

Unique perspectives on the Indian education sector

Monograph: August 2020

National Education Policy 2020

The Union Cabinet has approved the new National Education Policy (NEP), 2020 with an aim to introduce several changes in the Indian education system - from the school to college level. The framework provided by the policy suggests sweeping changes that are set to align the Indian education ecosystem with global standards and is based on guiding principles of (i) Equity & Inclusion (ii) Community Participation (iii) Use of Technology (iv) Conceptual Understanding (v) Critical Thinking (vi) Diversity & Local Context

The Policy provides for reforms at all levels of education from school to higher education. It seeks to increase the focus on early childhood care, reform the current exam system, strengthen teacher training, and restructure the education regulatory framework. It also seeks to set up a National Education Commission, increase public investment in education, strengthen the use of technology and increase focus on vocational and adult education, among others.

This monograph presents a comparative study between the prevalent state of education in the country and the reforms that the renewed policy shall bring.

About Eduvisors:

Eduvisors is a leading sector-focused consulting firm in Education in India. A part of Barry & Stone (B&S), a global network of independent consulting firms with 12 offices in 8 countries, Eduvisors is a pioneer amongst consulting firms in India with sole focus on the Education sector.

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National Education Policy 2020

Vision

The National Education Policy aims at building a global best education system rooted in Indian ethos, and aligned with the principles enunciated above, thereby transforming India into a global knowledge superpower.



Key Principles

- Flexibility for learners to choose their learning trajectories and programmes
- Multi-disciplinary and a holistic education for a multidisciplinary world
- Emphasis on conceptual understanding, creativity and critical thinking, ethics and human & Constitutional values
- Regular formative assessment
- Respect for diversity and respect for the local context in all curriculum, pedagogy, and policy
- Full equity and inclusion as the cornerstone of all educational decisions
- Resource efficiency without any compromise on equity and quality
- Considering teachers and faculty at the heart of the learning process
- 'Light but tight' oversight and regulatory system to ensure integrity and transparency
- **Substantial investment** in a strong, vibrant public education system as well as the encouragement and facilitation of true philanthropic private participation.



National Education Policy 2020

School Education

- **Early Education:**
 - ➤ National Curriculum Framework for ECCE for age group of 3 to 6 years. ECCE for all by 2030
 - > National Foundational Literacy and Numeracy Mission to achieve 100% foundational literacy
 - ➤ Setup of Bal Bhavans
- Infrastructure and Resources:
 - > Special Education Zones, School complex/clusters for resource sharing
 - ➤ Utilize unused capacity of schools as Samajik Chetna Kendras
- Curriculum & Pedagogy:
 - ➤ New 5+3+3+4 school curriculum with 12 years of schooling and 3 years of Anganwadi/ Pre-schooling
 - ➤ Holistic development of student using innovative pedagogies, vocational trainings and Holistic report card
- Assessments:
 - > National Assessment Center for Performance Assessment, Review and Analysis of Knowledge for Holistic development (PARAKH)
 - >State level exams in Grades 3, 5 and 8 in addition to Board exams in Grades 10 and 12
 - > Board exams to be modular, low stakes, based on conceptual knowledge and its application
- Holistic Development of Students:
 - ➤ Lok Vidya local artists as master instructors in schools
 - ➤ Holistic Report card use AI for identifying specific aptitude of child
 - > Vocational education integration from primary grades and a ten days (no bag days) internship with local trades/craftsperson for Grades 6 8
- Inclusivity:
 - ➤ Gender inclusion fund, KGBV's up-to class 12
 - ➤ Special provisions for gifted children
 - ➤ Adult education to focus on technology based solutions
- Teacher Education & Management:
 - ➤ Minimum qualification degree for teaching will be 4 year integrated B.Ed degree by 2030
 - National Professional Standards for Teachers (NPST) by 2022



National Education Policy 2020

Higher Education

- GER: Increase the current GER in higher education including vocational education from 26.3% (2018) to 50% by 2035.
- **Investment:** NEP envisions an increase in public investment in education to reach 6% of GDP and reach 20% of all public expenditure in 10-years.
- Value-based education: including developing humanistic, ethical, oral and universal human values of truth (satya), peace (shanti), non-violence (ahimsa), righteous conduct (dharma) and love (prem), citizenship values and life-skills, in personality development, teaching, learning and governance.
- Departments/Bodies:
 - > Higher Education Commission of India (HECI) single overarching umbrella body (excluding medical and legal education)
 - > NHERA, GEC, HEGC, NAA 4 independent HECI verticals
 - > SCERT for academics, State School Standards Authority to set minimum common standards for online self disclosure for all schools
 - > Public and private HEI's to be governed by the same set of norms
 - > Regulatory role of more than 17 professional councils to be changed to professional standard-setting bodies (PSSB's)
- **HEI's Restructuring:**
 - > Multidisciplinary Education and Research Universities (MERU's) to be set up with the aim to reach the global status
 - Each University, college and HEI cluster will aim to have 3000 or more students
 - > All institutions can have Open Distance Learning (ODL) and online programmes once accredited
 - >Multiple entry/exit option for HEI students. UG courses to be of 3 or 4 years (1 year research)
 - >M.Phil to be discontinued
- Special Education Zones (SEZs): Certain regions of the country with large populations from SEDGs will be declared SEZs
- **Teacher Education:** 4 year integrated B Ed degree to be minimum qualification degree for teaching by 2030. TEIs to move to multidisciplinary colleges and universities by 2030 and stringent action on non performing TEIs
- Internationalism: Encourage high performing universities to set up campuses in other countries and select foreign universities to operate in India

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I. Curriculum Framework and Pedagogy...(1/5)

New Academic Structure (5+3+3+4) & Pedagogy in NEP 2020

Educational Stage	Grades & Age	Pedagogy	
Secondary	Grade 9 to 12 (age 14 – 18 years)	Multidisciplinary study, greater critical thinking, Flexibility and student choice of subjects	
Middle School	Grade 6 to 8 (age 11 – 14 years)	Experiential learning in sciences, mathematics, arts, social sciences & humanities	
Preparatory	Grade 3 to 5 (age 8 – 11 years)	Play, discovery and activity based, Interactive classroom learning	
Foundation	Aangawadi, pre-school, preparatory (age 3 – 6 years) Grade 1 – 2 (age 6 – 8 years)	Multi level, play, activity based learning	

- > The current structure of school education is restructured on the basis of developmental needs of students.
 - Curriculum load in each subject should be reduced to its essential core content. This would make space for holistic, discussion-based, and analysis-based learning and shifting of focus from memorization to 'learning how to learn'
 - Increased flexibility and choice of subjects to study



I. Curriculum Framework and Pedagogy...(2/5)

Parameters	Current Scenario	National Education Policy 2020
Early Childhood education Framework	 Not offered at policy level 	 National Curricular & Pedagogical Framework for Early Childhood Education (NCPFECE) will be developed
Three Language Formula	 Already followed 	 Will now be followed early on, starting from Nursery
Foreign Language	 Not offered at policy level 	 To be offered to Secondary school as an elective (e.g. French, German, Spanish, Chinese, Korean, Thai, Japanese)
Special / Gifted Talent	 No special provisions 	 Teacher education will include methods for the recognition and fostering of such student talents and interests The NCERT and NCFTE will develop guidelines for the education of gifted children
Flexibility of Streams	 Cannot choose interdisciplinary subjects 	 Interdisciplinary subjects can be chosen together (eg. Physics & Music)
Mental & Physical Health & Well being		 Mandatory for students to acquire skills in Health & Nutrition, Physical Education, Fitness, Wellness and sports
Vocational Training & Internships		 To start from class 6 onwards To be allowed 10 bag-less days for vocational training

- > Multilingualism to foster as three language formula kept unaltered with focus on home language till class 5
 - Courses for foreign languages will be made available in interactive style and by integration of technology
- No hard separation between :
 - Curricular, extra-curricular, or co-curricular areas;
 - Arts and sciences;
 - Vocational & academic streams.



I. Curriculum Framework and Pedagogy...(3/5)

Parameters	Current Scenario	National Education Policy 2020
Sanskrit	 Currently offered as third language from grade 8 to 12 in various states 	 Will be offered at all levels of school & higher education as one of the optional language To be taught in foundational and middle school level in Simple Standard Sanskrit (SSS)
Classical Languages	 Courses not available 	 Courses having experiential and innovative approaches will be made available in all classical languages of India as options (possibly as online modules) Students will take at least two years of a classical language of India in Grades 6-12
Indian Sign language	Sign languages are taught locally	 Indian Sign Language (ISL) will be standardized across the country and National and State curriculum materials developed, for use by students with hearing impairment
Text Books	 Preparation of textbooks at the National level 	 Preparation of textbooks at the State level
National Curriculum Framework	-	 To be revised add local flavour to textbooks States to prepare their own curricula Free digital version of books on DIKSHA platform Textbook to contain only Essential core material
NCERT Books	-	 To be revised in accordance with National Curriculum Framework

- > In order to have a national curriculum which also allows local variations, the SCERTs in each State will be encouraged to prepare textbooks that contain:
 - a. NCERT core material:
 - b. Any NCERT supplementary material deemed of interest to the State;
 - c. Any other material and edits prepared by SCERT or local districts that add local relevance and flavor as needed or desired.
- > NCERT textbooks will be revised in accordance with the revised National Curriculum Framework
- > Every student in the country will take a fun course on "The Languages of India" sometime in Grades 6-8. It would give a sense of unity and be a conversation piece their entire lives as they meet people from other parts of India



I. Curriculum Framework and Pedagogy...(4/5)

Current

1. Curriculum & Pedagogical Structure

- 10+2 Structure
 - Primary (Grade 1 to 5)
 - > Upper Primary (Grade 6 to 8)
 - Secondary (Grade 9 to 10)
 - ➤ Higher Secondary (Grade 11 to 12)

2. Content Load and Learning

Focus on textbook and rote learning

National Education Policy 2020

- 5+3+3+4 design
 - > Foundational Stage (Nursery to Grade 2)
 - Preparatory Stage (Grade 3 to 5)
 - Middle Stage (Grade 6 to 8)
 - Secondary Stage (Grade 9 to 12)

- Focus on hands-on, experiential and analytical learning.
- While there will be essential common subjects for all, no hard separation between curricular and co-curricular or extra-curricular areas.

Implication

- New structure will help students acquire skills as structure based on cognitive and socio-emotional developmental stages
- 5+3+3+4 structure reduces burden of board exams on students and allows board level examinations at various levels which can be used for course correction and student improvement

The curriculum is a right step towards scientific temper, ethical reasoning, ancient Indian knowledge systems,, social responsibility, digital literacy and knowledge of critical issues local communities face.



I. Curriculum Framework and Pedagogy...(5/5)

Current

3. Three Language Formula

- The Three –Language Formula given by Kothari Education Commission is followed.
- According to this formula, every secondary school student has to study three languages:
 - 1. Mother tongue or the regional language.
 - 2. The official language of the union and
 - 3. A modern Indian or foreign language
- It is known very well that all the states of the south India follow _Three -language Formula' expect Tamil Nadu at present.
 - It follows two language formula with Tamil and English only.

National Education Policy 2020

- The Three Language Formula continues.
 State, School and students to decide on medium of instruction
- However, there will be flexibility in the choice of languages, as long as students can show proficiency in any three.
- Students whose medium of instruction is regional language will learn science and math bilingually both in regional language as well as in English from class 6 onwards.
- There will be a major effort from both the

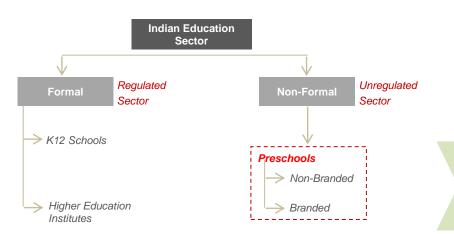
- The status of a language often depends on the status of the country or region where its speakers live
- Central and State governments will have to invest in developing curriculum in all languages and training large numbers of language teachers in all regional languages around the country, and in particular all Schedule 8 languages
- Textbooks and curriculum to have a local flavor
- High quality books will be available in all languages



II. Early Childhood Care & Education...(1/5)

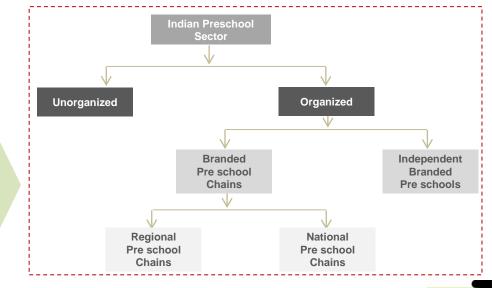
Overview:

- Pre school market comprises organized and unorganized players
- Pre school sector in India is dominated by unorganized neighborhood preschools
- The total market size of preschools is of US 3.27 billion
- This business is expanding at a 23% CAGR.



- Non-formal education sector is not regulated as of now in India
- In Pre School segment, there are ~38,000 preschools in India.
- The major share is of unorganized preschools ~85%

#	Particulars	Organized Pre schools	Unorganized Pre schools
1	Operations	 Operated by corporate pre school chains or formal school chains 	 Set up and maintained by an individuals with the basic availability of land and finances
2	Curriculum	 Standardized and well structured curriculum is followed 	No well defined curriculum





II. Early Childhood Care & Education...(2/5)

Parameters	Current Scenario	National Education Policy 2020
Inclusion in National Education Framework	 Currently ECCE is unregulated 	 ECCE will be formalized into a national education framework Integrated primary school framework from age 3 to 8
Right To Education Coverage	 RTE covers Class I to Class 8 	 RTE from preschool (age 3 onwards) till Class 12
Integrated Aanganwadi	 Anganwadis cover more children in age group of 2–4 years than 4-6 years. Preschool covers children in age group of 3 – 6 years 	 Aanganwadis & preschools to be linked to local primary schools and School Clusters will be developed Aanganwadis to be co-located with existing primary schools
Health & Education	 Focus on Health and Nutrition in Anganwadis 	 Focus to remain on Health and Nutrition along with basic literacy and numeracy with aim to develop school ready children A 3 month play based school preparation module for all grade 1 students to be developed by NCERT
Learning Pedagogy	Rote learning, formal teaching in preschools	 Focus on play, discovery based and experiential learning
Curriculum	 Women & Child Development Ministry oversees Aanganwadi system 	 National Curricular and pedagogical framework for early Childhood Education (NCPFECE) will be drafted by NCERT
Multi faceted Framework	 No standard framework across nation 	Framework to comprise of alphabets, languages, counting, colors, shapes, indoor and outdoor play, puzzles and logical thinking, problem solving, drawing, painting and other visual arts, craft, drama and puppetry, music and movement
Regulatory Body	 No regulatory body 	■ To be set up as recommended by National ECCE Policy (2013)

II. Early Childhood Care & Education...(3/5)

Parameters Current Scenario		National Education Policy 2020
Foundational Literacy & Numeracy	 Currently ECCE is unregulated 	 Target to achieve 100% Foundational Literacy and Numeracy with implementing ECCE framework and National Mission by 2025
Medium of Instruction	 Stipulated languages in unregulated preschools, regulated primary schools are majorly English, Hindi and regional languages 	 Medium of instruction till grade 5 will be regional / local language The local language will be continued to be taught later Teachers will be encouraged to use bilingual approach
Book Promotion	 Currently being carried out under various schemes by central and state level education departments 	 National Book Promotion Policy will be formulated and public and private school libraries will be expanded
360 degree Holistic Progress Card	 Progress cards measure only outcome of exams 	 Students will be Assessed with 360 degree Holistic Progress Card with self assessment, peer assessment and teacher assessment, Tracking Student Progress for achieving learning outcomes

- Expansion of Right to Education to ensure higher enrolment by curtailing drop out rates, but at the same time it will put cost burden on institutes to expand infrastructure and make necessary services available to RTE students
- Integrated Aanganwadis to help ensuring foundational literacy and numeracy skills along with focus on health and nutrition
- The current structure of school education must be restructured on the basis of the development needs of students.
- Holistic Progress card will help understand teachers and parents about improvement areas of student better and keep track on development and plugging loopholes before it is too late



II. Early Childhood Care & Education...(4/5)

1. Anganwadis and private pre-schools

Current

- Anganwadis are under the purview of Ministry of Women and Child Development.
- Most Anganwadis have remained relatively light on the educational aspects of ECCE [or Early Childhood Care and Education].
- Anganwadis are currently quite deficient in supplies and infrastructure for education.
- They have more children in the 2-4 year age range and fewer in the educationally critical 4-6 year age range.

National Education Policy 2020

- All aspects of early childhood education will be overseen & regulated under the Human Resource Development Ministry, just as health services in Anganwadis lie with the Health Ministry.
- Strengthening and expansion of Anganwadi system to include a robust education component
 - One worker at each Anganwadi trained in techniques of cognitive stimulation for infants & of play-based & multilevel education for 3-6 yr olds.
 - Each Anganwadi will be provided with excellent educational material developed by NCERT.
 - Additional quality centres will be built around the country.
- State governments will prepare cadres of professionally qualified educators for early childhood education.
- Educators will be given Continuous Professional Development

- Indian kids will soon enter the formal education system at the age of three.
- Children will be equipped with basic literacy and numeracy skills and will become school ready
- Professionalization of high quality teachers for early childhood education.
- Co-locating Anganwadis with existing primary schools will provide further benefits to parents and children through.
 Comprehensive services provided by the Anganwadi
- Curricular & pedagogical framework by NCERT intended for parents as well as Anganwadi teachers/workers will lead to appropriate cognitive stimulation of infants and young children



II. Early Childhood Care & Education...(5/5)

2. Right To Education

Current

RTE covers Class I to Class 8

National Education Policy 2020

 The Right to Education Act will be reviewed and expanded as per National Education Policy 2020 to cover the three years of preschool before Class 1 till Class 12 to provide

- Implementing RTE from preschool to higher secondary education will help in curtailing dropout rates and ensuring universal access to education at all levels
- Additional costs will come in the form of teacher recruitment and training, infrastructure and learning materials
- RTE from preschool would require all private schools (except the minority institutions) to reserve 25% of seats in preprimary schools for the poor and other categories of children (to be reimbursed by the state as part of the public-private partnership plan).
 - Welcoming for students from economically weaker sections
 - > Financial burden for private schools



III. School Exam Reforms...(1/2)

Parameters	Current Scenario	National Education Policy 2020
Board Exams	■ Board exams in Grade X & XII	 State Census Examinations in classes III, V and VIII Board Exams in Grade X & XII to continue, but Importance of board exams will be reduced Modular and semester-wise board exams will be developed
Range of Subjects	 Choice of only a few subjects 	 Choice of wide range of subjects
Choice of Semester	 No Choice of Semester 	 Choice of semester to take board exams
Type of Exams	 Subjective type exams for Grade X & XII Board 	 Viable models to be explored annual / semester / modular exams Two parts exams – objective type and subjective type
Assessment	 State school examinations at Secondary (10th) & Senior Secondary (12th) 	 State School Examinations in classes 3, 5 & 8 to continuously track students' progress National Assessment Center PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development) will be developed
National Testing Agency (NTA)		 NTA to develop a Common Aptitude Test for university admissions. Ensuring validity and reliability of its assessments and create credibility of its tests for admissions to universities and colleges

- > Parents would be able to monitor & control performance of their children throughout from Nursery to Class 12
- > Teachers will become more accountable for their academic results
- \succ NTA instituted processes would ease admissions into Higher education programs. For example:
 - Directly sending scores to the institution.
 - Connect directly to the bodies offering scholarships to students.



III. School Exam Reforms...(2/2)

Current

Board Exams

Board exams in Grade X & XII

National Education Policy 2020

- "State census examinations" in Grade 3, 5 and 8
- Board examinations between Grade 9 and 12 will test core capacities, basic learning skills and analysis.
- Students will be allowed to take board examinations up to twice a year.
- When computerized adaptive testing becomes widely available, multiple attempts will be allowed.
- Board examinations will be allowed in at least 24 subjects (three per semester).

- In the present system everything depends on the board exam so it is considered a "high stakes" feature and hence adds to the stress of children.
- The suggested frequency is three board exams in a semester for eight semesters.
- This will in fact increase the load far more.
- Reform will eliminate the need for undertaking coaching for 'cracking' the examination
- Exams will test primarily core capacities rather than months of coaching and memorization



IV. School Infrastructure...(1/2)

Parameters	Current Scenario	National Education Policy 2020
Improving School Infrastructure	 No concept of school complex 	 Multiple primary and middle public schools to be brought together to form a school complex A complex will consist of one secondary school (classes nine to twelve) and all the public schools in its neighborhood (pre primary-class eight) The school complexes will also include Anganwadis, vocational education facilities, and an adult education centre. Each school complex will be a semi-autonomous unit providing integrated education from early childhood to secondary education.
Aanganwadi Infrastructure	 Currently assessed by integrated child development services scheme 	 To be monitered by MHRD (now MoE) Anganwadi Centres will be strengthened with high quality infrastructure, play equipment Every Anganwadi must have a well-ventilated, well-designed, child-friendly and well-constructed building with an enriched learning environment. Funds for this programme will be provided by the Central and State governments.
Minimal set of Infrastructure standards		 State School Standards Authority (SSSA) will establish a minimal set of standards based on basic parameters (namely, safety, security, basic infrastructure, which shall be followed by all schools.

- > This will ensure that resources sharing is easier across a school complex. Students will have better access resources and support from school complex at their local school
- > Sharing of teachers will also be a burden on teaching capacity of teachers who may demand extra income for overtime, travel and increased load
- > Mandatory Infrastructure standards will be key enabler to bring all schools at par in terms of infrastructure and allied services



Current

School Complex

- No concept of school complex
- No concept of peer tutor
- No concept of instructional aides

National Education Policy 2020

- Public schools will be organized into organizational and administrative units called school clusters / complexes which will have one secondary school (covering Grades 9-12) and all other schools in its neighborhood (8 10 miles) that offer education from pre-primary to Grade 8
- School complexes will be semiautonomous units with the administrative, financial and academic authority to oversee the development of all schools within the complex and will function as the lowest rung of school education governance
- All schools within the complex will be able to share a common pool of resources such as libraries, science laboratories and equipment, computer labs, sports facilities and equipment, as well as human resources
- Mandatory Infrastructure standards

- School complexes to enable economically suboptimal small sized schools to maintain good quality, in terms of deployment of critical physical resources including teachers & provide better services in terms of student support, enrolment, support to children with disabilities, special talents & special subjects through the sharing of social workers and counselors
- Sharing of resources will reduce financial burden on individual schools. However, sharing of resources will be successful only if the school works in double shifts. Otherwise, sharing of resources would be a hassle considering transportation time.
- Implementation school complexes on ground will be a operational challenge
- Min. set of Infra standards too will bring all school at par in terms of basic amenities



V. Teacher Management...(1/3)

Parameters	Current Scenario	National Education Policy 2020
Teacher Education	B.Ed Colleges	 Teacher education will gradually be moved into multidisciplinary colleges and universities. All stand-alone TEIs will be required to convert to multidisciplinary institutions by 2025 Special shorter local teacher education programs will also be available at BITEs, DIETs, or at school complexes themselves, so that eminent local persons can be hired to teach at schools or school complexes as 'specialized instructors'
Qualification	■ B. Ed. (3 year)	 Minimum qualification for teacher recruitment By 2030: Four year integrated Bachelor's degree in Education or Two year B. Ed with an existing Bachelor's degree or One year B. Ed with an existing Master's degree in a specialty M. Phil program to be discontinued
Teacher Recruitment & Planning		 A comprehensive teacher-requirement planning exercise across state & nation to assess expected teacher and subject vacancies over the next two decades Teacher Eligibility Tests (TETs) score will be taken into account for recruitment TET's to be extended to cover teachers across all stages (Foundational, Preparatory, Middle and Secondary) of school education The practice of hiring new `para-teachers' (teachers on short-term contracts) to be phased out

- > Integrating B.Ed. colleges with HEI's by 2030 will help teachers to horn the professional skills required and will also improve quality
- > B.Ed. Program to become more profound and inclusive of time proven approach & pedagogy's
- > Lateral hiring of teachers will be become easier as eminent local persons can be on-boarded after successfully coached for modular courses. Person from other stream in mid-career can also choose to become teacher after doing short term B.Ed. courses



V. Teacher Management...(2/3)

Parameters	Current Scenario	National Education Policy 2020
Deployment & Transfers	Teacher deployed in one schoolExcessive teacher transfers	 Teachers should be deployed with a particular school complex for longer term (at least 5 to 7 years) Online computerized system for teacher transfers to ensure transparency
National Professional Standards for Teachers (NPST)		 A common guiding set of National Professional Standards for Teachers (NPST) will be developed by 2022, by the National Council for Teacher Education in consultation with NCERT. To be reviewed every 10 years NPST to comprise standards for performance appraisal for each rank, that would be carried out on a periodic basis Promotions and salary increases will not occur based on the length of tenure or seniority, but only on the basis of such appraisal
Training	 Voluntary specializations available through private outlets 	 Certificate courses to develop specialization or generalist teacher during preservice preparation with synergy between NCTE & RCI Online training using technology platforms like SWAYAM /DIKSHA
Continuous Professional Development	 No professional development mandate 	 Online development platform Minimum 50 hours of continuous professional development
Non Teaching Activities	 Census surveys, cooking mid-day meals, vaccination campaigns 	 Teachers will not participate in non-teaching activities

- > Long term deployment will ensure developing relationship with local community and teacher as a role model to children not to change frequently
- > Teachers not participating in non teaching activities will improve their focus on classroom teaching
- > Appraisal mechanism will bring in accountability and professionalism in teacher and help to improve quality of classroom delivery



V. Teacher Management...(3/3)

1. Teacher Management

Current

- Teacher deployed in one school for short term
- Govt. teachers participate in non teaching work such as census surveys, cooking midday meals or participating in vaccination campaigns
- Teacher qualification is B. Ed. (three year) program taught in B.Ed. colleges

National Education Policy 2020

- Teachers should be deployed with a particular school complex for at least five to seven years.
- Teachers will not participate in non-teaching activities during school hours
- Teachers doing outstanding work will be recognized, promoted and given salary raises.
- CPD mandatory for 50 hours
- Incentives for posting in local & rural areas
- Periodic performance appraisal will be done according to NPST to maintain accountability.
- All teachers in future earn a mandatory fouryear integrated bachelor's degree in education before they sit for a recruitment test such as the Teacher Eligibility Test (TET).

- Policy provides better working environment for teachers by sparing them of nonteaching government work
- Teacher absenteeism is a menace. The policy provides no ground reality-based monitoring mechanism for teachers.
- Critics deem the recruitment process inadequate.
- Flexible modes and alternative routes to acquiring qualified teacher status, especially for mid-career professionals who want to join the teaching force by 2 year and 1 year B.Ed courses.
- The status of the District Institutes for Education and Training (DIET) has not been made clear.



V. Governance, Regulation & Accreditation...(1/2)

Parameters	Current Scenario	National Education Policy 2020
School Management	 At local school level 	 School Complex Management Committees (SCMC) will be set up for more robust and improved governance, monitoring and initiatives by local stakeholders
Policy making & operations of schools	 Dept. of School Education an apex body in state government which handles policy making, overall monitoring, & educational operations of public schools 	 DSE will be responsible for overall monitoring and policymaking for continual improvement of the system;, it will not be involved with the provision, operation & regulation of schools
Regulatory Standards Authority	None	 State School Standards Authority (SSSA) will be created. SSSA will establish a minimal set of standards based on basic parameters (namely, safety, security, basic infrastructure, number of teachers across subjects and grades, probity, and sound processes of governance), which shall be followed by all schools. The framework for these parameters will be created by the SCERT
Establishing private schools	 Department of School Education 	New private schools will have to obtain a License to Start a School (LSS) from SSSA, on the basis of a transparent self-declaration on the requirements and criteria set up by the SSSA.

- All relevant information like school infrastructure, teacher resources, including their qualifications, school results in a public examinations, fees, etc. will be put in the public domain for the parents to make informed choices and thereby become the de facto regulator.
- > NEP 2020 guidelines have reduced role of DSE to decentralize concentration of power and reduce harmful conflicts of interests
- > SSSA will be develop requirements and criteria for establishment of private schools
- > Role of DSE on operations of school is not clearly mentioned in the NEP 2020 document



V. Governance, Regulation & Accreditation...(1/2)

Parameters	Current Scenario	National Education Policy 2020
Academic matters	DSE overlooks all academic matters	 Academic matters, including academic standards and curricula in the State, will be led by the SCERT (with close consultation and collaboration with the NCERT) The SCERT will develop a School Quality Assessment and Accreditation Framework (SQAAF) SCERT to be reinvigorated as an institution along with the other academic support structures such as the BRCs, BITEs, and DIETs
certification of competencies	 Secondary & senior secondary boards of state 	 Certification of competencies of students at the school-leaving stage will be handled by the Boards of Certification/Examination in each State
Efforts on stopping commercialisation of education	 No efforts have been made in this regard 	 Public disclosure on the school website and on the SSSA website - for both public and private schools - would include (at the very least) information on the numbers of classrooms, students, and teachers, subjects taught, any fees Schools must held to similar disclosure standards as for Section 8 companies
Health check up of system	 No such system exists 	 National Assessment Centre for School Education (PARAKH) to carry out periodic a sample-based National Achievement Survey (NAS)

- SCERT to become more enabled organization with support organizations like BRCs, BITEs and DIETs which will work in sync with NCERT to handle all academic related matters
- There is no clear guideline on proposed School disclosure system in NEP 2020
- Periodic NAS to help assess improvement areas and effectively implement strategy



V. Governance, Regulation & Accreditation...(2/2)

2. Regulation of Schools

Current

- Directorate of School Education (DSE) handles educational operations, policy and overall monitoring
- Public schools have School management Committee for governance
- Currently Block Resource Centre (BRC), Block Institutes of Teacher Education (BITE), District Institute of Education & Training (DIET) implement teacher education under state government departments
- Role of SCERT is limited

National Education Policy 2020

- Directorate of School Education (DSE)
 will be responsible for overall monitoring
 and policymaking for continual improvement
 of the system; however, it will not be
 involved with the provision and operation of
 schools or with the regulation of the
 system..
- An independent statewide regulatory standrds body called the State School Standards Authority (SSSA) will be created for each state.
- Board of Certification and Examination in each state will handle certification of competencies of students at the schoolleaving stage
- SCERT to handle all academic matters
- Schools to make similar disclosure that os section 8 companies

- Small schools present a systemic challenge for governance and management, SCMC will help in better governance
- Decentralizing powers of DSE to help in reducing conflicts of interest and making DSE focus on policy making and monitoring
- The toughest challenge in implementation will be the inadequate and ill-prepared people infrastructure and change management process
- The biggest investment of time and resources will need to be in capacitybuilding and getting the support of the people on the ground – district-and blocklevel officials and teachers – along with rigorous monitoring.



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Regulatory Structure and Accreditation...(1/2)

Parameters	Current Scenario	National Education Policy 2020
		 Higher Education Commission of India (HECI) - Single overarching umbrella body excluding medical and legal education
	 Multiple regulators (UGC, Bar Council of India, AICTE, UGC, NAAC) 	 HECI to have four independent verticals –
Regulatory Authority		For Regulation - National Higher Education Regulatory Authority (NHERA)
		➤ Standard Setting - General Education Council (GEC)
		➤ Funding - Higher Education Grants Council (HEGC)
		➤ Accreditation - National Accreditation Authority (NAA)

- The Committee noted that the current higher education system has been too heavy-handed which has lead to
 - i. heavy concentrations of power within a few bodies,
 - ii. conflicts of interest among these bodies, and a resulting lack of accountability.
- Therefore, it proposes setting up Higher Education Commission of India (HECI) as a single overarching umbrella body the for entire higher education, excluding medical and legal education.
- The first vertical of HECI will be the National Higher Education Regulatory Council (NHERC). It will function as a common, single point regulator for the higher education sector including teacher education but excluding medical and legal education.
- Though there will be a single body, there will be distinct and independent bodies which will each assume separate functions of accreditation (NAC), funding (HEGC), and academic standard setting (GEC).
- These bodies will replace autonomous bodies like University Grants Commission (UGC), All India Council of Technical Education (AICTE), and National Assessment and Accreditation Council (NAAC).
- Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.



Regulatory Structure and Accreditation...(2/2)

Current

- Multiple regulatory bodies such as UGC, Bar Council of India, AICTE, Medical Council of India (MCI).
- National Assessment and Accreditation Council (NAAC) is an accreditation body under UGC
- UGC responsible for coordination, determination and maintenance of standards of higher education.

NEP 2020

- Higher Education Commission of India (HECI)
 will be set up as a single overarching umbrella
 body the for entire higher education, excluding
 medical and legal education.
- The National Higher Education Regulatory
 Authority will be the sole regulatory authority to
 regulate in a 'light but tight' and facilitative manner.
- A General Education Council will be constituted to formulate the national higher education qualifications framework, outlining learning outcomes required for all certifications.
- The Higher Education Grants Commission, the new form of the University Grants Council, will be responsible for disbursing grants and fellowships to all institutions.
- An independent ecosystem of accrediting institutions supervised and overseen by a 'metaaccrediting' body, named National Accreditation Authority (NAA).
- In the long run, accreditation will become a binary process, as per the extant global practice.
- The regulatory role of more than 17 professional councils will be changed to professional standardsetting bodies (PSSB's).

- The NEP aims to reduced concentrated power given to few bodies which had lead to conflicts of interest among these bodies, and a resulting lack of accountability in past.
- NEP identifies corruption as an "important element that distorts governance of education" but offers no concrete mechanism to deal with it.
- The proposal to regulate public and private HEI'S on the same criteria and benchmarks has earned praise.



Establishment and Restructuring of New Higher Education Institutions...(1/2)

Parameters	Current Scenario	National Education Policy 2020	
Higher Education Institutions (HEIs)	 fragmented higher educational ecosystem, with more than 50,000 HEIs, a large proportion of which offer only a single programme and have fewer than 100 students 	 To be transformed into large, well resourced, vibrant multidisciplinary institutions. Each University, college and HEI cluster will aim to have 3000 or more students 	
Structure of HEI	 Two Types Research & Teaching (M.Phil, PhD) Colleges (Undergraduate) 	 Three Types: Research-intensive University Teaching-intensive University Autonomous Degree-granting College 	
Type of Universities	 'deemed to be university', 'affiliating university', 'affiliating technical university', 'unitary university' 	• 'University'	

- Setting up of new quality HEIs will be made easier. HEIs performing exceptionally well will be helped by Central and State governments.
- Public Private Partnership (PPP) models will be promoted in higher education.
- Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges.
- Every college would develop into either an Autonomous degree-granting College, or a constituent college of a university.
- All existing stand-alone professional educational institutions will have to become multi-disciplinary institutions by 2030. No new stand-alone institutions will be permitted except in specific fields as per national needs.
- Model public universities for holistic education, at par with IITs, IIMs, etc., called MERUs (Multidisciplinary Education and Research Universities) will be set up and will aim to reach the global status of, e.g., the Ivy League Universities in the U.S.
- All newly constituted higher educational institutions must receive accreditation as mandated by NHERA within five years of being established.
- HEIs to have a Board of Governors (BoG) consisting of a group of highly qualified, competent, and dedicated individuals:
 - BoG shall be responsible and accountable for the outcomes of the HEI and meeting regulatory guidelines mandated by NHERA.
 - The BoG of each HEI will anchor preparation and implementation of a strategic plan of action namely: Institutional Development Plan (IDP).



Establishment and Restructuring of New Higher Education Institutions...(2/2)

Current

- Establishment of a new HEI is through an Act by Parliament or State Legislature
- There are two types of universities in India:
 - Research & Teaching (M.Phil, PhD)
 - Colleges (Undergraduate)
- Complex nomenclature of HEIs as 'deemed to be university', 'affiliating university', 'affiliating technical university', 'unitary university' shall

NEP 2020

- By 2030, all higher education institutions will develop into one of three types Researchintensive University, Teaching-intensive University and Autonomous Degree-granting College.
- There will be no single discipline universities; even professional institutions will have to be multidisciplinary.
- Higher education institutes will be able to grant their own degrees; colleges will no longer be affiliated to universities.
- The NEP aims to move towards large multidisciplinary HEIs, by consolidating and restructuring existing institutions and building new ones - including establishing new world-class model institutions (Model Multidisciplinary Colleges) across the country, and also establishing at least one large high quality multidisciplinary HEI in (or close to) every district.
- Admission to all undergraduate programmes at public universities and colleges will be through a computer-based, common modular entrance examination, conducted by the National Testing Agency, held multiple times a year in various languages.

- Multidisciplinary approach will prepare Indian students for the job markets of the future.
- In a world where jobs can change drastically or disappear altogether because of technological advances such as Artificial Intelligence, integrating vocational education and providing multidisciplinary exposure is the best way to prepare students to use their full human capacities.
- Ensuring one quality university in every district in India fulfills the fundamental goal of the NEP i.e. access to quality education in India.
 - However, execution on the ground is what will determine the validity of the exercise.
 - What is needed is not a policy so much as a clear-cut and well-defined action plan.



Scholarship and Distance Learning...(1/2)

Parameters	Current Scenario	National Education Policy 2020	
Student Scholarship		 The National Scholarship Portal will be expanded to support, foster, and track the progress of students receiving scholarships. 	
Open and Distance Learning (ODL)	 No special accreditation required for online courses offered by HEI 	 All type of institutions can offer ODL and online programmes after getting accredited to do so 	

- Through the scholarship portal, efforts will be made to incentivize the merit of students belonging to SC, ST, OBC, and other SEDGs.
- Private HEIs will be encouraged to offer larger numbers of scholarships to their students.
- A dedicated unit for the purpose of orchestrating the building of digital infrastructure, digital content and capacity building will be created.
- All types of institutions will have the option to run Open Distance Learning (ODL) and online programmes, provided they are specifically accredited to do so, to enhance their offerings, improve access, increase GER, and provide increased opportunities for lifelong learning.
- All ODL programmes leading to any diploma or degree will be of standards and quality equivalent to the highest quality programmes run by the HEIs
 on their campuses.
- A comprehensive set of recommendations will be prepared for promoting online education consequent to the recent rise in epidemics and pandemics in order to ensure preparedness.



Scholarship and Distance Learning...(2/2)

Current

 No special accreditation for HEI's to do ODL or online learning

NEP 2020

- NEP states that Private HEIs will have to offer scholarships ranging from 100% to 25% for at least half of their students.
- All types of institutions will have the option to run Open Distance Learning (ODL) and online programmes, provided they are specifically accredited to do so, to enhance their offerings, improve access, increase GER, and provide increased opportunities for lifelong learning.
- All ODL programmes leading to any diploma or degree will be of standards and quality equivalent to the highest quality programmes run by the HEIs on their campuses.

- It will be a huge burden on Private HEI's to offer scholarships to half of its students. Especially new HEI's might find it very hard to survive or even enter the education sector.
- The NEP is somewhat naïve on assuming that private educational enterprises will be driven by non-profit motives.
- Accreditation to ensure that online and distance programmes are of high quality is considered as a good step to increase GER.



Establishing a National Research Foundation...(1/2)

Parameters	Current Scenario	National Education Policy 2020
Establishment	 No dedicated Foundation 	National Research Foundation

- The Committee observed that the total investment on research and innovation in India has declined from 0.84% of GDP in 2008 to 0.69% in 2014.
- The NEP recommends establishing National Research Foundation which will be created as an apex body for fostering a strong research culture and building research capacity across higher education in India.
- NRF will be an autonomous body, for funding, mentoring and building the capacity for quality research.
- The NRF will competitively fund research in all disciplines across the academic landscape: Science, Technology, Social Sciences, and Arts and Humanities.
- The primary activities of the NRF will be to
 - a) fund competitive peer-reviewed grant proposals of all types and across all disciplines;
 - b) seed, grow, and facilitate research at academic institutions, particularly at universities and colleges where research is currently in a nascent stage, through mentoring of such institutions
 - act as a liaison between researchers and relevant branches of government as well as industry,
 - d) recognize outstanding research and progress achieved via NRF funding/mentoring across subjects, through prizes and special seminars recognizing the work of the researchers.

	India	United States	China	Israel	South Korea
Spending on Research & Innovation (% GDP)	0.69	2.8	2.1	4.3	4.2



Establishing a National Research Foundation...(2/2)

Current

 No dedicated National Research Foundation

NEP 2020

- A National Research Foundation (NRF) will be set up to grant competitive funding to outstanding research proposals.
- It will also aim to seed, grow and facilitate research at academic institutions where research is currently at a nascent stage.

- The NEP has been criticized on a few counts. For example Vivek Monteiro pointed out the undesirability of a central authority, the proposed Rashtriya Shiksha Aayog (RSA), chaired by the prime minister to oversee all of education.
- Political interference has been the bane of the university system and the national education setup cannot be beholden to the prime minister of the day but must function with independence and integrity.
- A deep-seated problem with Indian school education for decades is that the government has traditionally been both the regulator and administrator and not an enabler of innovation, quality and standards.



Liberal Approach and Optimal Learning Environment...(1/2)

Parameters	Current Scenario	National Education Policy 2020
UG Courses	 Not interdisciplinary (Arts, Commerce, Sciences, Technology) 	Multidisciplinary coursesUG education can be of 3 or 4 years
		 Multiple Entry / Exit to be allowed with appropriate certification Flexibility to offer different designs of Masters programmes, a) there may be a two-year programme with the second year devoted entirely to research for those who have completed the three-year Bachelors programme;
Flexibility		 for students completing a four-year Bachelors programme with Research there could be a one-year Masters programme and
		 there may be an integrated five-year Bachelor's/Masters programme. Undertaking a PhD shall require either a Master's degree or a 4-year Bachelor's degree with Research.
		d) The M.Phil. programme shall be discontinued.

- An Academic Bank of Credit is to be established for digitally storing academic credits earned from different HEIs so that these can be transferred and counted towards final degree earned.
- UG education will have multiple exit options. For example, Certificate after 1 year, Advanced Diploma after 2 years, Bachelor's Degree after 3 years and Bachelor's with Research after 4 years.
- Pedagogy for courses will strive for significantly less rote learning and an increased emphasis on communication, discussion, debate, research, and opportunities for cross-disciplinary and interdisciplinary thinking.
- Departments in Languages, Literature, Music, Philosophy, Indology, Art, Dance, Theatre, Education, Mathematics, Statistics, Pure and Applied Sciences, Sociology, Economics, Sports, and other such subjects needed for a multidisciplinary, stimulating Indian education and environment will be established and strengthened at HEIs across the country.

Liberal Approach and Optimal Learning Environment...(2/2)

Current

UG Courses in single-discipline silos

NEP 2020

- Multidisciplinary UG Courses
- Students will be allowed to choose subject combinations across streams, including professional and vocational options – for instance, a student would be able to opt for physics along with history
- UG courses can be of 3 or 4 years with multiple exit options. For example, Certificate after 1 year, Advanced Diploma after 2 years, Bachelor's Degree after 3 years and Bachelor's with Research after 4 years.
- An Academic Bank of Credit is to be established for digitally storing academic credits earned from different HEIs so that these can be transferred and counted towards final degree earned.
- States will have the flexibility to decide on the medium of instruction and would be encouraged to conduct more academic programmes in Indian languages or mother-tongue.

Implication

- Multiple exit option will be beneficial for students who drop out of college due to certain reasons and end up getting no certification for the amount of time they invested in their UG.
- Academic Bank of Credit will help students mobility across the education system.



Teacher Education...(1/2)

Parameters	Current Scenario	National Education Policy 2020
Minimum Qualification	2 year B.Ed programme.	 By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. Degree.
Mentoring		 National Mission for Mentoring will be established with a large pool of outstanding senior/retired faculty.
Accountability of TEI		 All TEIs will be held accountable to adherence to the basic criteria for approval of their programs
Faculty in Dept. of Education (DoE)		 Faculties in DoE shall have not only PhDs in education but also those without PhD but having outstanding teaching experience/field experience
Credit based courses to PhD entrants		 All fresh PhD entrants, irrespective of discipline, will be required to take credit-based courses in teaching/education/pedagogy related to their chosen PhD subject during their doctoral training period

Key Observations:

- National Mission for Mentoring will enable vast pool of knowledge from senior faculty to be created and shared among mentees
- All TEIs will be held accountable to adherence to the basic criteria for approval of their programs; after giving one year for remedy, if any breaches are found, they will be shut down if the breaches are not remedied.
- Teacher education will include grounding in sociology, history, science, psychology, early childhood education, foundational literacy and numeracy, knowledge of India and its values/ethos/art/traditions, and more.
- Mandatory credit-based courses in teaching/education/pedagogy to PhD students will ensure, candidates grasps fundamentals of Teaching and Pedagogy before entering into teaching profession



Current

B.Ed is minimum qualification to become a teacher

NEP 2020

- By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. Degree.
- National Mission for Mentoring will be established, with a large pool of outstanding senior/retired faculty.
- Faculty not delivering on basic norms will be held accountable. Stringent action will be taken against substandard stand-alone Teacher Education Institutions (TEIs).
- Admission to pre-service teacher preparation programmes shall be through a single nationwide entrance examination to be conducted by the National Testing Agency
- All fresh PhD entrants, irrespective of discipline, will be required to take credit-based courses in teaching/education/pedagogy related to their chosen PhD subject during their doctoral training period.

Implication

- A reimagined teacher education policy needs to be far more liberal, without dilution of quality. And university based multidisciplinary colleges of teacher education is one such avenue.
- Making teaching compulsory for Ph.D students is a good way to ensure that more capable personnel choose teaching as profession however, this will increase burden on the Ph.D. students.
- 4 year integrated B. Ed. Programme: Teachers can be given liberal education for two years followed by areas in which they will be teaching. They will be able to get comprehensive knowledge, learn pedagogy and even communication skills, and make sure they can frame curriculum.



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Vocational Education

The lack of planning and the poor delivery of vocational education in the past has contributed to the creation of a perception that vocational education is perceived to be inferior to mainstream education. This policy aims to overcome such challenges associated with vocational education

1986-2020 2020 Onwards

Current Scenario

Vocational education in India lies in sharp contrast to its global counterparts primarily because:

- Social status hierarchies influence the vocational education sphere
- Focus was largely on dropouts and on grades XIth – XIIth
- Vocational graduates did not have a well defined pathway for higher education via vocational skills acquired which resulted in lack of vertical mobility for students from vocational streams

National Education Policy Recommendations

Mainstream Infusion:

All educational institutions - schools, colleges and universities have been instructed to integrate vocational education programs into mainstream education in a phased manner, beginning with vocational exposure at early ages, quality vocational education through middle and secondary school and smoothly into higher education. This will ensure that every child learns at least one vocation and is exposed to several more, emphasizing the dignity and importance of labor and exciting students about various vocations including those involving local arts and artisanship

Institutional Responsibility:

The development of vocational capacities will go hand-in-hand with development of 'academic' or other capacities. Towards this:

- Secondary schools will collaborate with ITIs, polytechnics, local industry etc
- Higher education institutions will offer vocational education either on their own or in partnership with industry
- Vocational courses will also be available to students enrolled in all other Bachelor's degree programs, including the 4-year holistic Bachelor's programs
- 'Lok Vidya,' knowledge developed in India, will be made accessible to students through integration into vocational education courses



Vocational Education

Vocational education will be integrated into all educational institutions in a phased manner (50% learners by 2025). Focus areas will be chosen based on skill gap analysis & mapping of local opportunities, and vocational education will become part of the larger vision of holistic education

1986-2020 2020 Onwards

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National Education Policy Recommendations

➤ National Committee for the Integration of Vocational Education (NCIVE):

The Ministry of Education (MoE) will constitute a NCIVE along with industry participation, to oversee this effort and also earmark budget for promoting this integration. The NCIVE shall provide mechanisms to individual institutions that are early adopters to innovate and find models and practices that work and share their findings with other institutions thereafter.

> Framework Alignment:

The National Skills Qualification Framework (NSQF) will be detailed further for each discipline/vocation/profession. Further, Indian standards will be aligned with the International Standard Classification of Occupations maintained by the International Labor Organization which will provide a framework for recognition of prior learning which will enable dropouts to be reintegrated through alignment of their experience with relevant framework levels

> Other Incentives:

- Models of offering vocational education, and apprenticeships, will also be experimented with by higher education institutions
- · Incubation centers will be set up in higher education institutes in partnership with industries



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Technology in Education

The thrust of technological interventions will be for the purposes of improving teaching-learning and evaluation processes, supporting teacher preparation & professional development, enhancing educational access, & streamlining educational planning & management etc.

1986-2020 2020 Onwards

Current Scenario

Currently, there are systemic gaps in the pursuit of modernization of education, such as:

- Absence of a directorate or oversight body for the cause of digitization of education
- There is an inherent resistance amongst teachers to introduce technology in the classroom
- Electricity being a prerequisite poses a challenge to the full scale implementation of any technologically driven initiative in the country

National Education Policy Recommendations

National Education Alliance for Technology (NEAT):

An autonomous body will be created to provide a platform for use of technology to enhance learning, assessment, planning, administration, and so on, both for school and higher education. The aim of NEAT will be to provide on a single portal various educational technology solutions that are tested for their robustness for improving the learning experience, with a special focus on the needs of the students with disabilities. NEAT will also fulfill the following roles:

- Provide best educational technology to students
- Build intellectual institutional capacities
- Provide independent, evidence based advice to central & state governments
- · Envision strategic thrust areas in the domain
- Articulate new directions for research & innovation

> Research & Data Analysis:

To keep pace with the advancements in technology, NEAT will set up an expert body that will:

- Maintain a regular inflow of authentic data from multiple sources
- · Act as a forum for harnessing the energy that democratizing technology can unleash
- Organize multiple regional and national conferences, workshops, etc. to solicit inputs from national & international educational technology researchers, entrepreneurs, & practitioners



Technology in Education

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1986-2020 2020 Onwards

Current Scenario

Currently, there are systemic gaps in the pursuit of modernization of education, such as:

- Learning possibilities, through advancements in education technology, have matured significantly and yet, find insufficient utilization within a traditional Indian classroom
- Motivation and thrust for research and innovation within the Indian ecosystem is scarce when it comes to advanced subjects such as Artificial Intelligence & Machine Learning

National Education Policy Recommendations

Software Development:

A rich variety of sophisticated educational software shall be made available to teachers and students at all levels. These solutions will offer multiple language support, special support for students with disabilities and will also be utilized for providing e-content related to Teachers professional development. NCERT, CBSE and NIOS shall continue to design and upload content to the National Teachers Portal.

> Artificial Intelligence (A.I.) Centric Research:

The National Research Foundation (NRF) has been requested to spearhead fundamental research in the domain, development of the technology (including possible mega-projects), and assessment of its socio-economic impact in the context of A.I. A three pronged approach has been suggested:

- · Advancing core A.I. research
- · Developing and deploying application based research
- Establishing international research efforts to address global challenges in areas such as healthcare, agriculture, and climate change using AI

> Focus on Disruptive Innovation:

Particular attention will be paid to emerging disruptive technologies that will necessarily transform the education system and what it teaches to the students.



Technology in Education

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1986-2020 2020 Onwards

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National Education Policy Recommendations

Greater HEI Responsibility:

Universities will play an active role not only in conducting research on disruptive technologies but also in creating initial versions of instructional materials and courses (including online courses) in cutting-edge domains and assessing their impact on specific areas such as professional education. All universities will offer PhD and Masters programs in core areas (such as Machine Learning) as well as multidisciplinary fields ("Al + X") and professional areas (healthcare, agriculture and law). They may also develop and disseminate courses in these areas via platforms, such as SWAYAM.

Increasing Awareness:

Awareness is necessary to have informed public consent on matters related to advanced technologies. Therefore, the following suggestions have been made:

- In schools, the study of current affairs and ethical issues will include a discussion on disruptive technologies
- It is also necessary to highlight ethical issues surrounding the development and deployment of Al-based technologies which will also be a part of awareness campaigns
- The Colleges may also offer targeted training in low-expertise tasks for supporting the Al value chain such as data annotation, image classification, and speech transcription.
- As disruptive technologies emerge, schooling & continuing education will assist in raising the general populace's awareness of their potential disruptive effects



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Adult Education

The New Education Policy posits a community driven adult literacy program in conjunction with political will, organizational structure, proper planning, adequate financial support, and high-quality capacity building of educators and volunteers.

1986-2020 2020 Onwards

Current Scenario

The current scenario lays little to no emphasis on adult education and can broadly be characterized as:

- Directorate of Adult Education acts as the apex body
- No dedicated adult education center is available for adults interested in learning and development
- Saakshar Bharat serves as the only nation wide welfare program in support of adult education

National Education Policy 2020

Curriculum Development:

Adult education curriculum framework will be developed by a new and well-supported constituent body of the NCERT consisting of five types of programs:

- Foundational literacy & numeracy
- · Critical life skills
- Vocational skills development
- · Basic education
- Continuing education

Infrastructure Optimization:

Infrastructural requirements for adult educations will be met through the use of school complexes (after hours and in the evenings) as education centers for all adults interested in education. ICT enabled classrooms and libraries will be critical enablers in this regard

> Trained Instructors:

A cadre of dedicated instructors/educators/preraks will be required to deliver the curriculum framework to mature learners. Instructors will be trained by the national, state and district level support institutions qualified community members will be encouraged and welcomed to take a short training course and volunteer, on a large scale.



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1986-2020 2020 Onwards

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National Education Policy Recommendations

> Adult Education Centers (AEC's):

All efforts will be undertaken to ensure the participation of community members in adult education. Volunteerism and social work will be encouraged and utilized to track and ensure participation of non-enrolled students. Dropouts will also be requested, during their travels, to gather data on individuals interested in adult education. They will then be provided information of their local Adult Education Centers

> National Literacy Mission & Community Support:

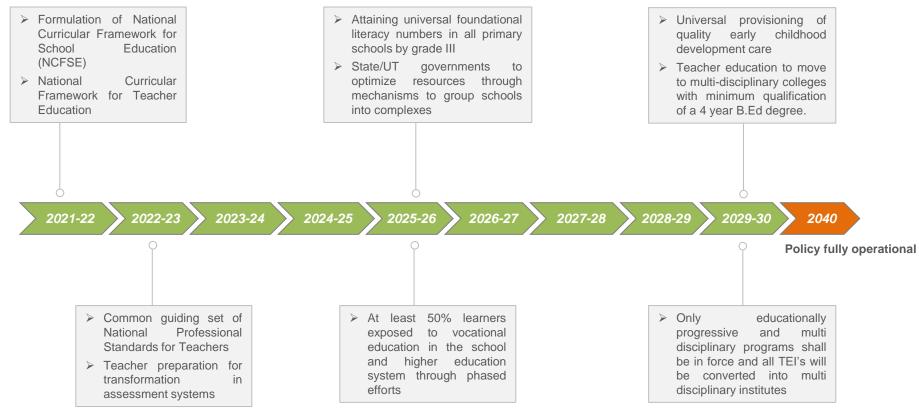
Any national literacy mission must mobilize community organizations and volunteers in order to achieve large-scale adult literacy and education outcomes. Qualified community members who wish to volunteer as adult education instructors or as one-on-one tutors - as a service to their communities and to the nation - will be welcomed, under the guidance and coordination of Adult Education Centers supported by State Governments.



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Achievement Milestones







Unique perspectives on the Indian education sector

Monograph: Augg 2020

Thank You

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