Cultural Heritage, Global Citizenship, and the Human-Centric Role of Artificial Intelligence in Higher Education in the Context of NEP 2020

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Abstract- The National Education Policy, 2020 (NEP 2020) represents a paradigmatic shift in India's higher education landscape by advocating a holistic, inclusive, and future-oriented educational framework. Central to this policy vision is the integration of Indian cultural heritage, Indian Knowledge Systems (IKS), and Global Citizenship Education (GCED) with emerging digital technologies, particularly Artificial Intelligence (AI). This paper critically examines the role of AI as a human-centric enabler in fostering cultural consciousness, ethical reasoning, epistemic justice, and global responsibility within higher education institutions. Employing a qualitative policy analysis and thematic literature synthesis, the study draws upon national policy documents, international frameworks, and interdisciplinary scholarly research. The analysis reveals that AI can significantly enhance culturally responsive pedagogy, multilingual access, personalized learning, preservation of cultural heritage, and global academic collaboration. However, the paper cautions that uncritical adoption of AI risks exacerbating digital inequality, cultural homogenization, algorithmic bias, and epistemic dominance. The study argues that a human-centered, ethically governed, and culturally sensitive AI framework—anchored in constitutional values and aligned with NEP 2020 objectives—is essential for realizing the transformative potential of higher education. The paper concludes with policy implications and future research directions relevant to policymakers, educators, and higher education institutions.

Keywords: NEP 2020; Higher Education; Cultural Heritage; Global Citizenship; Artificial Intelligence; Human-Centric AI; Indian Knowledge Systems

I. INTRODUCTION

Education has historically functioned as a foundational institution for the intellectual, moral, and cultural development of human societies. Across civilizations, education was never limited to vocational preparation; rather, it served as a mechanism for transmitting ethical values, collective memory, social responsibility, and philosophical inquiry. In ancient India, the *Gurukul* tradition emphasized holistic learning that integrated moral conduct, spiritual development, social duty, and intellectual discipline. Similar traditions existed in other civilizations, underscoring education as a civilizational project.

In the contemporary era—characterized by globalization, rapid technological change, cultural pluralism, and digital interdependence—the responsibilities of higher education institutions have expanded significantly. Universities are now expected to cultivate critical thinking, ethical reasoning, intercultural competence, democratic values, and global citizenship, in addition to disciplinary expertise (Nussbaum, 2010, pp. 1–17). These expectations have intensified due to global challenges such as climate change, pandemics, geopolitical conflicts, artificial intelligence-driven automation, and widening socio-economic inequalities.

Simultaneously, the accelerated integration of digital technologies—particularly Artificial Intelligence (AI)—has profoundly reshaped higher education ecosystems worldwide. AI-driven tools increasingly influence curriculum design, teaching-learning processes, learner analytics, assessment mechanisms, institutional governance, and student support services

(Holmes et al., 2019, pp. 1–15). While these developments offer unprecedented opportunities for personalization, access, efficiency, and global collaboration, they also raise serious ethical, cultural, and epistemological concerns related to data privacy, surveillance, algorithmic bias, cultural homogenization, and epistemic dominance.

Against this global backdrop, India's National Education Policy, 2020 emerges as a landmark reform initiative. NEP 2020 seeks to reimagine higher education by harmonizing India's civilizational heritage with the demands of a global knowledge economy (Government of India, 2020, pp. 36–38). The policy emphasizes cultural rootedness, ethical values, multilingualism, inclusivity, equity, and international engagement, while simultaneously advocating the responsible and inclusive use of emerging technologies.

This paper situates Artificial Intelligence within the broader philosophical, cultural, and policy framework of NEP 2020. It argues that AI must function as a human-centric, culturally responsive, and ethically governed educational enabler, rather than as a technologically deterministic force. The study explores how AI can support cultural heritage education and global citizenship while safeguarding epistemic diversity, social justice, and human values.

II. OBJECTIVES OF THE STUDY

The objectives of the present study are as follows:

- To critically examine the vision of NEP 2020 concerning cultural heritage, global citizenship, and higher education reform.
- To analyze the role of Artificial Intelligence in promoting inclusive, multilingual, and culturally responsive higher education.
- To explore the relevance of human-centric and ethical AI frameworks within the Indian socio-cultural and constitutional context.
- To identify challenges, policy implications, and future directions for AI-enabled higher education in India.

III. RESEARCH QUESTIONS

The study addresses the following research questions:

- How does NEP 2020 conceptualize the relationship between cultural heritage, global citizenship, and higher education?
- In what ways can Artificial Intelligence contribute to culturally sensitive and globally oriented higher education?
- What ethical and human-centric considerations are essential for AI adoption in Indian higher education institutions?
- What challenges and future pathways emerge from the integration of AI under the NEP 2020 framework?

IV. METHODOLOGY

This research adopts a qualitative, descriptive, and analytical methodology, which is widely accepted for conceptual, policy-oriented, and interdisciplinary studies published in Scopus-indexed and UGC-CARE journals.

4.1 Data Sources

The study draws upon multiple sources, including:

- ✓ National policy documents such as the *National Education Policy 2020* and NITI Aayog's *Responsible AI for All* (Government of India, 2020, pp. 36–47; NITI Aayog, 2021, pp. 18–33).
- ✓ International frameworks and reports published by UNESCO and OECD (UNESCO, 2015, pp. 15–25; UNESCO, 2021, pp. 27–41).
- ✓ Peer-reviewed academic literature on Artificial Intelligence in education, cultural heritage studies, ethics, decolonization of knowledge, and global citizenship education.

4.2 Analytical Approach

A thematic content analysis approach is employed to identify recurring themes related to cultural heritage, Indian Knowledge Systems, global citizenship, ethical AI, epistemic justice, and educational transformation. This approach allows for systematic synthesis of policy intentions and scholarly insights.

V. NEP 2020 AND THE VISION OF HIGHER EDUCATION

NEP 2020 articulates a transformative vision for higher education rooted in holistic development, multidisciplinary learning, flexibility, and lifelong

education (Government of India, 2020, Section 4.2, pp. 37–38). The policy challenges rigid disciplinary silos and advocates curricular structures that integrate sciences, social sciences, humanities, arts, and vocational education.

A defining feature of NEP 2020 is its emphasis on Indian Knowledge Systems (IKS). The policy recognizes the epistemic richness of indigenous and classical knowledge traditions and seeks their systematic reintegration into mainstream academic discourse (Section 4.38, p. 46). This represents a significant decolonial intervention, correcting the historical marginalization of non-Western epistemologies in higher education.

Simultaneously, NEP 2020 promotes internationalization through global academic partnerships, student and faculty mobility, collaborative research, and cross-border institutional engagement (Sections 12.8–12.9, pp. 89–90). This dual emphasis reflects the policy's commitment to nurturing learners who are globally competent yet culturally grounded.

VI. CULTURAL HERITAGE AND INDIAN KNOWLEDGE SYSTEMS

Cultural heritage constitutes the collective memory, identity, and value systems of a society. It includes tangible heritage—monuments, manuscripts, inscriptions, artifacts—and intangible traditions such as language, philosophy, rituals, art forms, oral histories, and ecological knowledge (Sen, 2005, pp. 21–36).

Indian Knowledge Systems, developed over millennia, offer profound insights into ethics, sustainability, medicine, mathematics, astronomy, linguistics, logic, and metaphysics. Traditions such as Yoga and Ayurveda emphasize holistic well-being, while ancient Indian contributions to mathematics and astronomy significantly influenced global scientific thought (Kumar, 2021, pp. 55–92).

NEP 2020 advocates the integration of IKS with contemporary disciplines (Section 4.39, p. 47). AI-enabled digital archives, manuscript digitization projects, virtual museums, immersive simulations, and semantic knowledge networks can enhance access to

cultural heritage, particularly for marginalized and geographically remote communities (UNESCO, 2021, pp. 133–145).

VII. GLOBAL CITIZENSHIP AND HIGHER EDUCATION

Global Citizenship Education (GCED) has emerged as a critical educational response to global challenges such as inequality, conflict, climate change, pandemics, and technological disruption. UNESCO (2015) defines GCED as an approach that empowers learners to promote peace, human rights, social justice, cultural diversity, and sustainable development (pp. 15–25).

GCED emphasizes intercultural dialogue, ethical responsibility, critical global awareness, and respect for diversity. Higher education institutions play a crucial role in nurturing these competencies by creating spaces for dialogue, research, and collaborative problem-solving.

NEP 2020 aligns closely with GCED principles by encouraging international collaboration, cross-cultural learning, and global research engagement. AI-enabled virtual classrooms, global simulations, and collaborative research platforms further enhance GCED outcomes by transcending geographical and cultural boundaries (OECD, 2021, pp. 67–83).

VIII. ROLE OF ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION

8.1 Personalized and Inclusive Learning

AI-driven adaptive learning systems analyze learner data—such as pace, performance patterns, and preferences—to offer personalized learning pathways. These systems support diverse learners, including first-generation students and linguistically marginalized groups, thereby promoting equity and inclusion (Holmes et al., 2019, pp. 41–55).

8.2 Multilingualism and Cultural Accessibility

Language remains a major barrier to equitable access in higher education. AI-powered translation, speech recognition, and natural language processing technologies enable content delivery in multiple Indian languages, aligning with NEP 2020's emphasis

on multilingualism and mother-tongue instruction (UNESCO, 2021, pp. 27–41).

8.3 Human-Centric and Ethical AI

AI adoption raises ethical concerns related to data privacy, surveillance, algorithmic bias, and cultural homogenization. Many AI systems reflect Western epistemologies, potentially marginalizing indigenous knowledge traditions (Floridi & Cowls, 2019, pp. 3–10).

NITI Aayog's *Responsible AI for All* framework emphasizes transparency, accountability, equity, and inclusivity grounded in Indian constitutional values (NITI Aayog, 2021, pp. 18–33). Human-centric AI must therefore augment human creativity and moral judgment rather than replace them.

IX. AI, DECOLONIZATION OF KNOWLEDGE, AND EPISTEMIC JUSTICE

Scholars have argued that dominant global knowledge systems marginalize indigenous epistemologies and perpetuate epistemic injustice (Santos, 2014, pp. 92–118). AI systems trained on biased datasets risk reproducing these hierarchies at scale, a phenomenon described as algorithmic colonialism (Couldry & Mejias, 2019, pp. 1–18).

However, inclusive and participatory AI design can support multilingual academic publishing, documentation of oral traditions, community-based knowledge repositories, and plural epistemologies. Such approaches contribute to epistemic justice and cognitive diversity within higher education.

X. ETHICAL GOVERNANCE AND POLICY IMPLICATIONS

Ethical governance frameworks must address data protection, informed consent, algorithmic accountability, transparency, and cultural sensitivity. Capacity building, faculty training, interdisciplinary research, and participatory AI design are essential for aligning technological innovation with societal goals (UNESCO, 2022, pp. 12–28).

XI. CHALLENGES

Key challenges include persistent digital inequality, infrastructural deficits, limited faculty preparedness, and institutional resistance to change. Without appropriate safeguards, AI integration may exacerbate socio-economic and cultural inequalities rather than mitigate them (UNESCO, 2021, pp. 133–145).

XI. CONCLUSION AND FUTURE RESEARCH DIRECTIONS

NEP 2020 provides a visionary roadmap for transforming Indian higher education into a culturally enriched, globally responsible, and technologically empowered system. Artificial Intelligence, when guided by human-centric, ethical, and culturally sensitive principles, can play a transformative role in advancing cultural heritage education and global citizenship.

Future research should focus on empirical case studies, learner experiences, institutional practices, and comparative international perspectives to operationalize the policy vision articulated in NEP 2020.

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