AI-driven Reforms in Indian Education Policy and Governance (2016–2026): A Review

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Abstract

Artificial Intelligence is hugely changing the face of education in India at every level, from preschool upward. The national policies, especially the NEP 2020, have very specifically emphasized incorporating AI and digital technologies into teaching-learning processes and governance. The AI curricula for middle and secondary grades, along with technical syllabi revisions, have been mentioned. Newer platforms and models of governance that promise evidence-based decision-making proliferate. Earlier pilots demonstrated that personalization in learning and inclusion could be offered through AI tools; for instance, adaptive tutoring systems improved student outcomes by replacing ineffective teaching. Language AI is trying to breach the linguistic barriers for schools across India. There are, however, some great challenges, such as India's digital divide- only about 57% of schools have computers, and about 54% have internet connectivity- which can increase inequity in low- and middle-income countries. Concerns regarding data privacy, algorithmic bias, and dehumanization of pedagogy have been well elaborated elsewhere. We synthesize the literature, from 2016 to 2026, across academic studies, government documents, and think tank reports, in this review. The roles of AI in curriculum, governance, teacher development, personalized learning, and data-driven policymaking are reviewed, taking case examples from Punjab and Odisha states and programs like DIKSHA/NISHTHA, which illustrate key roles played by AI within such areas. A brief mention follows of some key challenges equity, ethics, infrastructure, and teacher-student relationships-and policy implications. Overall, evidence suggests that while AI-driven reforms may yield a more student-centered, efficient education, good governance, inclusive design, and massive capacity building will be necessary for its realization.

Key Words :Artificial Intelligence; Education Policy; Governance; Digital Education; Learning Analytics; Ethical AI; Personalized Learning

Introduction

India's ecosystem of education, with more than 260 million students in over 1.5 million schools and 40 million in higher education, is getting digitally transformed. In the last 10 years, the Indian government has come up with flagship initiatives, including the Digital India program, SAMARTH school schemes, and the DIKSHA platform, which are all intended to expand access and improve quality. The 2020 National Education Policy takes this a step further by making express calls for the use of emerging technologies and calling AI and computational thinking new literacy skills that should be learned from middle school onward. Configured in line with global trends, Indian policymakers now view AI at a couple of different levels, such as a lever for personalized learning and an efficiency tool for administrative and inclusive growth. For example, in its 2022 report, UNESCO calls Artificial Intelligence in Education to point out that AI tools could significantly contribute to educational equity and improved learning outcomes, replacing the one-size-fits-all model of teaching with adaptive curricula. In India, there have been some studies regarding AI that could automate content creation, customized lessons, and even optimize teacher postings to reduce dropouts. In parallel, the state also gave signals about a "digital-first" education mode, for example, through the launch of the National Digital Education Architecture in 2021-22, leveraging DIKSHA as a one-nation platform and issue-based AI governance through the vision "AI for All" and the 2026 AI Guidelines. This literature review covers the period from 2016 up to early 2026 and covers primary, secondary, and tertiary education synthesizing academic and policy sources on AI-driven reforms in curriculum, pedagogy, administration, and governance in India. The country has several initiatives, with special emphasis on NEP 2020, AI curricula, and AI-capable platforms, as well as the crosscutting themes of personalized learning, teacher training, -driven policymaking, and challenges related to privacy, bias, and equity, are identified. The objective is to provide a detailed, evidence-based assessment of AI integration in India’s education policies and practices, and to evaluate emerging impacts

Methodology

Here a systematic review of the literature on "AI in education" in the Indian context from 2016 to 2026. The searches were conducted across various sources, including academic databases (IEEE Xplore, Google Scholar), government and institutional websites (Ministry of Education, NITI Aayog, NCERT, UNESCO, UNICEF), and publications within mainstream media and think tanks. The major keywords used in the search included "AI education India policy," "AI curriculum NEP 2020," "personalized learning AI India," and "education data governance India." We prioritized sources that policy-debate, implement, or evaluate AI applications within Indian schools and universities. Government policy documents like NEP 2020, press releases, and framework guidelines were included for any official mandate. The academic papers and reports provide empirical or analytical insights—for instance, ICRIER's policy briefs and peer-reviewed papers. International agency reports from UNESCO and UNICEF go broad, while NGO/think-tank briefs zoom in. News and industry coverage, like that from the Times of India, Education Times, and the IndiaAI portal, is used to track recent initiatives and statistics. These particular sources are not further listed; each has been read, and quotes and data relate to the source cited in connection with them.

Thematic Review

AI in Curriculum and Pedagogy

AI in Curriculum and Pedagogy The National Education Policy 2020 outlines a specific role for AI in education. It suggests that by middle school (Grades 6-8), all students should learn computational thinking and digital literacy. It also recommends offering AI as a skill subject in secondary school. In response, the Ministry of Education is introducing Artificial Intelligence and Computational Thinking into school curricula. For instance, a government announcement in 2025 stated that starting in the 2026-27 school year, an AI curriculum will begin in Grade 3, in line with NEP and the new National Curriculum Framework for School Education. The CBSE has set up an expert committee led by IIT Madras to design AI and CT modules. They are piloting AI as a skill subject from Grade 6 onward. School Education Secretary Sanjay Kumar noted that over 18,000 CBSE schools now offer AI as a skill

subject for Grades 6-10. By late 2025, about 10,000 teachers had been trained in AI through partnerships with Intel, IBM, and NIELIT. These steps align with NEP's vision of promoting "AI for public good" by gradually embedding AI literacy from foundational levels. In higher education, the push for AI has also changed curricula. The All India Council for Technical Education (AICTE) reports that its reforms include integrating AI, data science, and related subjects into engineering and multidisciplinary programs. NEP's focus on diverse fields and skills has prompted many universities and colleges to introduce new courses in AI, machine learning, data analytics, and robotics. For example, many IITs and central universities now offer specialized undergraduate and postgraduate programs in AI. Studies from other countries indicate that even during the K-12 lockdowns, Indian EdTech platforms like Byju's, Vedantu, and Embibe used AI algorithms to personalize learning paths and assessments. While not a formal curriculum, this industry-driven innovation affects pedagogy by introducing students to adaptive, AI-based content. At various education levels, AI is viewed as a teaching tool. NCERT's Central Institute of Educational Technology (CIET) emphasizes that AI-enabled tools, such as intelligent tutoring systems, adaptive learning platforms, learning analytics, and educational chatbots, can support competency-based, learner-centered education. For example, intelligent tutoring systems can assess a student's competency and adjust content accordingly, replacing the restrictive one-size-fits-all approach with optimized learning paths. Several states, such as Tamil Nadu and Karnataka, are testing AI-driven teaching apps that generate quizzes or explanations tailored to a student's performance. Meanwhile, policymakers stress that AI should support teachers rather than replace them. The CIET framework clearly states that ethical use, focusing on privacy and inclusivity, is essential. It also emphasizes that AI should enhance teachers' teaching abilities without taking away the human aspect of education. Summarizing the effects on curricula, Sihag (2024) reports that benefits of AI include improved teacher efficiency in multi-level classrooms and automated content development. There are also advantages from personalized learning driven by intelligent tutoring systems and data-based improvements in teacher deployment and dropout prediction. In practice, India is still in the early stages. However, there is a clear agreement that AI concepts and tools must be integrated into school and university curricula to develop 21st-century skills.

AI in Governance and Administration

AI is becoming part of the governance structure in Indian education to enhance administration and planning. A prime example is the Vidya Samiksha Kendra (VSK) initiative under Samagra Shiksha, which started in Gujarat in 2019 and expanded nationally. VSK acts as a data analytics command center, gathering real-time information from millions of schools on enrollment, attendance, learning outcomes, and teacher data. It uses big data and AI tools to identify problems and guide interventions. The VSK dashboard enables administrators at national, state, and district levels to track key metrics, pinpoint issues like low attendance or learning gaps, and distribute resources accordingly. Prof. Arun Mehta mentions that VSK employs AI and machine learning to predict potential challenges. This shift moves management from reacting to being more preventive, effectively digitizing accountability. Over 1.5 million schools and about 9.6 million teachers are now included in VSK data. This marks a significant move towards evidence-based governance, as AI helps transform the Unified District Information System (UDISE+) and other databases into useful insights, such as predicting dropout risks and assessing training effectiveness. In addition to VSK, the government is developing a digital infrastructure to support AI throughout the education system. The National Digital Education Architecture (NDEAR), launched in 2021, offers interconnected components for education IT systems. A key element of NDEAR is NCERT’s DIKSHA platform, now the One Nation, One Digital Platform. DIKSHA provides interactive content, quizzes, question banks, chatbots, and analytics, and experienced unprecedented usage during COVID-19 when millions of teachers and students accessed it. For instance, DIKSHA hosted the National Initiative for School Heads and Teachers’ Holistic Advancement (NISHTHA) training online. In 2020-21, over 2 million teachers were trained through DIKSHA, and additional NISHTHA modules are ongoing for secondary schools. Thus, DIKSHA not only supplies educational content but also acts as a means for large-scale teacher professional development. All these platforms generate vast amounts of educational data. UNESCO’s Classess® platform, an AI-driven analytics ecosystem launched in India, exemplifies this method. Classess connects classroom engagement data and learning outcomes to state and national dashboards, showing measurable impacts, such as a 25% rise in student mastery and 40% growth in data-informed teaching. The NEP 2020 clearly calls for strong digital infrastructure and data-driven decision-making in education. In line with this, states are also incorporating AI for routine tasks like teacher transfers and exam scheduling and

are digitizing services with AI chatbots for admissions and information. In summary, AI-driven governance models in India seek to make the system more transparent, efficient, and responsive, through tools like national dashboards (VSK/Classess), integrated platforms (DIKSHA/NDEAR), or intelligent policy analytics. These models promise quicker decision-making and improved targeting of interventions compared to traditional manual processes.

AI for Teacher Development

An essential part of India's AI education reform is building teachers' skills. The National Education Policy (NEP) 2020 highlights the need to train educators on using new technologies. The government has launched several initiatives to support this. For example, NCERT and Google worked together on online courses called “Advancing Science Learning through Digital Tools and AI-Driven Technology” for in-service teachers. CIET (NCERT) also conducted a national training series titled “Leveraging AI for Transforming School Education” in early 2026. This series aimed to improve AI literacy and teaching skills among educators. On a larger scale, the NISHTHA program trained millions of teachers in new teaching methods through the DIKSHA platform. This program has now been extended to secondary education. Beyond government programs, tech companies and training organizations have also contributed. By late 2025, over 10,000 school teachers had received specialized AI training through partnerships with companies like Intel, IBM, and NIELIT. These courses cover AI concepts, data-driven instruction, and practical use of AI tools in the classroom. Despite these efforts, surveys show that gaps in ICT and AI skills among teachers persist. ICRIER notes that many teachers have limited access to advanced devices and training in digital teaching methods. UNESCO also stresses that as tools become more available, teachers need training to understand data dashboards and use AI tools responsibly. In response, the government suggests ongoing professional development in educational technology. The long-term goal is to create “AI-ready” educators who can use analytics to effectively guide students, rather than just following fixed lesson plans. Early feedback from pilots indicates promise. Teachers using AI dashboards from platforms like DIKSHA or pilot projects in various states report spending less time on rote instruction and more time helping small groups. They are essentially doing what humans do best while letting AI handle repetitive tasks. In summary, teacher training is critical. India is increasing AI pedagogy workshops, integrating AI modules into teacher education programs, and building communities of practice. However, ensuring that every teacher achieves basic AI literacy remains a significant challenge.

Personalized Learning and Inclusivity

An essential part of India's AI education reform is building teachers' skills. The National Education Policy (NEP) 2020 highlights the need to train educators on using new technologies. The government has launched several initiatives to support this. For example, NCERT and Google worked together on online courses called “Advancing Science Learning through Digital Tools and AI-Driven Technology” for in-service teachers. CIET (NCERT) also conducted a national training series titled “Leveraging AI for Transforming School Education” in early 2026. This series aimed to improve AI literacy and teaching skills among educators. On a larger scale, the NISHTHA program trained millions of teachers in new teaching methods through the DIKSHA platform. This program has now been extended to secondary education. Beyond government programs, tech companies and training organizations have also contributed. By late 2025, over 10,000 school teachers had received specialized AI training through partnerships with companies like Intel, IBM, and NIELIT. These courses cover AI concepts, data-driven instruction, and practical use of AI tools in the classroom. Despite these efforts, surveys show that gaps in ICT and AI skills among teachers persist. ICRIER notes that many teachers have limited access to advanced devices and training in digital teaching methods. UNESCO also stresses that as tools become more available, teachers need training to understand data dashboards and use AI tools responsibly. In response, the government suggests ongoing professional development in educational technology. The long-term goal is to create “AI-ready” educators who can use analytics to effectively guide students, rather than just following fixed lesson plans. Early feedback from pilots indicates promise. Teachers using AI dashboards from platforms like DIKSHA or pilot projects in various states report spending less time on rote instruction and more time helping small groups. They are essentially doing what humans do best while letting AI handle repetitive tasks.

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Case Studies

- **State-Level Curricular Reforms:** Several Indian states have pioneered AI in schooling. Punjab, for example, became the first Indian state to launch an AI curriculum across its government schools (a three-year rollout of hands-on, project-based AI learning)[42]. At the same time, Odisha approved a *State AI Policy 2025* to integrate AI into 35% of its schools by 2029 (and 90% by 2036)[43]. Odisha's plan includes "AI labs" in schools, free online AI courses, and teacher training modules; it is notable for emphasising equity by offering AI lessons in Odia and tribal languages[43][44]. These cases illustrate two models: Punjab's infrastructure-led, rapid implementation, and Odisha's long-term, inclusive strategy. Both have attracted national attention as blueprints for scaling AI in education. Notably, these state moves complement the national curriculum reforms mentioned earlier.
- **Vidya Samiksha Kendra (VSK):** Originating as a Gujarat innovation (2019), VSK exemplifies AI in educational governance. By 2022, the Ministry of Education rolled it out nationally. The system employs machine learning to aggregate and analyse data from UDISE+ (school census), NAS (learning assessment) and other sources[31]. It provides a unified dashboard that "presents an unparalleled overview of India's educational scenario"[28]. Administrators use VSK insights to allocate resources, identify underperforming schools, and track the impact of interventions. Educators receive real-time reports on student achievement, enabling targeted remediation [45]. In practice, VSK has already covered millions of students and teachers across the country[30]. Its predictive analytics capability – "foresee potential challenges" and suggest corrective steps[29] – marks a sea change from legacy EMIS. VSK is often cited (by MHRD and experts) as a case of turning classroom data into actionable evidence[6][34].
- **DIKSHA and NISHTHA during COVID-19:** The COVID-19 pandemic stress-tested India's digital education tools. DIKSHA emerged as a critical national platform; user traffic skyrocketed as schools closed. According to NCERT, DIKSHA incorporates core NDEAR technologies (content authoring, quizzes, analytics) and saw an "unprecedented rise in access" during 2020–21[32]. On DIKSHA, the government launched the NISHTHA (teacher training) program for elementary teachers, reaching tens of lakhs of teachers online[33]. This large-scale upskilling was unique in scope: it simultaneously trained teachers in 24×7 mode (through YouTube channels) and used DIKSHA's microservices for monitoring. In essence, DIKSHA functioned as both a content repository and a professional development ecosystem under crisis conditions. This episode demonstrated the scalability of AI-driven platforms: by 2021, DIKSHA hosted self-learning modules for students and livestream/recorded sessions for teachers on a single unified system[46][33]. Lessons from this case have informed post-pandemic policy (e.g. PM eVidya channels remain linked to DIKSHA for hybrid learning).
- **Teacher Training Innovations:** In early 2026, CIET–NCERT organised a five-day online series, "Leveraging AI for Transforming School Education", aimed at headmasters and educators. This program – broadcast on TV and online – exemplified blended teacher PD in AI, covering topics from AI fundamentals to policy frameworks[36]. It reflects a trend of using mass media and digital tech to build capacity. No direct citation lists outcomes yet, but its very existence indicates increasing institutional commitment to teacher AI literacy.
- **Higher Education Efforts:** In universities, autonomous innovation is visible. Institutes like IITs and NITs routinely update curricula to include AI modules (as noted by AICTE's engineering curriculum overhaul[5]). Several universities have set up AI labs (often with industry funding) and centres for AI research. Open initiatives such as AICTE's ATAL academies and NPTEL also offer online AI/ML courses to students nationwide. While systematic data on outcomes is limited, these examples illustrate that at the tertiary level, AI reforms are often driven by individual institutions aligning with NEP's mandate for future-readiness.

Challenges

Despite the progress, several challenges threaten to undermine AI's benefits in Indian education:

- **Digital Divide and Equity**: A key issue is unequal access to technology. In 2023, only about 57.2% of schools had computers, and around 53.9% had Internet connectivity, with some rural states below 25%. During COVID closures, around 60% of children could not access online learning. UNICEF points out that many students, especially girls and those in rural areas, lack even basic devices. This gap means AI tools will likely only benefit already-advantaged students, creating a "rich-get-richer" situation. As noted by 360info, Indian classrooms are not uniformly "AI-ready"; rural schools often lack the infrastructure for basic online teaching. If this issue is not addressed, it could worsen inequalities as AI-driven private schools advance while under-resourced government schools fall behind.
- **Data Privacy and Security:** AI systems in education need to collect and analyze large amounts of student data, such as performance logs and socio-emotional indicators. India's legal framework for protecting this data is still developing. Experts warn that without strong protections, student data could be misused, for example, for surveillance or commercial purposes. The UNESCO report emphasizes that students should own their data but India has not yet established clear rules. Many pilot AI tools currently operate without transparent privacy policies. UNICEF urges that protecting children's data and ensuring privacy should be a top priority. There is also little oversight of the algorithms themselves. A national survey of EdTech tools found that very few explain how they use data, raising concerns about consent and transparency.
- **Algorithmic Bias and Fairness**: AI models trained on biased or unrepresentative data can perpetuate discrimination. In India, this could mean that English-centered curricula tools disadvantage speakers of regional languages or that exam-grading algorithms fail certain demographic groups. Both UNESCO and UNICEF emphasize the importance of correcting algorithmic biases and designing inclusive and fair AI. However, there is currently no systematic audit process for educational AI systems. Given India's diverse socio-economic and linguistic landscape, ensuring that algorithms treat all groups fairly is a significant challenge.
- Loss of Human-Centric Pedagogy: Educators are concerned that too much reliance on AI could weaken the teacher-student bond and critical thinking skills. The ICRIER analysis warns that AI tools should not replace "human interaction in the learning process." While AI can manage routine tasks like grading and content adaptation, it cannot provide socio-emotional support. UNESCO and UNICEF stress that technology should boost, not replace, the teacher's role. If policymakers push for AI in classrooms without maintaining human oversight, there is a risk that students will become passive consumers of technology, potentially harming their development and creativity in education.
- **Capacity and Training Deficits**: Meaningful AI integration requires skilled teachers and administrators, but the current capacity is insufficient. Surveys show that many educators lack training in information and communications technology (ICT) or data analysis. The ICRIER brief mentions that limited teacher training and digital resources are significant barriers to effective AI use. In higher education, retraining for faculty is similarly uneven. If these gaps are not addressed, they will slow implementation and may lead to poor use of available tools. • **Regulatory and Ethical Gaps**: India currently does not have a comprehensive, education-specific AI policy. The 2026 India AI Governance Guidelines outline broad principles, but applying these to schools and universities is challenging. There is no dedicated regulator for EdTech AI, and existing bodies like the UGC and NCERT have only issued general recommendations. This weak governance means potential problems, such as privacy violations and unfair outcomes, may go unchecked unless clear rules are established. In summary, while AI offers potential benefits, achieving these requires tackling these challenges. Many authors agree that without bridging the digital gap, ensuring data rights, and maintaining ethical standards, AI-driven reforms risk uneven or counterproductive effects. Policy Implications The findings suggest several implications for policymakers and educators:

- **Develop a National AI-Education Framework**: India should create a clear strategy for AI in education that builds on NEP 2020 and the 2026 AI guidelines. This should include clear standards for educational AI regarding data governance, ethics, and transparency, aligned with global best practices. Establishing a task force involving education and IT policymakers could ensure coordinated implementation.
- **Ensure Universal Digital Access:** In line with UNESCO's recommendations, the government must guarantee high-speed Internet and devices for all teachers and students. This might involve subsidizing connectivity in rural areas, expanding the PM eVIDYA initiative, or improving computer science labs. Without equitable access, other reforms will have limited impact.
- **Strengthen Data Protection and Ethics**: The Digital Personal Data Protection Act needs robust enforcement in education. States and schools should adopt policies that ensure student ownership of raw learning data. All AI tools bought by public education systems must meet criteria for privacy, fairness, and transparency. Creating an "EduTech Ethics Board" or extending existing bodies to oversee educational AI is worth considering.
- **Invest in AI Literacy and Training:** The government should expand teacher training to include AI and digital teaching methods. Programs like NISHTHA should continue and be evaluated. Digital literacy should be introduced earlier in education, as envisioned by NEP. Collaborations with industry can help, but central programs must ensure access for government teachers. UNESCO also recommends focusing on underprivileged groups in AI literacy campaigns.
- **Encourage Public–Private Collaboration**: Policymakers should help foster partnerships with EdTech companies, research organizations, and NGOs. For example, the government could offer grants for AI educational content in local languages or create sandbox environments to test new tools. Lessons from global leaders should be studied and adapted to fit local contexts.
- **Mandate Inclusivity and Localisation**: AI-driven content must reflect India's diversity. This includes funding AI models in regional languages and curricula. The example from Odisha, which provides AI lessons in local languages, should be scaled nationwide. All AI systems should also include accessibility features for students with disabilities. Monitoring should track not only overall performance but also equity across different socio-economic and gender groups. • **Promote Evidence-Based Policymaking**: The success of initiatives like Classess and VSK highlights the value of continuous monitoring. Education authorities should invest in research and feedback loops, such as conducting randomized evaluations of AI interventions, and using dashboards to adjust policies in real time. This data-driven approach will promote ongoing improvement rather than one-off solutions.
- **Preserve Human Agency**: Finally, policymakers must protect the teacher-student relationship. Any AI initiative should include human oversight. Technology must center on human agency. For example, training programs should teach educators how to interpret AI outputs and make teaching decisions, rather than rely solely on algorithms. The goal should be to involve teachers as co-creators with AI, rather than mere bystanders. In implementing these policies, India can draw on international models. The 2026 AI governance philosophy offers a general framework that emphasizes inclusion and transparency. UNESCO's recommendations provide a roadmap for action, covering areas from expanding access to addressing bias to enhancing AI literacy. Aligning national efforts with these guidelines will help ensure that AI in education meets the goals of quality and equity.

Policy Implications

The above findings suggest several implications for policymakers and educators:

The findings above have important implications for policymakers and educators:

- **Develop a National AI-Education Framework:** India should create a clear strategy for AI in education. This strategy should build on NEP 2020 and the 2026 AI guidelines. It must include standards for educational AI, such as data governance, ethics, and transparency that match global best practices like those recommended by UNESCO and UNICEF. An inter-ministerial task force made up of education, IT, and policymakers could help coordinate this effort.

- **Ensure Universal Digital Access**: Following UNESCO's Recommendation 4, the government should provide high-speed Internet and devices for all teachers and students. This could involve subsidizing connectivity in rural areas, expanding the PM eVIDYA initiative, or revitalizing computer science labs. Without equal access, other reforms will fall short.
- **Strengthen Data Protection and Ethics**: The Digital Personal Data Protection Act (2023) must be enforced in education. States and schools should implement policies that keep raw learning data owned by students, in line with UNESCO's advice. All AI tools used in public education must meet criteria for privacy, fairness, and explainability. Creating an "EduTech Ethics Board" or expanding organizations like the MeitY IndiaAI Mission to oversee educational AI could be an option.
- **Invest in AI Literacy and Training:** The government should enhance teacher education by including AI and digital teaching methods. Programs like NISHTHA should continue and be evaluated. Digital literacy, including coding and data skills, should start earlier in schools, as the NEP suggests. Partnerships with companies like Intel and Google can support this, but central programs must ensure access for government teachers. UNESCO recommends focusing on disadvantaged groups in AI literacy campaigns, including girls and students in rural areas.
- **Encourage Public-Private Collaboration**: Policymakers should promote cooperation with EdTech firms, research institutions, and NGOs, as suggested in Recommendation 3 of the UNESCO report. For example, the government could establish grant programs for AI educational content in local languages or create sandbox environments to test new tools. Lessons from global leaders, like Singapore's AI learning labs, should be examined to adapt successful practices locally.
- **Mandate Inclusivity and Localization:** AI-driven content must reflect India's diversity. Funding should support AI models in regional languages and curricula. The Odisha example of AI lessons in Odia and tribal languages should be scaled nationwide. Additionally, AI systems should include accessibility features for students with disabilities. Monitoring systems need to track not only overall performance but also equity indicators based on socio-economic and gender groups.
- **Promote Evidence-Based Policymaking**: The success of initiatives like Classess and VSK shows the importance of ongoing monitoring. Education authorities should invest in research and feedback mechanisms, such as randomized evaluations of AI interventions and dashboards for real-time policy adjustments. This data-driven approach, as encouraged by the NEP, promotes continuous improvement rather than one-time initiatives.
- **Preserve Human Agency:** Finally, policymakers must protect the teacher-student relationship. Any AI initiative should ensure human oversight. As UNICEF emphasizes, technology must center on human agency. Training programs should help educators understand AI outputs and make teaching decisions rather than depend solely on algorithms. The goal should be to make teachers co-creators with AI, not passive observers. By implementing these policies, India can look to international models. The country's 2026 AI governance philosophy, which emphasizes inclusion and transparency, provides a general template. Specifically for education, UNESCO's 10 recommendations offer a roadmap for action—from expanding access to addressing bias to enhancing AI literacy. Aligning national efforts with these guidelines will help ensure that AI in education meets the goals of quality and equity.

Limitations of the Review

This review provides a thorough overview of AI-driven reforms in education policy and governance in India from 2016 to 2026. However, it has several important limitations that should be acknowledged for academic transparency and to guide future research. 1. Dependence on Secondary Sources: This review relies solely on secondary data, which includes policy documents, academic articles, reports from international organizations, and grey literature. No primary data, such as interviews with policymakers, teachers, or students, or field-based observations, were gathered. This means the analysis reflects documented views rather than the real experiences of those involved in AI implementation. 2. Uneven Empirical Evidence: While the intent behind policies and pilot initiatives is well documented, there are few rigorous evaluations of AI-driven reforms in India. Many initiatives, like the introduction of AI curricula and governance dashboards, are new or still in pilot phases. Consequently, we cannot conclusively assess their long-term effects on learning outcomes, equity, and governance efficiency.

3. Policy-Practice Gap: Much of the literature highlights policy frameworks and strategic visions, such as NEP 2020 and AI guidelines, but fewer studies critically analyze implementation on the ground. Thus, the review may present aspirational goals more than the realities of classrooms and administration, especially in rural and under-resourced areas. 4. Rapidly Evolving Field: AI in education is advancing quickly. Developments after early 2026, including new regulations, technologies, or large-scale evaluations, are not included. Some conclusions might become outdated as policies evolve and new evidence comes to light. 5. Limited Disaggregated Analysis: Although the review addresses equity and inclusion, many available sources do not provide enough disaggregated data based on gender, caste, disability, region, or socio-economic status. This limits deeper analysis of how AI reforms affect marginalized groups in India's varied education system. 6. Variability in Quality of Sources: The review combines peer-reviewed literature with government reports, policy briefs, and reliable media sources. While this broadens the range of sources, it also introduces differences in methodological quality. Some claims, especially those from pilot reports or policy announcements, lack independent verification. 7. Focus on Formal Education Systems: The review mainly focuses on AI reforms in formal schools and higher education. It pays comparatively less attention to informal learning, community education, adult education, and non-formal skill development initiatives using AI, given the limited research available on these areas. 8. Ethical and Regulatory Evidence Gaps: While ethical issues like data privacy, bias, and accountability are discussed, there is a lack of specific case studies on ethical failures or regulatory enforcement in Indian education. This limits a deeper assessment of governance mechanisms. Scope for Further Research The rapid growth of AI-driven reforms in education policy and governance in India presents many opportunities for future research. Given the changing nature of technology and policy, the following areas need thorough and ongoing scholarly attention: 1. Longitudinal Impact Studies: Future research should look at the long-term effects of AI integration on student learning, retention rates, critical thinking, and socio-emotional development across all education levels. Longitudinal studies can help determine if AI-enabled personalization leads to lasting academic gains or just temporary improvements. 2. Policy-Implementation Alignment: There is a need for in-depth studies that explore the gap between national policy intentions, like NEP 2020 and AI governance guidelines, and actual implementation at state, district, and school levels. Comparative studies across states could uncover factors that support or hinder successful AI adoption. 3. Teacher Agency and Professional Identity: Further research should examine how AI tools affect teachers' professional freedom, teaching decisions, workload, and identity. Qualitative studies capturing teachers' perspectives can reveal whether AI serves as a supportive tool or adds another layer of managerial control. 4. Equity, Inclusion, and Social Justice: Researchers should focus on how AI reforms impact marginalized groups, including students from rural areas, low-income households, linguistic minorities, students with disabilities, and first-generation learners. Analyzing disaggregated data is crucial to assess whether AI reduces or reinforces existing educational inequalities. 5. Ethical Governance and Data Protection: There is a significant need for research on ethical frameworks for using AI in education, especially regarding student data privacy, consent, algorithm transparency, and accountability. Case studies exploring data governance practices within Indian educational platforms would be particularly useful. 6. Effectiveness of AI in Educational Governance: AI-based dashboards and analytics systems are increasingly used for policy and administration, but their effectiveness in improving governance outcomes is still under-explored. Future research could investigate whether data-driven decision-making leads to better resource allocation, accountability, and organizational efficiency. 7. Comparative and International Perspectives: Comparative studies between India and other countries in the Global South or OECD nations could help place India's AI reforms in a global context. Such research may identify transferable best practices and cautionary lessons for policy adaptation. 8. Student Perspectives and Learning Experiences: Much existing literature focuses on policy and system-level outcomes. Future research should center on students' views of AI-enabled learning to assess motivation, engagement, agency, digital well-being, and trust in AI systems through mixed-method or participatory designs. 9. AI Curriculum and Assessment Models: More research is required on how AI-related curricula are developed, taught, and assessed. This could include studies on age-appropriate AI literacy, interdisciplinary integration, and innovative assessment methods that evaluate not only technical skills but also ethical and critical understanding of AI. 10. Cost-Benefit and Sustainability Analysis: Lastly, research should evaluate the financial sustainability of AI-driven reforms. Cost-benefit analyses comparing AI interventions to traditional approaches can guide policymakers on scalability, return on investment, and long-term viability in resource-limited settings.

Conclusion

India's education sector is experiencing a significant shift toward AI integration, fueled by forward-thinking policies and a rise in EdTech innovations. The NEP 2020 and related initiatives have set the stage by incorporating AI into curricula and building digital infrastructure, such as DIKSHA and NDEAR. Early efforts, including AI-assisted teaching tools and predictive analytics in administration, show promise. Students receive customized instruction and faster feedback, while administrators gain real-time insights for decision-making. Research indicates that AI can improve teaching efficiency and encourage critical thinking. Pilot programs in Punjab, Odisha, and other states show bold, context-sensitive approaches to educational AI. However, the literature consistently warns against ignoring human and equity factors. India's diverse education system needs any AI solution to be adaptable and inclusive. As UNICEF and UNESCO stress, technology should enhance the interaction between teachers, students, and materials, not replace it. This means AI tools must be clear, fair, and used with the guidance of teachers. It also means addressing systemic gaps: only by providing universal infrastructure, strong data protections, and ongoing training can India prevent AI from becoming another source of inequality. Overall, AI-driven reforms in India's education policy could make learning more personalized, governance more evidence-based, and outcomes more equitable. However, achieving that potential will take ongoing effort to maintain ethical principles and human-centered values. In the future, research must track the impact of these reforms, for instance, by assessing student learning gains in AI-enhanced classrooms or observing whether VSK's insights lead to real improvements. Policymakers should remain flexible and ready to adjust guidelines as new evidence appears. In the end, as NCERT and UNICEF stakeholders agree, the future of AI in Indian classrooms relies on the collaboration between technology and people. If used wisely and inclusively, AI can help achieve India's vision of quality education for all, ensuring that every child, teacher, and school engages in the learning revolution, both in theory and in practice.

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