaction.

Research Gap

Although research on Artificial Intelligence has expanded rapidly, several gaps remain. First, much early AI literature concentrated on technical development and STEM-oriented applications. Research in social sciences and humanities is growing but remains distributed across individual disciplines.

Second, research often examines AI applications and ethical concerns separately. There is a need for integrated approaches that consider technological usefulness together with human values, academic integrity, cultural diversity and social justice.

Third, educational discussions frequently focus on tools rather than the competencies required by teachers and students. UNESCO's recent competency frameworks demonstrate the importance of developing human-centred, ethical and pedagogical AI capabilities (Miao & Cukurova, 2024; Miao et al., 2024).

Fourth, the Indian context requires greater attention because linguistic diversity, unequal digital access and institutional differences can influence how AI affects education and research.

The present paper therefore addresses the need for a broader interdisciplinary perspective connecting AI applications,

human capability, ethics, inclusion, education, research and social responsibility.

Future Perspectives

The future development of AI in social sciences and humanities is likely to involve deeper interaction between computational systems and human expertise.

Future research should focus on the following areas:

1. **Discipline-Specific AI Literacy** - Teachers, researchers and students need AI competencies appropriate to their disciplines rather than only general technical knowledge.
2. **Ethical Research Protocols** - Institutions should establish clear procedures for AI-assisted research, including disclosure, verification, privacy and data governance.
3. **Indian and Regional Languages** - AI research should give greater attention to Indian languages and dialects so that technological development does not remain concentrated around a small number of dominant languages.
4. **Digital Cultural Heritage** - AI can contribute to the preservation, digitization and analysis of manuscripts, archives, oral histories and cultural materials.
5. **Academic Integrity** - Higher education institutions need clear and adaptable policies regarding acceptable and unacceptable uses of generative AI.
6. **Human-AI Collaboration** - Future research should examine how AI can complement rather than replace human reasoning and creativity.
7. **Inclusive AI** - Researchers and policymakers should consider access, affordability, disability inclusion, language diversity and socioeconomic inequality.
8. **Responsible Governance** - AI governance needs to remain adaptive because technological capabilities change faster than many institutional policies.

Conclusion

Artificial Intelligence is changing the ways in which knowledge is generated, interpreted, communicated and used. In social sciences and humanities, its contribution extends from computational analysis of large datasets to language technologies, digital archives, educational applications and research support.

The major value of AI in these disciplines lies not simply in automation. AI can expand the scale of research, support new forms of analysis, facilitate multilingual communication, assist teachers and researchers, and improve access to information. At the same time, its limitations are equally important. Bias, inaccurate outputs, privacy risks, intellectual-property questions, digital inequality and academic-integrity concerns cannot be treated as secondary issues.

The paper therefore argues for a human-centred model of AI adoption. AI should function as a supporting technology while human beings retain responsibility for interpretation, ethical judgement, originality, cultural understanding and final decision-making.

For education, this means preparing teachers and students not merely to operate AI tools but to evaluate them critically and use them responsibly. UNESCO's recent AI competency frameworks reinforce the importance of human agency, ethics, AI knowledge, pedagogy and professional learning (Miao & Cukurova, 2024).

For India, the challenge is broader: AI development must be accompanied by digital inclusion, multilingual capacity, ethical governance and investment in human capabilities. India's policy direction toward "AI for All" provides a useful foundation, but effective implementation will require collaboration among government, educational institutions, researchers, technology developers and society.

Ultimately, the future of AI in social sciences and humanities should not be framed as a choice between humans and

machines. A more productive approach is to develop responsible human-AI collaboration, in which computational systems contribute speed and analytical capacity while humans provide context, creativity, values, critical thinking and ethical responsibility.

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