

3. Niti Aayog Report – School Education System – National

1. Why in News

1. NITI Aayog released policy report – 'School Education System in India – Temporal Analysis and Policy Roadmap for Quality Enhancement'
2. Comprehensive decade-long analysis of India's school education system
3. India's system – 14.71 lakh schools serving 24.69 crore students – world's largest
4. Draws on UDISE+ 2024-25, PARAKH Rastriya Sarvashay 2024, NAS 2017/2021, ASER 2024 data
5. Highlights progress and persistent challenges
6. Provides roadmap for sustained quality enhancement

2. About NITI Aayog Report

Scope and Coverage

1. Comprehensive policy document presenting decade-long analysis
2. Key parameters analysed –
 1. Access and enrolment trends
 2. Infrastructure development
 3. Equity and inclusion metrics
 4. Learning outcomes assessment
3. Coverage – All States and Union Territories
4. Temporal trends showing evolution

Data Sources

1. UDISE+ 2024-25 – Unified District Information System for Education Plus (school-level data)
2. PARAKH Rastriya Sarvashay 2024 – National assessment survey
3. National Achievement Survey (NAS) 2017 and 2021 – Learning outcomes measurement
4. Annual Status of Education Report (ASER) 2024 – Independent assessment of foundational skills
5. Multi-source triangulation ensures robustness

3. Key Highlights of Report

Improvement in School Infrastructure

1. Major advancements in –
 1. Electricity access expansion
 2. Functional sanitation facilities
 3. Inclusive infrastructure (ramps, accessible toilets, special needs facilities)
2. Progressive infrastructure development across schools

Expansion of Digital Learning Ecosystem

1. Improved access to –
 1. Computers and digital devices
 2. Internet connectivity
 3. Smart classrooms with interactive boards
2. Digital transformation of educational institutions
3. Technology integration in teaching-learning

Progress in Equity and Inclusion

1. Encouraging gains –
 1. Girls' participation increased across levels
 2. SC and ST students' enrolment improved across educational stages
 3. Gender parity indices improving
2. Bridging historical disparities

Recovery in Learning Outcomes

1. Improvement in foundational literacy and numeracy across grades
2. Post-pandemic recovery observed

3. NAS 2021 vs 2017 shows positive trends
4. ASER 2024 confirms foundational skills improvement

Role of Policy Initiatives

Recovery in learning outcomes supported by -

National Education Policy (NEP) 2020 -

1. Holistic, multidisciplinary education
2. 5+3+3+4 curricular structure
3. Focus on foundational literacy and numeracy

NIPUN Bharat Mission -

4. National Initiative for Proficiency in Reading with Understanding and Numeracy
5. Ensures every child attains foundational literacy and numeracy by Grade 3 by 2026-27

Samara Shiksha -

6. Integrated scheme for school education
7. From pre-school to senior secondary
8. Covers quality, equity, infrastructure

Need for Continued Reforms

1. Report emphasizes sustained efforts needed
2. Strengthen quality and equitable learning outcomes
3. Address persistent structural challenges
4. Build on gains achieved

4. Challenges Highlighted

Lack of Functioning Labs for STEM Education

1. Secondary schools lack functional science labs despite STEM push
2. UDISE+ 2024-25 - Only 51.7% of government secondary schools equipped with science laboratories
3. Nearly 50% of schools without functional labs
4. Impact - Limited opportunities for -
 1. Practical, inquiry-based learning
 2. Hands-on experimentation
 3. Scientific temperament development
5. Undermines STEM education quality

Single-Teacher Schools

1. Many schools, particularly in remote and sparsely populated regions, operate with only one teacher
2. UDISE+ 2024-25 - Over 1 lakh schools (more than 7% of all schools) operate with just 1 teacher
3. Consequences -
 1. Managing entire institution's administrative and teaching load
 2. Multi-grade teaching challenges
 3. Little to no value addition for students
 4. Limited subject specialization
 5. Poor learning outcomes
4. Equity issue affecting rural, tribal areas

Discontinuity in School Structures - Pyramidal Model

India's schooling system pyramid-shaped -

1. 7.3 lakh primary schools
2. 4.34 lakh upper primary schools (41% drop)
3. 1.42 lakh secondary schools (67% drop from upper primary)
4. 1.64 lakh higher secondary schools (slight increase from secondary)

Steep reduction at higher levels -

5. Limits access to continued education
 6. Children forced to travel long distances or drop out
 7. Transition barriers between levels
2. Geographic mismatch between population and school availability

Inadequate Access to Basic Facilities

Electricity -

1. Progress - Availability grew 1.6 times from 55.96% (2014) to 91.9% (2025)
2. Gap - 1.19 lakh schools still lack functional electricity (UDISE+ 2024-25)
3. Affects digital learning, lighting, safety

Water and Hygiene -

1. Progress - Schools with drinking water increased from 96.5% (2014) to 99% (2025)
2. Gap - 14,505 schools still lack functional water sources
3. Critical for health, hygiene, especially for girls
4. Inconsistent access affecting disadvantaged regions

Gaps in Equity and Inclusion

1. Despite notable gains, marginalized students face barriers -
 1. Socio-Economically Disadvantaged Groups (SEDGs)
 2. Girls in certain regions
 3. Migrant communities
2. Overlapping and structural barriers -
 1. Participation (enrolment)
 2. Retention (staying in school)
 3. Learning (quality outcomes)
3. Intersectionality of disadvantages compounds challenges

Fragmented Governance Structure

Education governance fragmented across -

1. Centre (policy, funding, monitoring)
2. States (implementation, curriculum adaptation)
3. Districts (coordination, supervision)
4. Blocks (school cluster management)
5. Panchayats (local school management committees)

Challenges -

6. Overlapping jurisdictions causing confusion
7. Poorly defined roles leading to buck-passing
8. State education departments face -
 1. Organizational overlaps
 2. Missing functions (gaps in service delivery)
 3. Inadequate staffing
 4. Unclear responsibilities
9. Operational and management inefficiencies
10. Weak coordination mechanisms

Misalignment in Pedagogy, Curriculum, and Learning Outcomes

1. Foundational challenge - Lack of alignment between -
 1. Curriculum (what is taught)
 2. Pedagogy (how it is taught)
 3. Assessment (what is tested)
2. National Curriculum Framework 2023 sets standards for -
 1. Learning competencies
 2. Developmental goals

3. Competency-based education
3. Gap – Standards not consistently translated into classroom practice
4. Teachers lack training, resources for competency-based pedagogy
5. Assessments remain rote-learning focused in many places

Existence of Small and Under-Enrolled Schools

1. Significant proportion operate with very low student strength –
 1. Over one-third of schools – Less than 50 students
 2. 5.1% of schools – Enrollment below 10 students
 3. 8% of schools – Enrollment 11–20 students
2. Challenges –
 1. Inefficient resource utilization
 2. Difficulty in providing subject specialists
 3. Multi-grade teaching necessitated
 4. High per-student cost
 5. Limited peer learning opportunities
3. Rationalization vs. access dilemma in remote areas

5. Way Forward – NITI Aayog Recommendations

Reform School System and Ensure Structural Continuity

NEP 2020 calls for –

1. Coherent, developmentally aligned schooling structure (5+3+3+4)
2. Academic continuity from foundational to secondary stage
3. Efficient use of resources
4. Equitable access across geographies

Actions –

5. School complexes/clusters ensuring all stages within reachable distance
6. Transition support between stages
7. Rationalization of small schools with transport/hostel provision

Strengthen School Infrastructure

Universal Access to Foundational Infrastructure –

1. Every school equipped with –
 1. Electricity (universal, 24/7)
 2. Drinking water (functional sources)
 3. Boundary walls (safety, security)
 4. Gender-segregated functional toilets (hygiene, especially for girls)
 5. Hygiene facilities (handwashing, sanitation)
2. Safe, inclusive, conducive learning environment

Integrate Digital Infrastructure –

Into teaching, learning, school governance –

1. Computers, tablets for students and teachers
2. Reliable internet connectivity
3. Digital content and learning management systems
4. Administrative digitization (attendance, assessments, reporting)

Strengthen Labs, Libraries, Resource Centres –

For experiential learning –

1. Functional science labs in all secondary schools
2. Mathematics labs, activity rooms
3. Well-stocked libraries with diverse reading materials
4. Resource centres for teachers

5. Maker spaces for innovation

Reform Governance and Enhance Administrative Capacity

Rationalize Governance Structures -

Enhance local autonomy -

1. Clarify roles across Centre-State-District-Block-Panchayat
2. Reduce overlaps, fill functional gaps
3. Empower School Management Committees (SMCs) and local bodies

Strengthen Institutional Capacity -

Administrative cadres -

1. Adequate staffing at all levels
2. Professional development for education administrators
3. Performance management systems
4. Data-driven decision-making capacity

Reform School Supervision -

Academic support structures -

1. Quality supervision, not just compliance checks
2. Mentoring and support for teachers
3. Regular school visits by Block Resource Coordinators, Cluster Resource Coordinators
4. Focus on instructional improvement

Develop Effective School Leadership -

Structured training -

1. Leadership development programs for headteachers
2. Decentralized empowerment with accountability
3. Instructional leadership capacity
4. Community engagement skills

Promote Equity and Inclusion

Contextualized Support for SEDG Students -

Strengthen support -

1. Targeted interventions (remedial classes, scholarships, hostel facilities)
2. Culturally responsive pedagogy
3. Mother tongue-based multilingual education
4. Address socio-economic barriers (uniforms, books, transport)

Enhance Gender-Inclusive Systems -

1. Safe school environments (functional separate toilets, boundary walls)
2. Address gender stereotypes in curriculum and pedagogy
3. Female teachers as role models
4. Menstrual hygiene management facilities
5. Safety protocols and committees

Prevent and Address Dropouts -

Education continuity and re-entry pathways -

1. Early warning systems identifying at-risk children
2. Tracking out-of-school children
3. Open schools, bridge courses for re-entry
4. Flexible learning pathways

Facilitate Education for Migrants -

Mobile populations -

1. Portable school leaving certificates
2. Admission without documents during migration
3. Special training centers

4. Seasonal hostels

Strengthen Vocational Education and Skill Integration

Mainstream Vocational Education -

Aspirational and integrated pathway -

1. Not just for "non-academic" students
2. High-quality vocational courses from Grade 6
3. Integration with academic curriculum
4. National Skills Qualifications Framework (NSQF) alignment
5. Multiple entry-exit with credit accumulation

Build Market Linkages -

Enhance regional relevance -

1. Industry partnerships for apprenticeships
2. Local skill needs assessment
3. Entrepreneurship education
4. Career counselling and guidance

Integrate AI for Pedagogical Innovation

1. AI as supportive tool -

1. Enhances classroom instruction (not replaces teachers)
2. Enables differentiated learning (personalized learning paths)
3. Improves formative assessment (real-time feedback, adaptive testing)
4. Learning analytics for intervention

2. System readiness -

1. Teacher training on AI tools
2. Ethical AI use frameworks
3. Data privacy and security protocols
4. Infrastructure for AI deployment

6. Evolution of Education in India

Ancient Indian Education

1. Education (Vidya) viewed as sacred and holistic
2. Emphasis - Moral discipline, spiritual growth, humility, righteousness, lifelong learning
3. Gurukula system, oral traditions

Colonial Reorientation (1823-1947)

1. Elphinstone's Minutes (1823), Macaulay's Minute (1835)
2. Promoted English-medium, clerical education
3. Marginalized indigenous knowledge systems, vernacular learning
4. Created colonial administrative class

Post-Independence Reconstruction (Post-1947)

1. Focus - Rebuilding educational infrastructure, expanding access
2. Improving teacher quality
3. Fulfilling Article 45 - Free and compulsory education for children up to age 14

Early Commissions (1950s)

1. Secondary Education Commission (Mudaliar Commission, 1952)
2. Promoted - Science education, mother tongue instruction, vocational guidance, teacher training reforms

First Three Five-Year Plans (1951-1966)

1. Expansion - Universal primary education, adult literacy
2. Technical education, teacher training
3. SC/ST and girls' education focus

4. State-level education planning

Kothari Commission & First NPE (1964-1968)

1. Education Commission (Kothari Commission, 1964-66) shaped modern policy
2. National Policy on Education (1968)
3. Three-language formula, universal education
4. Science and teacher training focus

Expansion through National Policies (1968-1995)

NPE 1986/1992 -

1. Access, equity, infrastructure
2. Operation Blackboard (basic facilities)
3. Navodaya Vidyalaya's (talent nurturing)
4. DIETs, SCERTs (teacher training, research)
5. Decentralization, vocational education

Rights-based & Inclusive Phase (1995-2010)

1. Mid-Day Meal Scheme - Nutrition, enrolment incentive
2. Sarva Shiksha Abhiyan (SSA) - Universal elementary education
3. Education for All (EFA), Millennium Development Goals (MDGs)
4. Right to Education (RTE) Act, 2009 - Legal entitlement to free and compulsory education (6-14 years)

Secondary Education & Quality Focus (2009-2020)

1. Rastriya Madhyamik Shiksha Abhiyan (RMSA) - Secondary education expansion
2. Sustainable Development Goal 4 (SDG 4) - Quality equitable inclusive education
3. Samagra Shiksha - Integrated scheme (pre-school to senior secondary)
4. Focus - Quality, equity, learning outcomes

NEP 2020 and Transformational Reforms (2020 onwards)

National Education Policy 2020 -

1. 5+3+3+4 structure - Foundational (5 years), Preparatory (3), Middle (3), Secondary (4)
2. Foundational literacy and numeracy focus
3. Early Childhood Care and Education (ECCE)
4. Competency-based learning
5. Vocational education integration
6. Technology integration
7. Holistic, multidisciplinary development

7. Conclusion

India's school education system achieved significant progress in infrastructure (electricity, sanitation, digital), inclusion (girls, SC/ST enrolment), and learning recovery post-pandemic supported by NEP 2020, NIPUN Bharat, Samagra Shiksha. However, structural challenges persist - 51.7% secondary schools lack science labs, 7% schools single-teacher, pyramidal structure limiting access, equity gaps for marginalized groups. Sustained reforms ensuring structural continuity, universal foundational infrastructure, governance rationalization, equity promotion, vocational integration, and AI-enabled pedagogy essential for equitable, inclusive, future-ready education serving 24.69 crore students across world's largest school system.

Source - <https://www.thehindu.com/news/national/niti-aayog-flags-poor-student-retention-learning-outcomes-in-report/article70955943.ece>