



# **National Education Policy 2019**

**Ministry of Human Resource  
Development  
Government of India**

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## Introduction

**0.1.** Education is a basic ingredient for achieving full human potential. Providing universal access to an education of high quality is the key to India's continued ascent, progress, and leadership on the global stage—in terms of economic development, social justice and equality, environmental stewardship, scientific advancement, and cultural preservation. India possesses the highest number of young people of any country entering school over the next decade, and the extent to which high quality educational opportunities are presented to them will determine the direction of the future of India and its people.

**0.2.** The world is undergoing rapid changes in the knowledge landscape. With the rise of big data, machine learning, and artificial intelligence, many unskilled jobs worldwide are expected to be taken over by machines, while the need for skilled labor, particularly involving mathematics, computer science, data science, and deep learning will be in rapidly increasing demand. With increasing pollution and climate change, there will be a sizable shift in how we meet the world's energy, water, and sanitation needs, again resulting in the need for new skilled labor, particularly in biology, chemistry, physics, and climate science. There will be a growing demand for humanities and art, as India moves towards becoming a developed country and among the three largest economies in the world.

**0.3.** Indeed, with the quickly changing employment and global ecosystem, it is becoming increasingly important that children not only learn, but learn how to learn. Education must thus, move towards less content, and more towards learning about how to think critically and solve problems, how to be creative and multi disciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. While learning by rote can be beneficial in certain contexts, pedagogy must evolve to make education more experiential, holistic and integrated, discovery oriented, learner-centered, discussion-based, flexible, and, of course, enjoyable. The curriculum must include basic arts, crafts, humanities, games, sports, languages, literature, culture, and values, in addition to science and mathematics, in order to develop all sides of learners' brains and make education more well-rounded, useful, and fulfilling to the learner. Education must aim to be character-making, enabling learners to be ethical, rational, compassionate, and caring, while at the same time preparing them for gainful, fulfilling employment.

**0.4.** The aim must be for India to have an education system by 2030 with access to the highest-quality education for all learners regardless of circumstances of birth or background. To achieve this, actions must be taken now and with urgency.

**0.5.** While the gap between the current state of learning outcomes and what is truly needed is sizable, closing the gap is most certainly achievable. Radical reforms will be needed in order to bring the highest quality and integrity into the system, from early childhood education through higher education.

**0.6.** This National Education Policy aims to cater to the many growing developmental imperatives of this country on the one hand, while creating a just and equitable society on the other. This Policy has proposed the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with

the aspirational goals of 21<sup>st</sup> century education, while remaining consistent with India's traditions and value systems. The National Education Policy lays special emphasis on the development of the creative potential of each individual, in all its richness and complexity. It is based on the principle that education must develop not only cognitive skills - both 'foundational skills' of literacy and numeracy and 'higher-order' cognitive skills such as critical thinking and problem solving – but also social and emotional skills - also referred to as 'soft skills' - including cultural awareness and empathy, perseverance and grit, teamwork, leadership, communication, among others.

**0.7.** The rich heritage of ancient Indian Knowledge has been a guiding light for this Policy. The aim of education in ancient India was not just the acquisition of knowledge, as preparation for life in this world or for life beyond schooling, but for complete realisation and liberation of the self. The Indian education system produced scholars like Charaka and Susruta, Aryabhata, Bhaskaracharya, Madhava, Chanakya, Patanjali, and Panini, among numerous others. They made seminal contributions to world knowledge in diverse fields such as mathematics, astronomy, metallurgy, medical science and surgery, civil engineering and architecture, shipbuilding and navigation, yoga, fine arts, chess, and more. The Indian Religion and Philosophy has had a strong influence on the world. These rich legacies to world heritage must not only be nurtured and preserved for posterity, but also enhanced and put to new uses through our education system. For instance, they can be integrated into a Liberal Arts education to help develop the creativity and originality of students, and to encourage them to innovate.

**0.8.** The teacher and the teacher's condition must and will be at the center of these changes. The new education policy must help reinstate teachers, at all levels, as the most respected and important members of our society, because they truly shape our next generation of citizens. It must do everything to empower teachers, and help them to do their job as effectively as possible. The new education policy must help recruit the very best and brightest to enter the teaching profession at all levels, by ensuring teachers their livelihood, respect, dignity, and autonomy, while also installing in the system basic methods of quality control and accountability.

**0.9.** The new education policy must provide to all students, irrespective of their place of residence, a quality education system, with special focus on historically marginalized, disadvantaged, and underrepresented groups. Education is a great leveler, and is the best tool for achieving economic and social mobility, inclusion and equality. Initiatives must be in place to ensure that all students from such groups, despite inherent obstacles, are presented with (and are made aware of) various targeted opportunities to enter and excel in the educational system.

**0.10.** These elements must of course be incorporated in an Indian manner and style, taking into account the local and global needs of the country, and with a respect for and deference to its rich diversity and culture. An instilling of knowledge of all of India and its varied social, cultural, and technological needs, its inimitable artistic, language, and knowledge traditions, and its strong ethics in India's young people is considered critical for purposes of national pride, self confidence, self- knowledge, cooperation, and integration – and thus, consequently, its continued progress and ascent.

## Previous policies

**1.1.** The previous policies on education have justifiably been preoccupied largely with issues of access and equity, but as a result have unfortunately dropped the baton with regard to quality of education. The implementation of the two previous education policies, especially with regards to quality, remains largely incomplete. The unfinished agenda of the National Policy on Education 1986, Modified in 1992 (NPE 1986/92), is appropriately dealt with in this Policy. A major development since the formulation of the NPE 1986/92 has been the establishment of Constitutional and legal underpinnings for achieving universal elementary education.

## Principles of this Policy

**1.2.** A good educational institution is one where every student feels welcomed and cared for, where a safe and stimulating learning environment exists, where a wide range of learning experiences are offered, and where good physical infrastructure with appropriate resources are available. While attaining these qualities must be the goal of every individual educational institution, there must also be integration and coordination across institutions and across all stages of education. This is fundamentally different from the current structure where the early school years are completely separated from high school which in turn is completely separated from higher education.

**1.3.** The principles that will guide both individual institutions, and the education system at large, are: **flexibility**, so that learners have the ability to choose their learning trajectories and programmes, and thereby choose their paths in life according to their own talents interests; **no hard separations** between arts and sciences, between curricular and extracurricular activities, between vocational and academic, etc., to ensure the integrity and unity of knowledge and eliminate harmful hierarchies among, and silos between, different areas of learning; **multidisciplinary** and a liberal education (across the sciences, social sciences, arts, humanities, and sports) for a multidisciplinary world; emphasis on **conceptual understanding** (rather than rote learning and learning-for-exams), on **creativity and critical thinking** (to encourage logical decision-making and innovation), on **values and ethics**, and on **life skills** (e.g., cooperation, teamwork, communication, resilience); **regular formative assessment for learning** rather than the summative assessment that encourages today's 'coaching culture'; a **respect for diversity** and **respect for the local context** in all curriculum, pedagogy, and policy, always keeping in mind that education is a concurrent subject; full **equity and inclusion** as the cornerstone of all educational decisions, to ensure all students are able to thrive in the education system; **resource efficiency** without any compromise on equity and quality; **teachers and faculty as the heart of the learning process** – their rigorous recruitment and preparation, continuous professional development, positive working environments and service conditions must be assured; a **'light but tight' oversight and regulatory system** to ensure **integrity** and **transparency** of the educational system (through audit and public disclosure) while simultaneously encouraging innovation and out-of-the-box ideas through **autonomy** and **empowerment**; **outstanding research** as a prerequisite for outstanding education and development; **continuous policy-making** based on regular assessment of realities on the ground by educational experts; and finally, **education is a public service** and access to quality education must be considered a fundamental right of every citizen; therefore, **substantial investment in a strong, vibrant public education system** is

absolutely vital to our democracy.

## **Purpose of this Policy**

**1.4.** This Policy is intended as a long-term vision for what the education system in India should look like and move towards in order to align with the aforementioned Principles of this Policy. The Policy is aligned with India's overall development goals - in particular, that of becoming a knowledge economy. It harnesses a number of the best practices in India and abroad, based on research evidence, to charter a path towards India's socio-economic growth and 'Development for All' (sabka saath, sabka vikas).

## **Vision of this Policy**

**1.5.** The National Education Policy 2019 envisions an India-centred education system that contributes directly to transforming our Nation sustainably into an equitable and vibrant knowledge society, by providing high quality education to all.

# **I. School Education**

## **1. Early Childhood Care and Education: The Foundation of Learning**

**1.1.** Over 85% of a child's cumulative brain development occurs prior to the age of 6, indicating the critical importance of appropriate care and stimulation of the brain in a child's early years for healthy brain development and growth. It is therefore of the utmost importance that every child has access to quality early childhood care and education (ECCE). Presently, quality ECCE is not available to most young children, particularly children from economically disadvantaged families. Investment in ECCE has the potential to give all young children such access, enabling all children to participate and flourish in the educational system throughout their lives. ECCE is perhaps the greatest and most powerful equaliser.

**1.2.** ECCE ideally consists of flexible, multifaceted, multilevel, play-based, activity-based, and discovery-based learning about, e.g., alphabets, languages, numbers, counting, colors, shapes, indoor and outdoor play, puzzles and logical thinking, problem solving, drawing/painting and other visual art, craft, drama and puppetry, music and movement.

**1.3.** The curricular and pedagogical framework for early childhood education shall be developed by NCERT, and delivered under the aegis of relevant ministries, through a significantly expanded and strengthened system of early-childhood educational institutions consisting of: (a) stand-alone Anganwadis; (b) Angawadis co-located with primary schools; (c) pre-primary schools/sections co-located with existing primary schools; and (d) stand-alone pre-schools - all of which would employ workers/teachers specially trained in the curriculum and pedagogy of ECCE. The overarching goal will be to ensure universal access to high quality early childhood care and education across the country.

## **2. Foundational Literacy and Numeracy: An Urgent & Necessary Prerequisite to Learning**

**2.1.** The ability to read and write, and perform basic operations with numbers, is a necessary foundation and indispensable prerequisite for all future school and lifelong learning. However, various governmental as well as non-governmental surveys indicate that we are currently in a severe learning crisis: a large proportion of students currently in elementary school estimated to be over 5 crore - have not attained foundational literacy and numeracy, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with Indian numerals. If action is not taken soon, over the next few years then we could lose 10 crore or more students from the learning system to illiteracy. Attaining foundational literacy and numeracy for all children must become an urgent national mission, with immediate measures to be taken on many fronts.

**2.2.** This would require firstly filling up of teacher vacancies as soon as possible - especially in disadvantaged areas and areas with large pupil-to-teacher ratios, or high rates of illiteracy - with special attention given to employing local teachers and female teachers. Second, studies around the world show one-on-one peer tutoring to be extremely effective for learning - not just for the learner, but also for the tutor. Thus, peer tutoring can be taken up as a voluntary and joyful activity for fellow students under supervision of trained teachers and by taking due care of safety aspects. Third, it will be made far easier for trained volunteers - from both the local community and beyond - to participate in this large-scale mission of the schooling system. Trained and qualified social workers from civil society organizations/departments of Social Justices and Empowerment could be connected to the schools through various innovative mechanisms to be adopted by State/UT Governments. If every literate member of the community could commit to teaching one student/person how to read, it would change the country's landscape very quickly; this mission will be highly encouraged and supported.

**2.3.** On the curricular side, it will be extremely vital to introduce an increased focus on foundational literacy and numeracy - and generally on reading, writing, speaking, counting, arithmetic, and mathematical thinking - throughout the primary school curriculum. The dedication of specific hours daily, and regular events over the year, to activities involving these subjects will be implemented to encourage and excite students to pursue these areas.

**2.4.** Finally, the nutrition and health (including mental health) of children will be seriously addressed, through healthy meals and the introduction of counsellors and community support into the schooling system, as well as through various continuing measures for addressing poverty that may lie beyond the education system. Research shows that the hours of the morning after a nutritious breakfast can be particularly productive for the study of subjects that are cognitively more demanding; these hours may be leveraged by providing a simple but energising breakfast in addition to midday meals.

## **3. Curtailing Dropout Rates and Ensuring Universal Access to Education at All Levels**

**3.1.** One of the primary goals of the schooling system must be to ensure that children are

actually enrolled in and attending school. Through initiatives such as the Sarva Shiksha Abhiyan and the Right to Education Act, India has made remarkable strides in recent years in attaining near-universal enrollment in primary school. However, the data for later grades indicates some serious issues in retaining children in the schooling system. The GER for Grades 6-8 was 90.7%, while for Grades 9-10 and 11-12 it was only 79.3% and 51.3%, respectively - indicating that a significant proportion of enrolled students begin to drop out after Grade 5 and especially after Grade 8. As per the annual Educational Statistics published by the Ministry an estimated 6.2 crore children of school age (between 6 and 18 years) were out of school in 2015. It must be a top priority of the country to bring these children back into the educational fold as early as possible, and to prevent further students from dropping out.

**3.2.** There are two overall initiatives that will be undertaken in order to bring children who have dropped out back to school and to prevent further children from dropping out. The first is to provide effective and sufficient infrastructure so that all students have access to safe and engaging school education at all levels from pre-primary school through Grade 12. This will be attained by upgrading and enlarging the schools that already exist, building additional quality schools in areas where they do not exist, and providing safe and practical conveyances, especially for the girl children, and/or hostels so that all children have the opportunity to attend a quality school of the appropriate level.

**3.3.** The second is to achieve universal participation in school by carefully tracking students, as well as their learning levels, in order to continually work towards ensuring that they a) are enrolled in and attending school, and b) have suitable opportunities for remediation and re-entry in case they have fallen behind or dropped out. The “free and compulsory” aspect of the RTE Act will be examined for extension through Grade 12 and to all children up to the age of 18. Counsellors recruited to schools/school complexes and teachers will continuously work with students, parents, and will travel through and connect with communities to ensure that all school-age children are attending and learning in school.

**3.4.** Once infrastructure and participation are in place, ensuring quality across the board will indeed be key in retaining students, so that students (particularly girls and underrepresented groups) and their parents do not lose interest in attending school. This will require a strong channel and system of incentives for the best teachers to be deployed to areas where dropout rates are particularly high, as well as an overhaul of the curriculum to make it more engaging and useful for all students.

## **4. Curriculum and Pedagogy in Schools: Learning Should be Holistic, Integrated, Enjoyable, and Engaging**

### **Restructuring school curriculum and pedagogy in a new 5+3+3+4 design**

**4.1.** The curricular and pedagogical structure of school education will be reconfigured to make them responsive and relevant to the developmental needs and interests of learners at different stages of their development, corresponding to the age ranges of 3-8, 8-11, 11-14, and 14-18 years, respectively. The curricular and pedagogical structure and the curricular framework for school education will therefore be guided by a 5 + 3 + 3 + 4 design, consisting of the Foundational (3 years of preschool + Grades 1-2), Preparatory (Grades 3-5), Middle (Grades 6-8), and High (Grades 9-12 in two phases, i.e. 9 and 10 in one and 11 and 12 in the



second) school stages respectively.

**4.2.** The Foundational Stage will consist of play/activity-based learning and the aforementioned curriculum and pedagogy of ECCE. It will also include a focus on etiquette and behavior, ethics, personal and public hygiene/cleanliness, teamwork and cooperation, etc. The Preparatory Stage will transition gradually from play-based learning to more formal but interactive classroom learning, with the introduction of some (light) textbooks, in order to lay a solid groundwork across subjects, including reading, writing, speaking, physical education, art, languages, science, and mathematics. The Middle Stage will see the introduction of subject teachers for learning/discussion of the more abstract concepts in each subject that students will be ready for at this stage, across the sciences, mathematics, arts, social sciences, and humanities. The High School (or Secondary) Stage will comprise of four years of multidisciplinary study, building on the subject-oriented pedagogical and curricular style of the Middle Stage, but with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility and student choice. The High School Stage may also allow an exposure to more subjects and enable greater flexibility, and more frequent assessment of modules.

**4.3.** The above-described stages are purely curricular and pedagogical, designed to optimize learning for students based on cognitive development of children; they will inform the development of national and state curricula and teaching-learning strategies at each stage, but it will not be necessary to make parallel changes to physical infrastructure.

**4.4.** To close the gap between the current state of learning outcomes and what is truly needed, classroom transactions must shift towards competency based learning and education. The assessment tools (including for assessment “as”, “of” and “for” learning) must also be aligned with the Learning Outcomes of a given class. To achieve this, in all stages, experiential learning must be adopted, including art integrated and sport integrated education, storytelling based pedagogy, among others, as standard pedagogy within each subject, and explorations of relations among different subjects.

### **Holistic development of learners**

**4.5.** The key overall thrust of curriculum and pedagogy reform across all stages will be to move the education system towards real understanding and *learning how to learn* - and away from the culture of rote learning as is present today. The goal will be to create holistic and complete individuals equipped with key 21<sup>st</sup> century skills. All aspects of curriculum and pedagogy will be reoriented and revamped in order to attain these critical goals.

### **Reduce curriculum content to enhance essential learning and critical thinking**

**4.6.** Curriculum content will be reduced in each subject to its core essentials, in order to make space for critical thinking and more holistic, discovery-based, discussion-based, and analysis based learning. The mandated contents will focus on key concepts, ideas, applications, and problem-solving. Teaching and learning will strive to be conducted in a more interactive manner; questions will be encouraged, and classroom sessions will regularly contain more fun, creative, collaborative, and exploratory activities for students for deeper and more experiential

learning.

## **Empower students through flexibility in course choices**

**4.7.** Students will be given an increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education, the arts, and vocational crafts – so that they may be free to design their own paths of study and life plans. Holistic development and a wide choice of subjects and courses year to year will be the new distinguishing feature of secondary school education. There will be no hard separation among ‘curricular’, ‘extra-curricular’, or ‘co-curricular’ areas, among ‘arts’, ‘humanities’, and ‘sciences’, or between ‘vocational’ or ‘academic’ streams. Subjects such as physical education, the arts, and vocational crafts, in addition to science, humanities, and mathematics, will be seriously incorporated throughout the school curriculum, with a consideration for what is interesting and safe at each age.

## **Education in the local language/mother tongue**

**4.8.** It is well-understood that young children learn and grasp nontrivial concepts most quickly in their home language/mother tongue. Thus, when possible, the medium of instruction – till at least Grade 8 - will be the home language/mother tongue/local language. Thereafter, the home/local language shall continue to be taught as a language wherever possible. High-quality textbooks, including in science, will be made available in home languages. In cases where home-language textbook material is not available, the language of transaction between teachers and students will still remain the home language when possible. Teachers will be encouraged to use a bilingual approach, including bilingual teaching-learning materials, with those students whose home language may be different from the medium of instruction.

## **Multilingualism and the power of language**

**4.9.** Because research clearly shows that children pick up languages extremely quickly between the ages of 2 and 8, and moreover that multilingualism has great cognitive benefits to young students, children will be exposed to languages early on (but with a particular emphasis on the mother tongue), starting from the Foundational Stage onwards. All languages will be taught in an enjoyable and interactive style, with plenty of interactive conversation, reading, writing, and speaking, and through art such as music, poetry, and theatre. There will be a major effort from both the Central and State governments to invest in large numbers of language teachers in all regional languages around the country, and in particular all Schedule 8 languages. States, especially states from different regions of India, may enter bilateral agreements to hire teachers in large numbers from each other, in order to satisfy the three-language formula in their respective states, and also to encourage the study of Indian languages across the country.

**4.10.** The three-language formula will continue to be implemented, while keeping in mind the Constitutional provisions and aspirations of the people, regions, in order to promote multilingualism as well as promote national unity. However, there will be a great flexibility in the three-language formula, in keeping with the principle of flexibility in this policy. No language will be imposed on any State.

**4.11.** Students whose medium of instruction is the local/home language will begin to learn science bilingually in Grade 6, so that by the end of Grade 9 they can speak about science both in their home language and English. International subjects such as business studies, accountancy, psychology etc. would also be taught bilingually.

**4.12.** The home/local language and/or the second Indian language will be enhanced with the reading of and analysis of uplifting literature from the Indian subcontinent, ancient to modern, and by authors from all walks of life, as well as through other arts, such as by playing and discussing music or film excerpts, or engaging in theatre in these languages.

**4.13.** As so many developed countries around the world have amply demonstrated, being well educated in one's language, culture, and traditions is indeed a huge benefit to educational, social, and technological advancement. India's languages are among the richest, most scientific, most beautiful, and most expressive in the world, with a huge body of ancient as well as modern literature (both prose and poetry), film, and music written in these languages that help form India's national identity and wealth. For purposes of cultural enrichment as well as national integration, all young Indians should be aware of the rich and vast array of languages of their country, and the treasures that they and their literatures contain.

**4.14.** Thus every student in the country will take a fun project/activity on 'The Languages of India' sometime in Grades 6-8. In this project/activity, students will learn about the remarkable unity of most of the major Indian languages, starting with their common phonetic and scientifically-arranged alphabets and scripts, their common grammatical structures, their origins and sources of vocabularies from Sanskrit and other classical languages, as well as their rich inter-influences and differences. They will also learn what geographical areas speak which languages, get a sense of the nature and structure of tribal languages, and they would learn to say a few lines in every major language of India and a bit about the rich and uplifting literature of each. Such an activity would give them both a sense of the unity and the beautiful cultural heritage and diversity of India, and would be a wonderful icebreaker their whole lives as they meet people from other parts of India. This project/activity would be a joyful activity and would not involve any form of assessment.

**4.15.** The importance, relevance, and beauty of the classical languages and literature of India also cannot be overlooked. Sanskrit, while also an important modern (Schedule 8) language, possesses a classical literature that is greater in volume than that of Latin and Greek put together, containing vast treasures of mathematics, philosophy, grammar, music, politics, medicine, architecture, metallurgy, drama, poetry, storytelling, and more, written by people of various religions as well as non-religious people, and by people from all walks of life and a wide range of socioeconomic backgrounds over thousands of years.

**4.16.** India also has an extremely rich literature in other classical languages, including classical Tamil, as well as classical Telugu, Kannada, Malayalam, and Odia, in addition to Pali, Persian, and Prakrit; these classical languages and their literatures too must be preserved for their richness and for the pleasure and enrichment of posterity. When India becomes a fully developed country, the next generation will want to be able to partake in and be enriched as humans by India's extensive and beautiful classical literatures which contain great intellectual and cultural treasures.

**4.17.** Sanskrit will thus be offered at all levels of school and higher education as one of the optional languages on par with all Schedule 8 languages. In addition to Sanskrit, the teaching of all other classical languages and literatures of India, including Tamil, Telugu, Kannada, Malayalam, Odia, Pali, Persian, and Prakrit, will also be widely available in schools as options (possibly as online modules), through experiential and innovative approaches including by integration of technology, to ensure that these languages and literatures stay alive and vibrant, especially in those states where they may be best taught and nurtured.

**4.18.** For the enrichment of our children, and for the preservation of these rich languages and their artistic treasures, all students in all schools, public or private, may have the option of learning at least two years of a classical language of India and its associated literature, through experiential and innovative approaches including by integration of technology, in Grades 6-12, with the option to continue from middle level through secondary education and university.

**4.19.** In addition to high-quality offerings in Indian languages and English, foreign languages such as Korean, Chinese, Japanese, Thai, French, German, Spanish, or Russian will also be widely offered at the secondary level, for students to learn about the cultures of the world and to increase their global knowledge and mobility according to their own interests and aspirations.

**4.20.** Teaching of languages should be done through innovative methods such as gamification and apps, and by weaving in the cultural aspects of the languages, with the teaching-learning of various subjects and with real-life experiences through films, theatre and storytelling, art and music, local literature, etc. Thus, the teaching of languages should also be based on experiential learning pedagogy.

### **Curricular integration of essential subjects and skills**

**4.21.** While students must have a large amount of flexibility in choosing their individual curricula, certain subjects and skills should be learned by all students in order to become good, successful, innovative, adaptable, and productive human beings in today's rapidly-changing world. In addition to proficiency in languages, these skills include: scientific temper and evidence-based thinking; creativity and innovativeness, collaborative approach, citizenship skills, imbibing of constitutional values; sense of aesthetics and art; oral and written communication; physical education, wellness, and sports; problem solving and logical reasoning; vocational exposure and skills; digital literacy, coding and computational thinking; ethical and moral reasoning; knowledge of India (including Indian knowledge systems); current affairs; and knowledge of critical issues facing local communities, states, the country, and the world. It is recognised that mathematics and mathematical thinking will be very important for India's future and India's leadership role in the numerous upcoming fields and professions that will involve artificial intelligence, machine learning, and data science. Concerted curricular and pedagogical initiatives, including introducing contemporary subjects such as Artificial Intelligence, Design Thinking, Organic Living, etc. at relevant stages will be undertaken to develop these various important skills in all students at all levels.

## **National textbooks with local content and flavour**

**4.22.** The reduction in, and increased flexibility of, school curriculum content - and the renewed emphasis on constructivist rather than rote learning - must be accompanied by parallel changes in school textbooks. All textbooks shall aim to contain the essential core material (together with discussion, analysis, examples, and applications) deemed important on a national level, but at the same time contain any desired nuances and supplementary material in accordance with local contexts and needs. Where possible, teachers will also have choices in the textbooks they employ - from among a set of textbooks that contain the requisite national and local material - so that they may teach in a manner that is best suited to their own desired teaching styles and their students' and communities' needs.

**4.23.** The aim will be to provide such quality textbooks at the lowest possible cost - namely, the cost of production/printing - in order to remove the burdens of textbook prices on the students and on the educational system. This may be accomplished by using high-quality textbook materials developed by NCERT in conjunction with the SCERTs; additional textbook materials would be funded by public-private partnerships and crowd sourcing that incentivise experts to write such high-quality textbooks at-cost-price. States will prepare their own curricula (which may be based on the NCERT National Curriculum Framework to the extent possible) and prepare textbooks (which may be based on the NCERT textbook materials to the extent possible), incorporating State flavour and material as needed. The availability of such textbooks in all regional languages must be a top priority, so that all students have access to high-quality learning.

## **Transforming assessment for student development**

**4.24.** The aim of assessment in the culture of our schooling system will shift from one that primarily tests rote memorisation skills to one that is more formative, is competency based, promotes learning and development for our students, and tests higher-order skills such as analysis, critical thinking, and conceptual clarity. The primary purpose of assessment will indeed be for learning - it will help the teacher and student - and the entire schooling system - continuously revise teaching learning processes in order to optimise learning and development for all students. This will be the underlying principle for assessment at all levels of education.

**4.25.** The current nature of secondary school exams, including Board exams and entrance exams - and the resulting coaching culture of today - are doing much harm, especially at the secondary school level, replacing valuable time for true learning with excessive exam coaching and preparation. These exams also force students to learn a very narrow band of material in a single stream, rather than allowing the flexibility and choice that will be so important in the individualized education system of the future. The existing system of entrance examinations shall be reformed to eliminate the need for undertaking coaching for 'cracking' the examination.

**4.26.** To reverse these harmful effects of the current assessment system, Board exams will encourage holistic development; students will be able to choose many of the subjects in which they take Board exams, depending on their individualised interests. Board exams will also be made 'easier', in the sense that they will test primarily core capacities rather than months of coaching and memorisation; any student who has been going to and making a basic effort in a school class will be able to pass the corresponding subject Board Exam without much additional

effort. To eliminate the “high stakes” aspect of Board Exams, all students will be allowed to take Board Exams on up to two occasions during any given school year. In this regard, guidelines will be prepared by NCERT, and teachers prepared, for a transformation in the assessment system by 2022, to align with the NCF 2020. A regulatory body will be formed at the national level, under MoE, for all recognised school boards of India, for regulating assessment and evaluation norms and standards, and for ensuring that the assessment patterns of the different boards meet the skill requirements of the 21<sup>st</sup> century and are in consonance with the stated objectives of this policy.

**4.27.** The principles for university entrance exams will be similar; the National Testing Agency (NTA) will work to offer high-quality common modular entrance exams multiple times each year in various subjects, from logic, quantitative reasoning, and languages, to more specialized subject exams in the sciences, arts, and vocational subjects. The exams shall test the conceptual understanding and the abilities to apply knowledge, and shall eliminate the need for taking coaching for these exams. Students will be able to choose the range of subjects that they are interested in having tested, and each university will be able to see each student’s individual subject portfolio, and admit students into their programmes based on individual interests and talents. The NTA will serve as a premiere, expert, autonomous testing organisation to conduct entrance examinations for admissions and fellowships in higher educational institutions. The high quality, range, and flexibility of the NTA testing services will enable most universities to use these common entrance exams - rather than having 100’s of universities each devising their own exams - thereby drastically reducing the burden on students, universities and colleges, and the entire education system.

### **Support of students with singular interests and talents**

**4.28.** Every student has innate talents, which must be discovered, nurtured, fostered, and developed. These talents may express themselves in the form of varying interests, dispositions, and capacities. Those students that show particularly strong interests and capacities in a given realm must be encouraged to pursue that realm beyond the general school curriculum. Teacher education will include methods for the recognition and fostering of such student talents and interests.

**4.29.** Topic-centered and Project-based Clubs and Circles will be highly encouraged and supported at the levels of schools, school complexes, districts, and beyond. Examples include Science Circles, Math Circles, Music Performance Circles, Chess Circles, Poetry Circles, Language Circles, Drama Circles, Debate Circles, and so on. Funds will be made available for transportation for teachers to take their students to these circles or clubs when these are not meeting at their own schools. Along these lines, high quality national residential summer programmes for secondary school students in various subjects will also be funded, with a rigorous merit-based admissions process to attract the very best students and teachers to these programmes.

**4.30.** Teachers will aim to encourage students with singular interests and/or talents in the classroom by giving them supplementary enrichment material and guidance and encouragement, and will help them to organise such Topic-centered Clubs and Circles through specific funding allocated for this purpose.

**4.31.** Olympiads and competitions in various subjects will be strengthened across the country, with clear coordination and progression from school to local to state to national levels, with necessary funding to ensure that all students may participate at all levels for which they qualify. Public and private universities, especially premier institutions like the IITs and NITs, would be encouraged to use results from Regional, National, and International Olympiads, as well as results from and work in regional and national topic-based programmes, as part of the criteria for admissions into their undergraduate programmes.

**4.32.** Once internet-connected smartphones or tablets are in the hands of all students, online apps with quizzes, competitions, assessments, enrichment materials, and online communities for shared interests will be developed, and will work to enhance all the aforementioned initiatives.

### **5. Teachers**

**5.1.** Teachers truly shape the futures of our children - and, therefore, the future of our nation. It is because of this most noble role that the teacher in India was the most respected member of society. Only the very best and most learned became teachers. Society gave teachers, or gurus, what they needed in order to pass on their knowledge, skills, and ethics optimally to students. Today, however, the status of the teacher has undoubtedly and unfortunately dropped. The quality of training, recruitment, deployment, service conditions, and empowerment of teachers is not where it should be, and consequently the quality and motivation of teachers does not reach the standards where it could be. The high respect for teachers and the high status of the teaching profession must be revived and restored for the very best to be inspired to enter the profession, for teachers to be well-motivated and empowered to innovate, and for education to therefore reach the heights and levels that are truly required to ensure the best possible future for our children and our nation.

#### **Recruitment and deployment**

**5.2.** To ensure that truly excellent students enter the teaching profession - especially from rural areas - a large number of merit-based scholarships shall be instituted across the country for study at outstanding 4-year integrated B.Ed. programmes. In rural areas, special merit-based scholarships will be established that also include preferential employment in their local areas upon successful completion of their B.Ed. programmes. Such scholarships will provide local job opportunities to outstanding local students (especially female students), so that these students may serve as local-area role models and as highly-qualified teachers who speak the local language. Incentives will be provided for outstanding teachers to take teaching jobs in rural areas, especially in areas with the greatest current teacher shortages and greatest needs for outstanding teachers. A key incentive for teaching in rural schools will be the provision of local housing near or on the school premises.

**5.3.** The harmful practice of excessive teacher transfers will be halted, to ensure that teachers can build relationships with and become invested in their communities, and so that students have continuity in their role models and educational environments. Transfers will occur in very special circumstances, e.g., to solve two body or other family-related issues, or for promotions of outstanding teachers and administrators to leadership positions, as suitably laid down in a

structured manner by State/UT governments.

**5.4.** Teacher Eligibility Tests (TETs) will be strengthened to better test material correlated to being outstanding teachers, both in terms of content and pedagogy. The TETs will also be extended to cover teachers across all stages (Foundational, Preparatory, Middle and Secondary) of school education. For subject teachers, suitable TET test scores in the corresponding subjects will also be taken into account for recruitment. To gauge passion and motivation for teaching, a classroom demonstration or interview will become an integral part of teacher hiring at schools and school complexes; these interviews would also be used to assess comfort and proficiency in teaching in the local language, so that every school / school complex has at least some teachers who can converse with students in the local language.

**5.5.** To ensure an adequate number of teachers across subjects - particularly in subjects such as art, physical education, vocational education, and languages - teachers could be hired to a school/school complex and sharing of teachers across schools can be considered in accordance with the grouping of schools format adopted by State/UT governments.

**5.6.** To promote local knowledge and expertise, schools/school complexes will be permitted and indeed will be supported with suitable resources to hire local eminent persons or experts as 'specialised instructors' in various subjects, such as in traditional local arts, vocational crafts, entrepreneurship, agriculture, or any other subject where local expertise exists and would benefit students and help preserve and promote local knowledge.

**5.7.** A comprehensive teacher-requirement planning exercise will be conducted across India and in each State to assess expected teacher and subject vacancies over the next two decades. All the above-described initiatives in recruitment and deployment will be scaled as needed over time, with the aim to fill all vacancies with outstanding teachers, including outstanding local teachers.

## **Service environment and culture**

**5.8.** The primary goal of overhauling the service environments and cultures of schools will be to maximise the abilities of teachers to do their jobs effectively, and to ensure that they are part of vibrant, caring, and inclusive communities of teachers, students, parents, principals, and other supporting staff, all of whom share a common goal: to ensure that our children are learning.

**5.9.** A very first requirement in this direction will be to ensure decent and pleasant service conditions at schools. Adequate and safe infrastructure, including working toilets, clean drinking water, clean and attractive spaces conducive to learning, electricity, computing devices, and internet, library and sports and recreational resources will be important to provide to all schools in order to ensure that teachers and students are comfortable and inspired to teach and learn in their schools.

**5.10.** The State/UT Government may adopt innovative formats, such as school complexes, rationalization of schools, etc. for effective school governance. The creation of school complexes for example, could go a long way towards building vibrant teacher communities. The hiring of teachers to school complexes could automatically create relationships between



schools across the school complex; it might also help ensure excellent subject distribution of teachers, creating a more vibrant teacher knowledge base. Teachers at very small schools may not remain isolated any longer and may become part of and work with larger school complex communities, sharing community best practices with each other and working collectively and collaboratively to ensure that all children in the system are learning. School complexes could also share counsellors, technical and repair staff etc to further support teachers and help create an effective community environment for learning.

**5.11.** In collaboration with parents and other key local stakeholders, teachers will also be more involved in the governance of schools/ school complexes, including as members of School Management Committees/ School Complex Management Committees.

**5.12.** To prevent the large amounts of time spent currently by teachers on non-teaching activities, teachers will not be engaged in work that is not directly related to teaching (except for rare events that do not interfere with their class work); in particular, teachers will not be involved in election work during non-election period, cooking of midday meals, and other strenuous administrative tasks, so that they may fully concentrate on their teaching-learning duties.

**5.13.** To help ensure that schools have positive learning environments, the role expectations of principals and teachers will explicitly include developing a caring and inclusive culture at their schools, for more effective learning for all, and for the benefit of all in their communities.

**5.14.** Teachers will be given more autonomy in choosing finer aspects of curriculum and pedagogy, so that they may teach in the manner that they find most effective for the students in their classrooms and communities. Teachers will be recognised for novel approaches to teaching that improve learning outcomes in their classrooms.

### **Continuous professional development**

**5.15.** Teachers will be given constant opportunities for self-improvement and to learn the latest innovations and advances in their profession. To ensure that every teacher has the flexibility to optimise their own development as teachers, a modular approach to continuous teacher development will be adopted. Developmental opportunities, in the form of local, state, national, and international teaching and subject workshops, as well as online teacher development modules, will be available to all teachers so that each teacher may choose what is most useful for their own development. Platforms (especially online platforms) will be developed so that teachers may share ideas and best practices. Each teacher will be expected to participate in, say, 50 hours of CPD opportunities every year for their own professional development. Initially the focus of CPD should be on orienting all teachers towards competency based learning and related pedagogies, such as experiential learning, art and sport integrated approach, etc.

**5.16.** Leaders such as school principals and school complex leaders will have similar modular leadership / management workshops and online development opportunities and platforms to continuously improve their own leadership and management skills, and so that they too may share best practices with each other. Such leaders will also be expected to participate in 50 total hours of CPD modules per year, covering leadership and management, as well as content

and pedagogy for the teaching aspects of their jobs With focus on preparing and implementing pedagogical plans based on competency and outcome based education.

### **Career management and progression**

**5.17.** Teachers doing outstanding work must be recognised, promoted, and given salary raises, to incentivise all teachers to do their best work. Therefore, a robust merit-based tenure-track, promotion, and salary structure will be developed, with multiple levels within each teacher rank that incentivises and recognises excellent and committed teachers through tenure, promotions, and salary increases. A system of multiple parameters for proper assessment of performance will be developed for the same by the State/UT Government based on peer reviews, attendance, commitment, hours of CPD, and other forms of service to the school and the community, etc. Such merit-based assessments would be used to determine tenure decisions and the rate of promotions and salary increases for each teacher.

**5.18.** Vertical mobility of teachers based on merit will also be paramount; outstanding teachers with demonstrated leadership and management skills would be trained over time to take on academic leadership positions in schools, school complexes, and at BRCs, CRCs, BIETs, and DIETs.

### **Approach to teacher education**

**5.19.** Recognising that the best teachers will require training in high-quality content as well as pedagogy, teacher education will gradually be moved into multidisciplinary colleges and universities. As colleges and universities all move towards becoming multidisciplinary, they will also aim to house outstanding education departments that offer B.Ed. and M.Ed. degrees.

**5.20.** By 2030, the minimum degree qualification for teaching will be a 4-year liberal integrated B.Ed. degree that teaches a range of knowledge content and pedagogy, and includes strong practicum training in the form of student-teaching at local schools. The 2-year B.Ed. programmes will also be offered, by the same multidisciplinary institutions offering the 4-year integrated B.Ed., and will be intended only for those who have already obtained Bachelor's Degrees in other specialised subjects. These B.Ed. programmes may also be replaced by suitably adapted 1-year B.Ed. programmes, and will be offered only to those who have completed the equivalent of 4-year multidisciplinary Bachelor's Degrees or who have obtained a Master's degree in a specialty and wish to become a subject teacher in that specialty. All such B.Ed. degrees would be offered only by accredited multidisciplinary higher educational institutions offering 4-year integrated B.Ed. programmes.

**5.21.** All B.Ed. programmes will include training in time-tested as well as the most recent techniques in pedagogy, including with respect to foundational literacy and numeracy, multilevel teaching and evaluation, teaching children with special needs, teaching children with special interests or talents, use of educational technology, and learner-centered and collaborative learning; all B.Ed. programmes will also include strong practicum training in the form of in-classroom teaching at local schools.

**5.22.** Special shorter local teacher education programmes will also be available at BIETs, DIETs, or at school complexes themselves, so that eminent local persons can be hired to teach

at schools or school complexes as ‘specialised instructors’, for the purpose of promoting local knowledge and skills, e.g., local art, music, agriculture, business, sports, carpentry and other vocational crafts.

**5.23.** Shorter post-B.Ed. certification courses will also be made widely available, at multidisciplinary colleges and universities, to teachers who may wish to move into more specialised areas of teaching, such as the teaching of students with special needs, or into leadership and management positions in the schooling system, or move from one stage to another between foundational, preparatory, middle and secondary stages.

**5.24.** Finally, order to fully restore the integrity of the teacher education system, the thousands of substandard standalone Teacher Education Institutions (TEIs) across the country will be shut down as soon as possible by the Higher Education Regulator.

**5.25.** The NCF for Teacher education, 2009 (NCFTE 2009) outlines many excellent approaches that are still relevant for accomplishing effective teacher education. This document will be revisited and updated by NCTE by the end of 2021, taking into account the changing context of teacher education today and, in particular, all the above Policy points, and will be made available in all regional languages.

## **6. Equitable and Inclusive Education: Learning for All**

**6.1.** Education is the single greatest tool for achieving social justice and equality. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which every citizen has the opportunity to dream, thrive, and contribute to the nation. Unfortunately, prejudice and bias, based on gender, social and economic status, and special needs, among other factors, often affect people’s capacity to benefit from the education system, compounding social cleavages that hold the nation back from growth, innovation, and progress. The education system must aim to benefit all of India’s children so that no child loses any opportunity to learn and excel because of the circumstances of birth or background.

**6.2.** While the Indian education system and successive government policies have made steady progress towards bridging gender and social category gaps in all levels of school education, large disparities still remain - especially at the secondary level - particularly for groups that have been historically underrepresented in education. Underrepresented groups (URGs) in education can be broadly categorised into those having given gender identities (including women and transgender individuals), given socio-cultural identities (such as Scheduled Castes, Scheduled Tribes, OBCs, Muslims, migrant communities), given special needs (such as learning disabilities), and given socio-economic conditions (such as the urban poor). While overall enrolments in schools decline steadily from Grade 1 to Grade 12 - a problem which must be addressed across the country among all groups as discussed in chapter 3 - this decline in enrolments is considerably more pronounced for many of these URGs. According to U-DISE 2016–17 data, about 19.6% of students belong to Scheduled Castes (SC) at the primary school level, but this fraction falls to 17.3% at the higher secondary level. These enrolment drop-offs are even more severe for ST students (10.6% to 6.8%), Muslim students (15% to 7.9%), and differently-abled children (1.1% to 0.25%), with even greater declines for female students within each of these URGs. The decline in URGs’ enrolment in higher education is

even steeper.

**6.3.** The critical problems and recommendations regarding early childhood education, foundational literacy/numeracy, and access/enrolment/attendance discussed in chapter 1–3, respectively, are particularly relevant and important for underrepresented and disadvantaged groups; therefore, the measures from chapter 1–3 will be targeted in a concerted way for URGs especially.

**6.4.** In addition, there have been various successful policies and schemes implemented over the past several years (such as targeted scholarships, conditional cash transfers to incentivise parents to send their children to school, providing bicycles for transport, etc.) that have significantly increased participation of URGs in the schooling system in certain areas. These successful policies and schemes of past years must be renewed and significantly strengthened across the country.

**6.5.** It will also be essential to take into account research that ascertains which measures are particularly effective for certain under-represented groups. For example, providing bicycles and organising cycling and walking groups to provide access to school have been shown to be particularly powerful methods in increasing participation of female students - even at lesser distances - because of the safety benefits and comfort to parents that they provide. Peer tutoring, open schooling and appropriate infrastructure to ensure access can be particularly effective for certain children with special needs. Schools having quality early childhood care and education reap the greatest dividends for children who come from families that are socially or economically disadvantaged. Meanwhile, the hiring of counselors and teachers that work with and connect students, parents, schools, and teachers in order to improve attendance and learning outcomes have been found to be especially effective for children in urban poor areas.

**6.6.** Data shows that certain geographical areas contain significantly larger proportions of URGs. Thus it is recommended that certain regions of the country with large populations from URGs should be declared Special Education Zones (SEZs), where all the above schemes and policies are implemented to the maximum through additional concerted efforts and funding from the Centre and States in order to truly change the educational landscape of these Zones.

**6.7.** It must be noted that women cut across all underrepresented groups, making up about one half of all other URGs - unfortunately, the exclusion and inequity that URGs face are only amplified for the women in those URGs. The policy additionally recognises the special and critical role that women play in society and in shaping social mores - not only in their own generation but in the next one; therefore, providing a quality education to girls is the best way to increase the education levels for these URGs not just in the present but also in future generations. The policy thus recommends that the policies and schemes designed to uplift students from URGs should be especially targeted towards girls in these URGs.

**6.8.** In addition, the Government of India will constitute a ‘Gender-Inclusion Fund’ to build the nation’s capacity to provide a quality and equitable education for all girls as well as transgender students. The fund will be available to States to implement priorities determined by the central government critical for assisting women and girls and transgender students in gaining access to education (such as the provisions of sanitation and toilets, bicycles, conditional cash transfers etc.); funds will also enable states to support and scale effective

community-based interventions that address local context-specific barriers to girls/transgender students' access to and participation in a quality education. Similar 'Inclusion Fund' schemes will also be developed to address analogous access issues for other URGs.

**6.9.** All the above policies and measures are absolutely critical to attaining full inclusion and equity for all URGs - but they are not sufficient. What is also required is a change in school culture. All participants in the school education system, including teachers, principals, administrators, counsellors, and students, will be sensitised to the requirements of all students, the notions of inclusion and equity, and the respect and dignity of all persons. Such an educational culture will be the best tool to help students become empowered individuals who, in turn, will enable society to transform into one that is responsible towards its most vulnerable citizens. Inclusion and equity will become a key aspect of teacher education (and training for all leadership, administrative, and other positions in schools); efforts will be made to recruit more high quality teachers and leaders from URGs in order to bring in excellent role models for all students.

**6.10.** Students will also be sensitised through this new school culture brought in by teachers and counsellors, and also through corresponding changes in the school curriculum. The school curriculum will include material on human values such as respect for all persons, empathy, tolerance, inclusion, and equity early on; any biases in school curriculum will be removed, and more material will be included that is relevant and relatable to all communities, and which develops these human values.

### **7. Efficient Resourcing and Effective Governance through School Complexes**

**7.1.** While the establishment of primary schools in every habitation across the country - driven by the Sarva Shiksha Abhiyan (SSA) and other important efforts across the states - has helped to ensure near-universal access to primary schools, it has also led to the development of numerous very small schools. According to U-DISE 2016–17 data, nearly 28% of India's public primary schools and 14.8% of India's upper primary schools have less than 30 students. The average number of students per grade in the elementary schooling system (primary and upper primary, i.e., Grades 1–8) is about 14, with a notable proportion having below 6; during the year 2016–17, there were 1,19,303 single-teacher schools, the majority of them (94,028) being primary schools serving Grades 1–5.

**7.2.** These small school sizes have made it economically suboptimal and operationally complex to run good schools, in terms of deployment of teachers as well as the provision of critical physical resources. Teachers often must teach multiple grades at a time, and teach multiple subjects, including subjects in which they may have no prior background; key areas such as music, arts, and sports are too often simply not taught; and physical resources, such as lab and sports equipment and library books, are simply not available across schools.

**7.3.** The isolation of small schools also has a negative effect on education and the teaching-learning process. Teachers function best in communities and teams, and so do students. Small schools also present a systemic challenge for governance and management. The geographical dispersion, challenging access conditions, and the very large numbers of schools make it

difficult to reach all schools equally. Administrative structures have not been expanded in accordance with the increases in the number of schools.

**7.4.** Although consolidation of schools is an option that is often discussed, it must be carried out very judiciously, and only when it is ensured that there is genuinely no impact on access (e.g., through the construction of quality roads and provision of appropriate bus services / transportation). Such measures are nevertheless likely to result only in limited consolidation, and would not solve the overall structural problem and challenges presented by the large numbers of small schools.

**7.5.** These challenges will, by 2025, be addressed through State/UT governments by adopting innovative mechanisms to group or rationalise schools. The objective behind this intervention would be to ensure that every school has adequate number of counsellors and teachers (shared or otherwise) for teaching all subjects including skill, art, music and sports, etc; ensuring that every school has adequate resources (shared or otherwise) such as library, science labs, equipment, computer labs, skill labs, play grounds, sports facilities, etc.; building a sense of community to overcome isolation of teachers through joint professional development programmes, content development, holding joint activities such as art and science exhibitions, sports meets, quizzes and debates, fairs; ensuring cooperation and support for the education of Children with Special Needs, etc.

**7.6.** One possible mechanism for accomplishing the above would be the establishment of **school complexes**, consisting of one secondary school together with all other schools offering lower grades in its neighbourhood, in a radius of five to ten miles, was first enunciated by the Education Commission (1964–66) but was left unimplemented. This policy strongly endorses the idea of the school complex, wherever possible.

**7.7.** The aim of the school complex will be to: a) build vibrant communities of teachers, school leaders, and other supporting staff; b) better integrate education across all school levels, from early childhood education through Grade 12, as well as vocational and adult education; c) share key material resources such as libraries, science laboratories and equipment, computer labs, sports facilities and equipment, as well as human resources such as social workers, counsellors, and specialised subject teachers - including teachers for music, art, languages, and physical education - across schools in the complex; and d) develop a critical mass of teachers, students, supporting staff, as well as equipment, infrastructure, etc. - resulting in greater resource efficiency and more effective functioning, coordination, leadership, governance, and management of schools in the schooling system.

**7.8.** The establishment of school complexes and the sharing of resources across complexes will have a number of other benefits as a consequence, such as significantly improved support for children with special needs, more topic-centred clubs and academic / sports / arts / crafts events across school complexes, better incorporation of art, music, language, physical education, and other subjects in the classroom through the sharing of teachers in these subjects, better student support, enrolment, attendance, and performance through the sharing of social workers and counsellors, and School Complex Management Committees (rather than simply School Management Committees) for more robust and improved governance, monitoring, oversight, innovations, and initiatives by local stakeholders. Building such larger communities of schools, school leaders, teachers, students, supporting staff, parents, and local citizens would

energise and enable the schooling system, and in a resource-efficient manner.

## 8. Regulation and Accreditation of School Education

**8.1.** The goal of regulation of India's school education system must be to continually improve educational outcomes; it should *not* be to overly restrict schools, prevent innovation, or demoralise teachers, principals, and students. All in all, regulation must aim to empower schools and teachers with trust, enabling them to perform at their very best, while ensuring integrity of the system through the enforcement of complete transparency and full public disclosure of all finances, procedures, and educational outcomes.

**8.2.** At the current time, all three main functions of governance and regulation of the school education system - namely, the provision of public education, the regulation of educational institutions, and policymaking - are handled by a single body, i.e., the Department of School Education (DSE) or its arms (e.g., the DSE and its officials such as the DEO, BEO). This leads to harmful conflicts of interest and excessive centralised concentrations of power; it also leads to ineffective management of the school system, as efforts toward educational provision are often diluted by the focus on the other roles, particularly regulation that the DSE must perform.

**8.3.** The current regulatory regime also has not been able to curb the rampant commercialisation and economic exploitation of parents by many for-profit private schools, yet at the same time it has all too often inadvertently discouraged public-spirited private/philanthropic schools. There has been far too much asymmetry between the regulatory approaches to public and private schools, even though the goals of both types of schools should be the same: to provide a quality education.

**8.4.** The public education system is the foundation of a vibrant democratic society, and the way it is run must be transformed and invigorated in order to achieve the highest levels of educational outcomes for the nation. At the same time, the private philanthropic school sector must also be encouraged and enabled to play a significant and beneficial role.

**8.5.** The key principles and recommendations of this policy regarding the State school education system, the responsibilities within that system, and the approach to its regulation are thus as follows.

**8.6.** The three distinct roles of governance and regulation, namely, the provision/operation of education, the regulation of the education system, and policymaking, will be conducted by separate independent bodies, in order to avoid conflicts of interest and concentrations of power, and to ensure due and quality focus on each role. Specifically:

- a) The educational operations and service provision for the public schooling system of the whole state will be handled by the Directorate of School Education (DSE); it will work to implement policies regarding educational operations and provision, but otherwise will be separated from and work independently of the apex body above.
- b) An independent, state-wide, regulatory body called the State School Regulatory Authority (SSRA) will be created for each state. All regulation will be carried out by the SSRA, based on a very minimal set of basic parameters (namely, safety, security, basic infrastructure, the number of teachers across subjects and grades, probity, and sound

processes of governance), to bring down significantly the heavy load of regulatory mandates currently borne by schools. The framework for these parameters will be created by the SCERT for each state in consultation with various stakeholders, especially teachers and schools. Accreditation and audit will be used to implement these frameworks. Transparent public disclosure of all regulatory information, by the regulatory bodies and by the schools, will be used extensively for public oversight and accountability.

- c) The Department of School Education currently acts as the apex state level body in school education and will be the primary institution 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 regulation of the system, in order to eliminate conflicts of interest.
- d) Academic matters, including standards setting and curricula in the State, will be led by the SCERT (with close consultation and collaboration with the NCERT), which will be reinvigorated as an institution along with the other academic support structures such as the BRCs, BIETs, and DIETs. Meanwhile, certification of competencies of students at the school-leaving stage will be handled by the Boards of Certification/Examination in each State.

**8.7.** Public and private schools will be regulated on the same criteria, benchmarks, and processes, emphasising online and offline public disclosure and transparency rather than mandates, so as to ensure that public-spirited private schools are encouraged and not stifled in any way. Private philanthropic efforts for quality education will be encouraged - thereby affirming the public-good nature of education - while protecting parents and communities from usurious commercial practices, including arbitrary increases in tuition fees. Public disclosure on the school website and on the SSRA 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, and overall student outcomes on standardised evaluations such as the NAS and SAS.

**8.8.** Since the RTE Act, 2009 has been the statutory lynchpin for school regulation and governance for the past decade, it will be reviewed and appropriate modifications made to enable this policy and to incorporate improvements on the basis of the learnings and experiences gained since it was enacted. To ensure that all students, particularly students from underprivileged and disadvantaged sections, have a guaranteed opportunity to participate in high quality schooling from early childhood education (age 3 onwards) through higher secondary education (i.e., until Grade 12), the right to free and compulsory education in the RTE Act will be considered for extension downwards to include up to three years of early childhood education prior to Grade 1, and upwards to include Grades 11 and 12. The RTE 12(1)(c) clause will be better enforced or suitably amended to ensure the intended effect of including disadvantaged students across the education system.

**8.9.** For a periodic 'health check-up' of the overall system, a sample-based National Achievement Survey (NAS) of student learning levels will continue to be carried out by the NCERT. States will also be encouraged to conduct their own census-based State Assessment Survey (SAS), the results of which will be used only for developmental purposes, public disclosure by schools of their overall and anonymised student outcomes, and for continuous improvement of the school education system.



**8.10.** Finally, the children and adolescents enrolled in schools must not be forgotten in this whole process; after all, the school system is designed for them. Careful attention to their safety and rights, and the various difficult issues faced by adolescents especially the girl children, issues such as substance abuse and forms of discrimination and harassment, must be provided the highest importance by the system, with clear, safe, and efficient mechanisms for reporting and for due process on any infractions against children's/adolescents' rights or safety. The development of such mechanisms that are effective, timely, and well-known to all students will be accorded high priority.

## II. Higher Education

### 9. Quality Universities and Colleges: A New and Forward-looking Vision for India's Higher Education System

**9.1.** As India moves towards becoming a true knowledge society and economy - and in view of the forthcoming fourth industrial revolution, where India aims to lead and an increasing proportion of employment opportunities will consist of skilled jobs of a creative and multidisciplinary nature - more and more young Indians will aspire to higher education. Accordingly, the higher educational system in India must, at the earliest, be re-adjusted, re-vamped, and re-energised to fulfill these important and noble aspirations of the people.

**9.2.** In view of these requirements of the 21<sup>st</sup> century, the aim of a quality university or college education must be to develop good, well-rounded, and creative individuals. It must enable an individual to study one or more specialised areas of interest at a deeper level, while at the same time build character, ethical and constitutional values, intellectual curiosity, scientific temper, creativity, spirit of service, and 21<sup>st</sup> century capabilities across a range of disciplines including the sciences, social sciences, arts, humanities, languages, as well as professional, technical, and vocational crafts. A quality higher education must enable personal accomplishment and enlightenment, constructive public engagement, and productive contribution to society. It must prepare students for more meaningful and satisfying lives and work roles, and enable economic independence. Quality university college education must therefore aim to be both a joy and an opportunity, to which all citizens must have access if they so desire.

**9.3.** At the level of society, the aim of higher education must be to enable the development of an enlightened, socially-conscious, knowledgeable, and skilled nation that can uplift its people and construct and implement robust solutions to its own problems. Higher education must thus form the basis for knowledge creation and innovation in the nation and thereby contribute deeply to a growing national economy. The purpose of quality higher education is therefore more than simply the creation of greater opportunities for individual employment; it represents the key to more vibrant, socially-engaged, and cooperative communities and a happier, cohesive, cultured, productive, innovative, progressive, and prosperous nation.

**9.4.** Some of the major problems currently plaguing the higher education system in India include: i) a severely fragmented higher educational ecosystem, with more than 50,000 higher

education institutions (HEIs), a large proportion of which offer only a single programme and have fewer than 100 students and a large proportion of which are commercial enterprises in which little or no education is taking place; ii) there is a rigid separation of disciplines, with too much early specialisation and streaming of students into narrow areas of study; iii) a lack of access to higher education, especially in socio-economically disadvantaged areas; iv) a lack of teacher and institutional autonomy to innovate and excel; v) inadequate mechanisms for merit-based career management and progression of faculty and institutional leaders; vi) a lack of research at most universities and colleges, and of transparent and competitive peer-reviewed research funding across disciplines; vii) suboptimal governance and leadership of HEIs; and viii) a regulatory system that is not empowered to close down fake colleges, while constraining excellent and innovative institutions.

**9.5.** This policy envisions a complete overhaul and re-energising of the higher education system to overcome the aforementioned eight challenges and thereby deliver high-quality higher education, with equity and inclusion, to all young people who aspire to it. The policy's vision includes the following key changes to the current system: (a) moving towards a higher educational system consisting of large, multidisciplinary universities and colleges, with at least one in or near every district; (b) moving towards a more liberal, multidisciplinary undergraduate education; (c) moving towards faculty and institutional autonomy; (d) re-vamping curriculum, pedagogy, assessment, and student support for enhanced student experiences; (e) reaffirming the integrity of faculty and institutional leadership positions through merit-appointments and career progression based on teaching, research, and service; (f) establishment of a National Research Foundation to fund outstanding peer-reviewed research and to actively seed research in universities and colleges; (g) governance of HEIs by highly-qualified independent boards having academic and administrative autonomy; (h) "light but tight" regulation by a single regulator for all of higher education, including professional education; and (i) increased access, equity, and inclusion through a range of measures, including open schooling and ODL, greater opportunities for outstanding public education, all infrastructure and learning materials accessible to learners with special needs, and substantial increases in scholarships at private/philanthropic universities for disadvantaged and underprivileged students.

## **10. Institutional Restructuring and Consolidation**

**10.1.** The main thrust of this policy regarding higher education is the ending of the fragmentation of higher education by moving higher education into large multidisciplinary universities, colleges, and HEI clusters, each of which will aim to have upwards of 3,000 or more students. This would help build vibrant communities of scholars and peers, break down harmful silos, enable students to become well-rounded across disciplines (including artistic, creative, and analytic subjects as well as sports), develop active research communities across disciplines (including cross-disciplinary research), and increase resource efficiency, both material and human, across higher education.

**10.2.** Moving to large multidisciplinary universities and HEI clusters is thus the highest recommendation of this policy regarding the structure of higher education. The ancient Indian universities Takshashila and Nalanda, which had thousands of students from India and the world studying in vibrant multidisciplinary environments, and modern universities such as the Ivy League Universities/Stanford/MIT in the United States today, amply demonstrate the type

of great success that such large multidisciplinary research universities can bring. It is time that India bring back this great Indian tradition which is needed more today than ever to create well-rounded and innovative individuals, and which is already transforming other countries educationally and economically.

**10.3.** This vision of higher education will require, in particular, a new vision for what constitutes a higher education institution (HEI), i.e., a university or a college. A university should mean a multidisciplinary institution of higher learning that offers undergraduate and graduate programmes, with high quality teaching, research, and service. Whereas premier universities should be ‘research intensive’, other universities shall, while placing greater emphasis on teaching should conduct significant research. All colleges shall eventually become Autonomous Colleges, which are large multidisciplinary institutions of higher learning primarily focused on undergraduate teaching. A college should therefore either be an autonomous degree granting institution, or a constituent college of a university - in the latter case it would be fully a part of the university.

**10.4.** All higher education institutions (HEIs) shall be multidisciplinary and shall aim to have student enrolments in the thousands, for optimal use of infrastructure and resources, and to attain the multidisciplinary ecosystem of teaching, research, and service that is being envisioned for the higher education of the future. It is understood that this process will take time; the first move for all HEIs will be to become multidisciplinary - they may then become larger over time as space permits.

**10.5.** These three ‘types’ of institutions are not in any natural way a sharp, exclusionary categorisation, but are along a continuum. HEIs will have the autonomy and freedom to move from one type to another, on the basis of their plans, actions, and effectiveness. The most salient marker for the three types of institutions will be the focus of their goals and work. The Accreditation System will develop and use appropriately different and relevant norms for the three types of HEIs. However, the expectations of high quality of education, and therefore of teaching-learning, across all types and all HEIs will be the same.

**10.6.** In addition to teaching and research, HEIs will also have other crucial responsibilities, which they will discharge through appropriate resourcing and structures. This includes supporting other HEIs in their development, community engagement and service, contribution to various fields of practice, faculty development for the higher education system, and contribution to school education.

**10.7.** In the long term (by 2040), the Indian Higher Education system will consolidate into a smaller number of institutions, across the three types of HEIs and HEI clusters, but the average enrolment of these institutions will be much larger than the average enrolment today; this will help increase resource efficiency, multidisciplinary capacity and quality, as well as GER.

**10.8.** A suitable number of institutions of each type will be developed in order to ensure geographical diversity with full access, equity, and inclusion. The goal for GER over the next 10 years will be 50%, commensurate with the aspirations of the people and comparable with other rapidly developing nations (such as, e.g., China and Brazil, which have GERs in higher education of 44% and 50%, respectively). While a number of new institutions may be developed in order to attain these goals, a large part of the capacity creation will happen by

consolidating, expanding, and improving existing HEIs.

**10.9.** Growth will be in both public and private institutions, with a strong emphasis on developing a large number of outstanding public institutions of each type. There will be a fair and transparent system for determining (increased) levels of public funding support for public HEIs. This system will give equitable opportunity for public institutions to grow and develop, and will be based on transparent, pre-announced criteria from within the accreditation norms of the Accreditation System. Access to high-quality institutions in disadvantaged geographies will be a priority. This consolidation, expansion, and improvement shall ensure equitable and high-quality higher education across the country.

**10.10.** All types of institutions will have the option to run Open Distance Learning (ODL) programmes, provided they are specifically accredited to do so (see 20), in order to enhance their offerings, improve access, increase GER, and provide increased opportunities for lifelong learning. All ODL programmes (and their components) 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.

**10.11.** Single-stream HEIs will be phased out, and all single-stream HEIs will move towards becoming vibrant multidisciplinary institutions and HEI clusters. HEIs will gradually move towards full autonomy - academic, administrative, and eventually financial - in order to enable this vibrant culture. The autonomy of public institutions will be backed by adequate public financial support and stability. Private institutions with public-spirited commitment to high-quality equitable education will be encouraged and treated on par. The new regulatory system envisioned by this policy (see 20) will foster this overall culture of empowerment and autonomy to innovate, including by gradually phasing out the system of 'affiliated colleges', in order to enable and encourage local innovation and excellence.

**10.12.** Admission to all undergraduate programmes of HEIs will be preferably through assessments of the National Testing Agency, to eliminate the burden of numerous overlapping entrance exams developed separately by each HEI. Performance in national competitions such as Olympiads, Topic-centred summer programmes (including sports programmes or teams), etc, as described in §4.10, will also be permissible as a part of the objective admissions criteria developed and set by each HEI, especially the IITs and NITs.

**10.13.** The overall higher education sector will be integrated into one higher education system -including professional and vocational education. This Policy and its approach will be equally applicable to all HEIs across all current streams, which would eventually merge into one coherent ecosystem of higher education.

## **11. Towards a More Liberal Education**

**11.1.** India has a long tradition of holistic and multidisciplinary learning in the so-called 'liberal arts', from universities such as Takshashila and Nalanda to extensive literatures combining subjects across fields. Ancient books described education as knowledge of the 64 Kalas or arts, and among these 64 arts were included subjects such as singing, playing musical instruments, and painting, but also more 'scientific' fields such as engineering, medicine, and mathematics, as well as more 'vocational' fields such as carpentry. The notion of 'knowledge of many arts' i.e., what is

called 'liberal arts' in modern times - must be brought back to Indian education, as it is exactly the kind of education that will be required for the 21<sup>st</sup> century.

**11.2.** Assessments of educational approaches in undergraduate education that integrate the humanities and arts with STEM have consistently showed positive learning outcomes, including increased creativity and innovation, critical thinking and higher-order thinking capacities, problem-solving abilities, teamwork, communication skills, deeper learning and mastery of curricula across fields, increases in social and moral awareness, besides general engagement and enjoyment of learning. As an example, a survey of Nobel Prize winning scientists revealed that they are 3 times more likely than the average scientist to have an artistic hobby. Research is also improved and enhanced through a liberal education approach.

**11.3.** A comprehensive liberal arts education will develop all capacities of human beings - intellectual, aesthetic, social, physical, emotional, and moral - in an integrated manner. This will help develop well-rounded individuals that possess: critical 21<sup>st</sup> century capacities in fields across the arts, humanities, languages, sciences, social sciences, and professional, technical, and vocational fields; an ethic of social engagement; and rigorous specialisation in a chosen field or fields. Such a liberal education shall be, in the long term, the approach of all undergraduate programmes, including those in professional, technical, and vocational disciplines.

**11.4.** A holistic and liberal education as described so beautifully in India's past is indeed what is needed for the education of India in the future to truly lead the country into the 21st century and the fourth industrial revolution. Even engineering schools such as the IITs will move towards more liberal educations with more arts and humanities, while arts and humanities students will aim to learn more science -while all will make the effort to learn more vocational subjects. India's rich legacy in the arts as well as in the sciences and beyond will greatly help in making the move towards liberal education an easy and natural transition.

**11.5.** Imaginative and flexible curricular structures will enable creative combinations of disciplines for study, and would offer multiple useful entry and exit points, thus demolishing currently prevalent rigid boundaries and creating new possibilities for life-long learning. Graduate-level (masters and doctoral) education in large multidisciplinary universities, while providing rigorous research-based specialisation, would also provide opportunities for multidisciplinary work, including in education and in industry.

**11.6.** Large multidisciplinary universities and colleges, as described in §10, will facilitate the move towards true high-quality liberal education. Flexibility in curriculum and novel and engaging course options will be on offer to students, in addition to rigorous specialisation in a subject or subjects. This will be encouraged by increased faculty and institutional autonomy in setting curricula. 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.

**11.7.** Departments in Languages, Literature, Music, Philosophy, Indology, Art, Dance, Theatre, Education, Mathematics, Statistics, Pure and Applied Sciences, Sociology, Economics, Sports, and other such subjects truly needed for a multidisciplinary, stimulating Indian education and environment will be established and strengthened at HEIs across the country. Lessons in seva/service, and participation in community service programmes, will also be considered an

integral part of liberal education. Finally, as part of a liberal education, students will be provided with opportunities for internships with local industry, businesses, artists, craftspersons, etc., as well as research internships with faculty and researchers at their own or other HEIs or research institutions, so that students may actively engage with the practical side of their learning and, as a by-product, further improve their employability.

**11.8.** The structure and lengths of degree programmes shall be adjusted accordingly. The undergraduate degree will be of either 3-or 4-year duration. HEIs may offer multiple exit options within this period, with appropriate certifications, e.g., an advanced diploma in a discipline or field (including vocational and professional areas) after completing 2 years of study or a diploma after completing 1 year.

**11.9.** The 4-year programme will provide students the opportunity to experience the full range of liberal arts education. This will be called the Bachelor of Liberal Arts (BLA) or Bachelor of Liberal Education (BLE) in the chosen major and minors. The 3-year programme will lead to a Bachelor's degree. Both programmes may lead to a degree 'with Research', if the student completes a rigorous research project as specified by the HEI. HEIs may choose to call their 3-year undergraduate degree a Bachelor of Arts, or Science, or Vocation, or the appropriate professional field. Undertaking a Ph.D. shall require either a Master's degree or a 4-year Bachelor's degree with Research. The M.Phil. programme shall be discontinued.

**11.10.** Model public universities for liberal 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. They will help set the highest standards for liberal education across India.

**11.11.** This move towards large multidisciplinary HEIs will be carried out as swiftly as possible and in a systematic and thoughtful manner, by consolidating and restructuring existing institutions and building new ones -including establishing new world class model institutions of this type (Model Multidisciplinary Colleges) across the country, and also establishing at least one large high quality multidisciplinary HEI in (or close to) every district.

**11.12.** Three types of such HEIs along the research-teaching and university-college spectrum will be developed in accordance with the needs of the country. Single-stream HEIs will be phased out, and all single-stream HEIs will move towards becoming multidisciplinary.

## **12. Outstanding Learning Environments and Support for Students**

12.1. Effective learning requires a comprehensive approach across curriculum, pedagogy, and student support. Curriculum must be engaging and relevant, and articulate a clear vision for the desired outcomes and how to attain them. High-quality pedagogy is then necessary to successfully impart the curricular material to students; pedagogical practices determine the learning experiences that are provided to students - thus directly influencing learning outcomes. Last but not least, the development of capacities that promotes student wellness - such as fitness, good health, psycho-social well being, and sound ethical grounding - are also critical for high-quality learning. Often, higher education represents the first time in students' lives when they are living and working independently, and the resulting stress and pressures of student life can sometimes form a serious threat to wellness. Robust care and support systems are thus vital for maintaining beneficial

conditions for student wellness, and form an important precondition for effective learning.

12.2. In summary, curriculum, pedagogy, and student support are the fundamental requirements for quality learning; infrastructure, resources, technology, etc., while also important, are means for supporting these necessary ingredients. A number of initiatives will thus be required for ensuring that learning environments are engaging and supportive for all students to succeed.

12.3. First, institutions and faculty will have the autonomy to innovate on matters of curriculum, pedagogy, and assessment -informed by a broad overall framework of higher educational qualifications that ensures consistency across institutions and equivalence across programmes, both in the ODL and the traditional 'in-class' modes. Curriculum and pedagogy will be designed by institutions and motivated faculty to ensure a stimulating and engaging learning environment for all students, and assessment will be used to further the goals of each programme.

12.4. Second, each institution will integrate its academic plans - ranging from curricular improvement to quality of classroom transaction - into its larger institutional development plan. Each institution will be committed to the holistic development of students, and create strong internal systems for supporting diverse student cohorts in academic and social domains -both inside and outside formal academic interactions in the classroom. For example, all HEIs will have mechanisms and opportunities for funding for topic-centered clubs and activities organised by students (with the help of faculty and other experts as needed), such as clubs and events dedicated to science, mathematics, poetry, language, literature, debate, music, table tennis, etc. Over time, such activities could be incorporated into the curriculum once appropriate faculty expertise and campus student demand is developed. Faculty will have the capacity and training to be able to approach students not just as teachers in the classroom, but also as mentors and guides.

12.5. Third, students from socio-economically disadvantaged backgrounds require particular encouragement and support to make the transition to higher education successfully. Providing access is only the first step; continuous support must also be provided. Universities and colleges will thus be required to set up high-quality support centres and will be given adequate funds and academic resources to carry this out effectively. There will be professional academic and career counselling available to all students, as well as counsellors to ensure physical and emotional well being.

12.6. Fourth, ODL provides a natural path to increase access to high-quality higher education. In order to leverage its potential completely, ODL will be renewed through concerted, evidence-based efforts towards expansion while ensuring adherence to clearly articulated standards of quality. ODL programmes will aim to be equivalent to the highest quality in-class programmes available.

12.7. Finally, all programmes, courses, curricula, pedagogy across subjects, including those in in-class and in ODL modes, as well as student support will aim to achieve global standards of quality. This will also help in having larger numbers of international students studying in India, and provide greater mobility to students in India who may wish to visit, study at, transfer credits to, or carry out research at institutions abroad, and vice versa. Courses and programmes in subjects such as Indology, Indian languages, arts, history, culture, and modern India, internationally relevant curricula in the sciences, social sciences, and beyond, meaningful opportunities for social engagement, quality residential facilities and on-campus support, etc. will be fostered to attain this goal of global quality standards, attract greater numbers of international students, and achieve the

goal of 'internationalisation at home'.

### **13. Motivated, Energised, and Capable Faculty**

13.1. The most important factor in the success of higher education institutions is the quality and engagement of its faculty. Acknowledging the criticality of faculty in achieving the goals of higher education, various initiatives have been introduced in the past several years to systemise recruitment and career progression, and to ensure equitable representation from various groups in the hiring of faculty. Compensation levels of permanent faculty in public institutions have also been increased substantially. Various initiatives have also been taken towards providing faculty with professional development opportunities. However, despite these various improvements to the status of the academic profession -and the existence of so many model faculty members who truly inspire us all - on average, faculty motivation in terms of teaching, research, and service in HEIs remains far lower than would be truly desired and needed for the higher educational system to thrive and reach the high levels that are expected of it. The various factors that lie behind low faculty motivation levels must be addressed to ensure that each faculty member is happy, enthusiastic, engaged, and motivated towards advancing her/his students, institution, and profession. To this end, the policy recommends the following initiatives to achieve the very best, motivated, and capable faculty in HEIs.

13.2. As the most basic step, service conditions that are conducive to excellent teaching, research, and service will be ensured. All HEIs will be equipped with the basic infrastructure and facilities necessary to carry out good work in higher education, including clean drinking water, clean working toilets, blackboards, offices, teaching supplies, labs, and pleasant classroom spaces and campuses.

13.3. Teaching duties also will not be excessive, and student-teacher ratios not too high, so that the activity of teaching remains pleasant and there remains adequate time for interaction with students, conducting research, and other university activities. Faculty will be appointed to individual institutions and not be transferable across institutions, so that they may feel truly invested in, connected to, and committed to their institution and community.

13.4. Faculty will be trusted and empowered to maximise their motivation; they will be given the freedom to creatively design their own curricular and pedagogical approaches, including with respect to syllabi, pedagogy, textbook selections, assignments, and assessments. Faculty will also be empowered to decide how best to spend their time, with respect to research and other institutional activities - within basic norms. In summary, empowering the faculty to conduct innovative teaching, research, and service as they see best will be a key motivator and enabler for faculty to do truly outstanding, creative work.

13.5. Excellence will be further incentivised through merit-based recruitment within the existing reservation categories, and career management. Institutional decisions regarding faculty recruitment, retention, salary increases, promotions, recognition, and movement into institutional leadership will move, while implementing the reservations, towards being merit-and performance-based, and will not anymore be based on seniority, let alone nepotism, bribery, etc. Meanwhile, faculty who do not deliver on basic norms will be held to account.



13.6. In keeping with the vision of autonomous institutions empowered to drive excellence, HEIs will have clearly defined, independent, and transparent processes and criteria for faculty recruitment, while following the reservations provided under the provisions of Constitution of India. A robust and merit-based tenure-track, promotion, and salary structure will be developed, with multiple salary levels within each faculty rank, to incentivise and recognise excellent and committed faculty. The goal will be to ensure the highest quality teaching, research, and service on campus. A system of multiple parameters for proper assessment of performance will be developed for the same, including peer reviews, student reviews, innovations in teaching and pedagogy, quality and impact of research, professional development activities, and other forms of service to the institution and the community. Such merit-based assessments would be used to determine tenure decisions, as well as promotions and salary increases for each faculty member, among other possible department-wide and institution-wide recognitions.

13.7. Vertical mobility of faculty based on merit will also be essential; outstanding faculty with demonstrated leadership and management skills would be trained over time to take on increasingly important academic leadership positions. The process in place for faculty recruitment, tenure, development, and career management / progression will be part of the institutional development plan of each HEI.

13.8. The presence of outstanding and enthusiastic institutional leaders that cultivate excellence and innovation through a merit-and performance-based process and culture is the need of the hour. High-quality institutional leadership is extremely important for the success of an institution and of its faculty. Various outstanding faculty with high academic and service credentials as well as demonstrated leadership and management skills will be identified early, and trained through a ladder of leadership positions. Leadership positions shall not remain vacant, but rather an overlapping time period during transitions in leadership shall be the norm to ensure the smooth running of institutions. Corrupt practices will be removed and replaced by merit-based hiring of institutional leaders through committees of experts. Institutions or individuals engaging in any corrupt practice in the selection of institutional leaders will be brought to justice.

13.9. Institutional leaders will aim to create a culture of excellence that will motivate and incentivise outstanding and innovative teaching, research, institutional service, and community outreach from faculty members and all HEI leaders. It is the institutional leaders that would be held to account for the quality and direction of the institution. See also §19.

### **14. Equity and Inclusion in Higher Education**

14.1. Entry into quality higher education experiences can open up a vast array of possibilities which can lift both individuals as well as communities out of cycles of disadvantage. For this reason, making high-quality higher education opportunities available to all individuals, regardless of circumstances of birth, must be among the highest priorities.

14.2. Many of the reasons for, and the dynamics of, exclusion of certain groups are common across school and higher education. Therefore, the approach to equity and inclusion must be common across school and higher education; furthermore, there must be continuity across the stages to ensure a sustainable reform. Thus, the policy initiatives required to meet the goals of equity and inclusion in higher education must be read in conjunction with those for school education.

14.3. There are of course certain facets of exclusion, both causal and in their effect, that are particular to or substantially more intense in higher education - these must be addressed specifically for higher education, for all URGs - and include: lack of knowledge of higher education opportunities, aspirational distancing of higher education, economic opportunity cost of pursuing higher education, overall expenses, admission processes, language barriers, economic potential of programmes, and lack of within-institutions facilities and support.

14.4. The policy for equity and inclusion in higher education must therefore contain and continue the policy actions for school education, but also include additional actions that are specific to higher education. Such additional policy initiatives for equity and inclusion in higher education include:

- setting clear targets for higher GER for URGs;
- enhancing access by building more high-quality HEIs in Special Education Zones containing larger numbers of URGs;
- requiring Institutional Development Plans that contain specific plans for action on increasing participation from URGs, including:
  - mitigating opportunity costs and fees for pursuing higher education;
  - providing more financial assistance and scholarships to URGs;
  - conducting outreach on higher education opportunities and scholarships among URGs;
  - making admissions processes more inclusive;
  - making curriculum more inclusive;
  - increasing economic and employability potential of higher education programmes;
  - developing more degree courses in Indian languages and bilingually;
  - ensuring all buildings and facilities are wheelchair-accessible;
  - developing bridge courses for those students that may come from disadvantaged educational backgrounds;
- providing socio-emotional and academic support for all such students through suitable counselling and mentoring programmes.

## 15. Teacher Education

15.1. Teacher education is truly vital in creating the team of school teachers that will shape the next generation. Teacher preparation is an activity that requires multidisciplinary perspectives and knowledge, the formation of dispositions and values, and the development of practice under the best mentors. Teachers must be grounded in Indian values, languages, knowledge, ethos, and traditions, while also being well-versed in the latest advances in education and pedagogy.

15.2. Heartbreakingly, the teacher education sector has been beleaguered with mediocrity as well as rampant corruption due to commercialisation. According to the Justice J S Verma Commission (2012) constituted by the Supreme Court, a majority of standalone teaching institutes over 10,000 in number - are not even attempting serious teacher education, but are essentially selling degrees for a price. Regulatory efforts so far have neither been able to curb the corruption rampant in the system, nor enforce basic standards for quality, and in fact have had the negative effect of curbing the growth of excellence and innovation in the sector. The sector and its regulatory system are therefore in urgent need of revitalisation through radical action, in order to raise standards and restore integrity, credibility, efficacy, and high quality to the teacher education system.

**15.3.** In order to improve and reach the levels of integrity and credibility required to restore the prestige of the teaching profession and thereby attain a successful school system, substandard and dysfunctional teacher education institutions (TEI) that do not meet basic educational criteria must and will be shut down. This effort will be launched in a mission mode by MoE with strong political will, positive administrative intent, and an effective implementation strategy. All TEIs will be held accountable to adherence to the basic criteria for approval of their programmes; after giving one year for remedy, if any breaches are found, they will be shut down if the breaches are not remedied. There must be a sound legal approach developed to ensure this enforcement is carried out effectively. By 2023, India should have only educationally sound teacher preparation programmes in operation, developing professionally competent teachers.

**15.4.** Because teacher education requires multidisciplinary inputs and a marriage of high-quality content and pedagogy, all teacher preparation must be conducted within composite multidisciplinary institutions. To this end, all large multidisciplinary universities - including all public universities as well as all Model Multidisciplinary Colleges - will aim to establish, develop, and house outstanding education departments which, aside from carrying out cutting-edge research in various aspects of education, will also run B.Ed. programmes to educate future teachers, in collaboration with other departments such as psychology, philosophy, sociology, neuroscience, Indian languages, arts, history, and literature, as well as various other specialised subjects such as science and mathematics. Moreover, all independent TEIs will be required to convert to multidisciplinary institutions by 2030, since they will have to offer the 4-year integrated teacher preparation programme.

**15.5.** The 4-year integrated B.Ed. offered by such multidisciplinary HEIs will, by 2030, become the minimal degree qualification for school teachers. By 2030, every HEI offering a teacher education programme will be multidisciplinary and offer the 4-year integrated B.Ed. programme. The 4-year integrated B.Ed. will be a dual-major liberal Bachelor's degree, in Education as well as a specialised subject (such as a language, or history, music, mathematics, computer science, chemistry, economics, etc.). Each HEI offering the 4-year integrated B.Ed. may also design a 2-year B.Ed. on its campus, for outstanding students who have already received a Bachelor's degree in a specialised subject and wish to pursue teaching. Scholarships for meritorious students will be established for the purpose of attracting outstanding candidates to both the 4-year and 2-year B.Ed. programmes. A 1-year B.Ed. may be designed for particularly outstanding candidates who have received a 4-year B.L.A./B.L.E. undergraduate degree in a specialised subject.

**15.6.** Multidisciplinary higher educational institutions will work towards establishing high-quality education departments and teacher education programmes, and will be strongly supported by government funding to achieve this goal. Such HEIs will ensure the availability of a range of experts in education and related disciplines as well as specialised subjects. Each higher educational institution will have a network of government and private schools and school complexes to work with in close proximity, where potential teachers will student-teach (among other synergistic activities between HEIs and school complexes, such as community service, adult and vocational education, etc.). Such HEIs will develop holistic teacher education programmes based on their academic subject strengths related to education as well as in specialised subjects. Beyond the teaching of cutting-edge pedagogy 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.

**15.7.** Admission to pre-service teacher preparation programmes, like all HEI admissions, will be carried out in large part through subject and aptitude tests as conducted by the National Testing Agency.

**15.8.** The faculty profile in Departments of Education will necessarily aim to be diverse. Not everyone would be required to have a Ph.D., but teaching experience and field research experience will be highly valued. Faculty with training in areas of social sciences that are directly relevant to school education (e.g., psychology, child development, linguistics, sociology, philosophy/political science) as well as from science education, mathematics education, social science education, and language education programmes will be attracted and retained in teacher education institutions, to strengthen multidisciplinary education of teachers and provide rigour in conceptual development.

**15.9.** All fresh Ph.D. entrants, irrespective of discipline, will be required to have taken 8-credit courses in teaching / education / pedagogy related to their chosen Ph.D. subject during their doctoral training period. Exposure to pedagogic practices, designing curriculum, credible evaluation systems, and so on will be ensured, since many research scholars will go on to become faculty. Ph.D. students will also have a minimum number of hours of actual teaching experience gathered through teaching assistantships and other means. Ph.D. programmes at universities around the country must be re-oriented for this purpose. Opportunities for Ph.D. students to assist faculty as teaching assistants must be created as part of all Ph.D. programmes.

**15.10.** In-service continuous professional development for college and university teachers will continue at the Academic Staff Colleges, recently renamed as Human Resource Development Centres (HRDCs); however, these centres will be integrated completely into the universities that presently host them, instead of being seen as external entities as they are now. They will also be incorporated in the Regional Institutes of Education (RIEs) of NCERT. The HRDCs will either become into the Department of Education if one already exists, or become the seed for creating such a Department.

## **16. Reimagining Vocational Education**

**16.1.** Vocational education refers to deliberate interventions to bring about learning that would make students productive in designated areas of economic activity. Although ‘work productivity’ is not the only aim and concern of vocational education, it is its distinctive objective, and this sets it apart from other forms of education and training. India needs to embrace the full breadth and depth of the definition of vocational education, given the scale of its ambitions with regard to realising its demographic dividend.

**16.2.** Vocational education has a very large scope covering the four broad sectors of the economy, namely, agriculture, manufacturing, non-manufacturing, and services. India also has a rich tradition of arts and crafts and other indigenous knowledge that must also be included under the umbrella of vocational education. As many as 20 ministries of State and Central governments, as well as industry and businesses in the private sector, are engaged in vocational education and training youth for employment.

**16.3.** The 12th Five-Year Plan (2012–2017) estimated that only a very small percentage of the Indian workforce in the age group of 19–24 (less than 5%) received formal vocational education;

this may be compared to other countries such as the USA where the number is 52%, Germany 75%, and South Korea as high as 96%. These numbers only underline the urgency of the need to hasten the spread of vocational education in India.

**16.4.** Some of the reasons for this include the fact that vocational education has in the past focused largely on dropouts (Grade 8 and upwards) and on Grades 11–12. However, students passing out from Grades 11–12 with vocational subjects did not have well-defined pathways to continue with their chosen vocations in higher education. The admission criteria for general higher education were also not designed to provide openings to students who had vocational education qualifications, leaving them at a disadvantage relative to their compatriots from mainstream education. This led to a complete lack of vertical mobility for students from the vocational education stream, an issue that has only been addressed recently through the announcement of the National Skills Qualifications Framework (NSQF) in 2013.

**16.5.** The lack of planning and the poor delivery of vocational education in the past has contributed to the creation of a social status hierarchy in which vocational education is perceived to be inferior to mainstream education, meant largely for students who are unable to cope with the latter. This is a perception that persists even today, and affects the choices students make. It is a serious concern that can only be dealt with by a complete re-imagining of how vocational education is offered to students in the future. This policy aims to overcome the social status hierarchy associated with vocational education through requiring that ALL educational institutions -schools, colleges and universities -integrate vocational education programmes into mainstream education in a phased manner, beginning with vocational exposure at early ages, quality vocational education through secondary school and smoothly into higher education. Integrating vocational education in this way will ensure that every child learns at least one vocation and is exposed to several more, emphasising the dignity and importance of labour and exciting students about various vocations including those involving local arts and artisanship.

**16.6.** This Policy sets a goal of achieving skill development among at least 50% of learners through the school and higher education system by 2025, in order to realise the full potential of India's demographic dividend.

**16.7.** Vocational education will be integrated into all educational institutions in a phased manner over the next decade. Focus areas will be chosen based on skills gap analysis and mapping of local opportunities, and technical and vocational education will become part of the larger vision of liberal education. The National Committee for the Integration of Vocational Education (NCIVE) will oversee this effort. This transition will be facilitated through collaboration between educational institutions and technical institutions and industry, with the help of a separate 'Vocational Education Inclusion Fund' for integration.

**16.8.** It is imperative that vocational education is smoothly integrated into colleges and universities, so that the acceptance of vocational education grows rapidly and achieves the targets set in this policy. Vocational education at the undergraduate level will be scaled up to a capacity of 50% of enrolment by 2030-35. Higher education institutions will offer vocational education either on their own or in partnership with industry. The B.Voc. degrees introduced in 2013 will continue to exist, but vocational courses will also be available to students enrolled in all other Bachelor's degree programmes, including the 4-year Liberal Education programmes. HEIs will also be allowed to conduct short-term certificate courses in various skills including soft skills. 'Lok Vidya,'

knowledge developed in India, will be made accessible to students through integration into vocational education courses.

**16.9.** Individual institutions that are early adopters must innovate to find models and practices that work and then share these with other institutions through mechanisms set up by NCIVE, so as to help extend the reach of vocational education. Models of offering vocational education, and apprenticeships, will also be experimented with by higher education institutions. Incubation centres will be set up in higher education institutes in partnership with industries.

**16.10.** The National Skills Qualifications Framework 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 Labour Organisation. This Framework will provide the basis for Recognition of Prior Learning. Through this, dropouts from the formal system will be reintegrated by aligning their practical experience with the relevant level on the Framework. The Framework will also facilitate mobility across general and vocational education.

### **17. Professional Education**

17.1. Preparation of professionals must involve an education in the ethic and importance of public purpose, an education in the discipline, and an education for practice. For this to be achieved, professional education should not take place in the isolation of one's specialty.

17.2. Professional education will thus become an integral part of the overall higher education system. The practice of setting up stand-alone technical universities, health science universities, legal and agricultural universities, or institutions in these or other fields, will be discontinued. All institutions offering either professional or general education must organically evolve into institutions offering both seamlessly by 2030.

17.3. Agricultural education with allied disciplines will be revived. Although Agricultural Universities comprise approximately 9% of all universities in the country, enrolment in agriculture and allied sciences is less than 1% of all enrolment in higher education. Both capacity and quality of agriculture and allied disciplines must be improved in order to increase agricultural productivity through better skilled graduates and technicians, innovative research and market-based extension linked to technologies and practices. Capacity to prepare professionals in agriculture and veterinary sciences through programmes integrated with general education will be increased sharply. The entire design of agricultural education shall be changed to develop professionals with the ability to understand and use local knowledge, traditional knowledge and emerging technologies while being cognizant of critical issues such as declining land productivity, climate change, food sufficiency for our growing population, etc. Institutions offering agricultural education must benefit the local community directly; one approach could be to set up Agricultural Technology Parks to promote technology incubation and dissemination.

17.4. Legal education programmes will be restructured. Professional education in law must be globally competitive, adopting best practices and embracing new technologies for wider access to justice and timely delivery of justice. At the same time, it must be informed and illuminated with Constitutional values of Justice - Social, Economic, and Political - and directed towards national

reconstruction through instrumentation of democracy, rule of law, and human rights. The curricula for legal studies must reflect socio-cultural contexts along with, in an evidence-based manner, the history of legal thinking, principles of justice, practice of jurisprudence, and other related content appropriately and adequately. State institutions offering law education must consider offering bilingual education for future lawyers and judges - in English and in the language of the State in which the law programme is situated. This is to alleviate delay in legal outcomes consequent to need for translation.

17.5. Healthcare education shall be re-envisioned such that the duration, structure, and design of the educational programmes are as required for the roles that graduates will play. For example, every healthcare process/intervention (e.g., taking/reading an ECG) does not necessarily need a fully qualified doctor. All MBBS graduates must possess: (a) Medical skills, (b) Diagnostic skills, (c) Surgical skills, and (d) Emergency skills. Students will be assessed at regular intervals on well-defined parameters primarily for the skills required for working in primary care and in secondary hospitals. Quality of nursing education will be improved; a national accreditation body for nursing and other sub-streams will be created.

17.6. Given that our people exercise pluralistic choices in healthcare, our healthcare education system must be integrative -this would mean, illustratively, that all students of allopathic medical education must have a basic understanding of Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy (AYUSH), and vice versa. There shall also be a much greater emphasis on preventive healthcare and community medicine in all of healthcare education.

### **18. Catalysing quality academic research in all fields through a new National Research Foundation**

18.1. Knowledge creation and research are well-known to be centrally critical to growing and sustaining a large and vibrant economy, uplifting society, and continuously inspiring a nation to achieve even greater heights. Indeed, some of the most prosperous civilisations throughout history, from ancient times (such as India, Mesopotamia, Egypt, China, and Greece) to the modern era (such as the United States, Germany, Israel, South Korea, and Japan), were/are strong knowledge societies that attained their intellectual and material wealth in large part through celebrated and fundamental contributions to new knowledge - in the realm of science as well as art, language, and culture -that enhanced and uplifted not only their own civilisations but those around the globe.

18.2. A robust ecosystem of research is perhaps more important than ever with the rapid changes occurring in the world today, e.g., in the realm of climate change, population dynamics and management, biotechnology, an expanding digital marketplace, and the rise of machine learning and artificial intelligence. If India is to become a leader in these disparate areas, and truly achieve the potential of its vast talent pool to again become a leading knowledge society in the coming years and decades, the nation will require a significant expansion of its research capabilities and output across disciplines. Research has never been more essential for the economic, intellectual, societal, environmental, and technological health and progress of a nation.

18.3. Unfortunately, levels of R&I investment in India have not grown but instead have steadily dropped over the last decade -from .84% of GDP in 2008 to around .69% in 2014, where it remains today. For the sake of comparison, the levels of R&I investment as a proportion of GDP in some

other countries are: United States (2.8%), China (2.1%), Israel (4.3%), and South Korea (4.2%); i.e., all invest at least three times as much as a proportion of GDP.

18.4. The societal challenges that India needs to address today, such as access for all its citizens to clean drinking water and sanitation, quality education and healthcare, improved transportation, air quality, energy, and infrastructure, will require the implementation of approaches and solutions that are informed by top-notch science and technology and are also rooted in a deep understanding of the social sciences and humanities and the various socio-cultural dimensions of the nation. Facing and addressing these challenges will require high-quality interdisciplinary research across fields that must be done in India and cannot simply be imported; the ability to conduct one's own research also enables a country to much more easily import and adapt relevant research from abroad.

18.5. Furthermore, in addition to their value in solutions to societal problems, any country's identity, upliftment, spiritual/intellectual satisfaction and creativity is also attained in a major way through its history, art, language, and culture. Research in the arts and humanities, along with innovations in the sciences and social sciences, are therefore extremely important for the progress and enlightened nature of a nation. Research and innovation at institutions in India, particularly those that are engaged in higher education, is critical. Evidence from the world's best universities throughout history shows that the best teaching and learning processes at the higher education level occur in environments where there is also a strong culture of research and knowledge creation; conversely, much of the very best research in the world has occurred in multidisciplinary university settings.

18.6. India has a long historical tradition of research and knowledge creation, in disciplines ranging from science and mathematics to art and literature to phonetics and languages to medicine and agriculture, and it is time India reclaimed this tradition, at the earliest, to be ready to lead research and innovation in the 21<sup>st</sup> century, as a strong and enlightened knowledge society and one of the three largest economies in the world.

18.7. This Policy envisions a comprehensive approach to transforming the quality and quantity of research in India. This includes definitive shifts in school education to a more play-and discovery-based style of learning -with a key emphasis on the scientific method and critical thinking, career counselling in schools towards identifying student interests and talents, the institutional restructuring of the higher educational system to promote research in universities, the multidisciplinary nature of all HEIs and the emphasis on liberal education, the inclusion of research and internships in the undergraduate curriculum, faculty career management systems to substantially include research in its considerations, and the governance and regulatory changes that encourage faculty and institutional autonomy and innovation -all of these aspects are extremely critical for a research mindset in the country and have been elaborated on in other parts of this policy.

18.8. To build on these various elements in a synergistic manner, and to thereby truly grow and catalyse quality research in the nation, this policy envisions the establishment of a National Research Foundation (NRF). The overarching goal of the NRF will be to enable a culture of research to permeate through our universities. In particular, the NRF will provide a reliable base of merit-based peer-reviewed research funding, helping to develop a culture of research in the country through suitable incentives for and recognition of outstanding research, and by undertaking major initiatives to seed and grow research at State Universities and other public institutions where



research capability is currently limited. Successful research will be recognised, and where relevant, implemented through close linkages with governmental agencies as well as with industry and private/philanthropic organisations.

18.9. The primary activities of the NRF will be to:

- 1) fund competitive peer-reviewed grant proposals of all types and across all disciplines;
- 2) 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 (e.g., by hiring eminent and active research scholars that are retired or near retirement from high-quality research institutions), hiring excellent young research students and faculty, and strengthening and recognising existing high-quality programmes at such institutions;
- 3) act as a liaison between researchers and relevant branches of government as well as industry, so that research scholars are constantly made aware of the most urgent national research issues of the day, and so that policymakers are constantly made aware of the latest research breakthroughs; this would allow breakthroughs to be brought into policy and/or implementation in an optimal fashion; and
- 4) recognise outstanding research and progress achieved via NRF funding/mentoring across subjects, through prizes and special seminars recognising the work of the researchers.

Today, unfortunately, no organised mechanism exists to address these important matters regarding research in an interrelated fashion. This will be precisely the goal of a new and comprehensive National Research Foundation.

### **19. Effective Governance and Leadership for Higher Education Institutions**

19.1. It is effective governance and leadership that enables the creation of a culture of excellence and innovation in higher education institutions. The common feature of all world-class institutions globally -including in India -has indeed been the existence of strong self-governance and outstanding merit-based appointments of institutional leaders, which has truly enabled and nurtured such a culture.

19.2. Unfortunately, such self-governance and merit-based appointment of leadership have not been the norm in the majority of institutions of higher education in India. Instead, institutions are constantly plagued by excessive external interference on both of these counts. Too often leadership appointments are used as mechanisms to distribute favours or to collect bribes -a truly disgraceful and harmful state of affairs for education. This external influence has severely diluted the independence of institutions and brought in non-merit-based practices, demotivating these institutions and their faculty from innovating in their curricula, pedagogical practices, research, and service initiatives.

19.3. Institutions have also been severely disempowered by the rigid regulatory systems of higher education. Decisions related to many fundamental local issues, which should naturally be within the purview of local governance and leadership, have been centralised at the level of the University Grants Commission or other bodies of the Centre and State, creating delays, inefficiencies, and non-optimal decisions at the local level. Colleges are unable to chart their own courses, controlled as they are by rigid bureaucratic norms of the affiliating University. All this deeply undermines the principle of local governance and the local pursuit of innovation and excellence.

19.4. All higher education institutions in India must aim to become independent self-governing institutions pursuing innovation and excellence, through suitable measures that ensure leadership of the highest quality and thereby an institutional and systemic culture of excellence. Local and empowered governance of high quality must be enabled through the establishment, for each HEI, of a highly qualified, competent, and dedicated Board of Governors that truly care about the institution and its success. The Board will thus consist of a group of carefully selected individuals having a high, demonstrated capability and a strong sense of ownership of the institution; examples include eminent alumni of the HEI as well as local accomplished persons, in a variety of fields, with strong interest in the institution. The Board will be free of any kind of political or other interference; Board members must be unbiased and public spirited, while being capable of providing both academic and administrative leadership of the HEI. The Board will be empowered to govern the institution, so that excellence can truly be pursued and actualised.

19.5. A clear chain of responsibility and accountability for the HEI, beginning with the Board at the apex, will be enabled through relevant legislative actions, since it may require reconfiguring the roles of existing bodies, their powers, and reporting structures. There must also be clear mechanisms for public accountability of HEIs, either by appointment of an adequate number of independent and highly competent public figures on the Board or, where applicable (as detailed later), in a 'Court' of the HEI appointed as a representative body of the public.

19.6. All leadership positions (not only the Head) in institutions must be offered to persons having the very best academic qualifications and demonstrated administrative and leadership capacities for these roles. The selection and professional development processes for those in institutional leadership positions will be revamped. Outstanding leaders will be identified and developed early, working their way through a ladder of leadership positions. Rigorous, impartial, merit-based, and competency-based processes for selection of people in leadership positions needs will be followed, with well-defined guidelines for each position based on the role and the competencies required for that role; seniority and all other non-merit-based factors will be removed as criteria for selection.

19.7. The appointment processes for HEI leaders, through eminent committees set up for the purpose, will assess all the actual criteria - academic qualifications and demonstrated administrative and leadership capacity - rigorously and objectively, while also having the creative energy to make bold bets on people who show promise. Some of India's and the world's best institutions have been built by leaders who showed such promise, even though they may not have fit into more conventional notions of who should be an institutional leader. Leaders of an HEI must demonstrate strong alignment to Constitutional values and the overall vision of the institution, along with attributes such as a strong social commitment, belief in teamwork, pluralism, ability to work with diverse people, and a positive and enthusiastic outlook. These attributes and capacities are important for all leadership roles within an HEI, not only that of the Head of the institution.

19.8. As the higher education system moves towards academic and administrative autonomy, strong and ethical leadership, both in terms of governing bodies and leaders, will become even more imperative. While stability of tenure is important to ensure the development of a suitable culture, at the same time leadership succession will be planned with care to ensure that good practices that define an institution's processes do not end due to a change in leadership; leadership changes will come with sufficient overlaps, and not remain vacant, in order to ensure smooth transitions. All efforts will be made to build strong and diverse teams, comprising both academic and non-academic members. Coherent, shared plans at all levels with meaningful input from all stakeholders - Board members, institutional leaders, faculty, students, and staff - rather than decisions made by a few

individuals, will be the basis for progress towards institutional goals. Suitable mechanisms for all to participate in forming an institutional vision towards excellence will be created and enabled.

19.9. While being provided with adequate funding, autonomy, and legislative enablement, HEIs in turn will display commitment to institutional excellence, engagement with their local communities, and the highest standards of financial probity and accountability. The BoG of each HEI will anchor an Institutional Development Plan (IDP), on the basis of which institutions will develop initiatives and assess their own progress, and on the basis and progress of which each public institution would be granted public funding.

### **20. Transforming the Regulatory System of Higher Education**

20.1. Regulation of higher education has been too heavy handed for decades; too much has been attempted to be regulated with too little effect. The mechanistic and disempowering nature of the regulatory system has been rife with very basic problems, such as heavy concentrations of power within a few bodies, conflicts of interest among these bodies, and a resulting lack of accountability.

20.2. India also has some of the toughest requirements in the world for setting up higher education institutions; these requirements are largely input-centric, focusing on land and space norms, endowment funds and their sources, etc. Such excessive input mandates, together with centralised, outdated, and rigid requirements with respect to faculty qualifications and curriculum implementation, have resulted in an inspectorial regime instead of an effective regulatory system that promotes innovation and the pursuit of excellence. Ironically, this rigid inspectorial regime has also had a consistently poor record of weeding out poor practises and institutions. The regulatory system is thus in need of a complete overhaul in order to re-energise the higher education sector and enable it to thrive.

20.3. To address the above-mentioned issues, the most basic principle in the regulatory system of higher education will be that the distinct functions of regulation, provision of education, funding, accreditation, and academic standard setting will be performed by distinct, independent, and empowered bodies. This is considered essential to create checks-and-balances in the system, minimise conflicts of interest, and eliminate concentrations of power.

20.4. There will also be one common regulatory regime for the entire higher education sector, eliminating duplication and disjunction of regulatory efforts. The regulator will regulate in a ‘light but tight’ and facilitative manner, meaning that a few important matters -particularly financial probity, good governance, and full online and offline public disclosure of all finances, procedures, faculty/staff, courses, and educational outcomes - will be very effectively regulated, while leaving the rest to the judgment of the HEIs, which is essential to institutional autonomy, innovation, and pursuit of excellence.

20.5. The primary mechanism to enable such regulation will be accreditation, focused primarily on basic norms, disclosure, good governance, and outcomes, and it will be carried out by an independent ecosystem of accrediting institutions supervised and overseen by a ‘meta-accrediting’ body. The license to function as an accreditor, called “meta-accreditation”, shall be awarded to an appropriate number of public as well as private not-for-profit institutions by the ‘metaaccreditor’.

20.6. Specialised bodies will set the standards or expectations in particular fields of learning and practice, while having no regulatory role. All HEIs will decide how their educational programmes respond to these standards, among other considerations, and would also be able to reach out for support from these standard-setting bodies if needed.

20.7. Such a system architecture will bring to life the principle of functional separation to ensure due focus and eliminate conflicts of interests between different roles; it will also empower HEIs - with full autonomy - academic, administrative, and eventually financial - while ensuring that the few truly key essential matters are given due attention. This would therefore mean no external interference in HEIs, including from funding agencies. The autonomy of HEIs shall be backed with adequate public funding. Responsibility and accountability shall devolve to the HEIs (and its Board) concomitantly. No distinction in such expectations shall be made between public and private HEIs.

20.8. Such a transformation will require existing structures and institutions to re-invent themselves and undergo an evolution of sorts. The separation of functions would mean that each body would take on a new, single role which is relevant, meaningful, and important in the new regulatory scheme.

20.9. Setting up new quality HEIs will also be made far easier, while ensuring with great effectiveness that these are set up with the spirit of public service and due financial backing for long-term stability. HEIs performing exceptionally well will be helped by Central and State governments to expand their institutions, and thereby attain larger numbers of students and faculty as well as disciplines and programmes; in particular, governments will help in securing more contiguous or nearby land for outstanding institutions to expand.

20.10. The fundamental design principles of an effective regulatory system will thus be: i) a clear separation of functions to enable adequate focus on each essential role while eliminating conflicts of interest; ii) a single, empowered, responsive, but minimalistic regulatory authority to ensure basic regulatory requirements, such as financial probity and full public disclosure of finances, procedures, course and programme offerings, and educational outcomes, while otherwise empowering institutions to make their own decisions for the pursuit of excellence; iii) accreditation through the establishment of independent high-quality accrediting bodies, overseen by a meta-accreditor, as the basis of regulation; and iv) each body in the regulatory system run by Independent Boards consisting of persons having high expertise in the relevant areas along with integrity, commitment, and a demonstrated track record of public service.

20.11. All HEIs - public and private - shall be treated on par within this regulatory regime. The regulatory regime shall encourage private philanthropic efforts in education; at the same time, it shall closely monitor and eliminate commercialisation of education. There will be common national guidelines for all legislative Acts that will form private HEIs. These common minimal guidelines will enable all such Acts to establish private HEIs, thus enabling a common regulatory regime for private and public HEIs. These common guidelines will cover Good Governance, Financial Stability & Security, Educational Outcomes, and Transparency of Disclosures.

20.12. Private HEIs having a philanthropic and public-spirited intent will be encouraged through a progressive regime of fees determination. This regime will empower the private HEIs to set the fees for their programmes independently, while ensuring that a significant proportion of their students are able to attend through freeships and scholarships. This fee regime will ensure reasonable

recovery of cost while ensuring that the HEIs discharge their social obligations.

## III. Other Key Areas of Focus

### 21. Adult Education

**21.1.** The abilities to attain foundational literacy, obtain an education, and pursue a livelihood must be viewed as fundamental rights of every citizen. Literacy and basic education open up whole new worlds of personal, civic, economic, and lifelong-learning opportunities for individuals that enable them to progress personally and professionally. At the level of society and the nation, literacy and basic education are powerful force multipliers which greatly enhance the success of all other developmental efforts. Worldwide data on nations indicate extremely high correlations between literacy rates and per capita GDP.

**21.2.** Meanwhile, being a non-literate member of a community has innumerable disadvantages, including the inability to: carry out basic financial transactions; compare the quality / quantity of goods purchased against the price charged; fill out forms to apply for jobs, loans, services, etc.; comprehend public circulars and articles in the news media; use conventional and electronic mail to communicate and conduct business; make use of the internet and other technology to improve one's life and profession; comprehend directions and safety directives on the street, on medicines, etc; help children with their education; be aware of one's basic rights and responsibilities as a citizen of India; appreciate works of literature; and pursue employment in medium or high-productivity sectors that require literacy. States/UT governments should treat the abilities listed here as illustrative list of outcomes to be achieved through adoption of innovative measures for implementing Adult Education.

**21.3.** Extensive field studies and analyses, both in India and across the world, clearly demonstrate that volunteerism and community involvement and mobilisation are key success factors of adult literacy programmes, in conjunction with political will, organisational structure, proper planning, adequate financial support, and high-quality capacity building of educators and volunteers. Successful volunteer-based literacy programmes result not only in the growth of literacy among adults in the community, but also result in increased demand for education for all children in the community, as well as greater community contributions to positive social change. The National Literacy Mission, when it launched in 1988, was indeed largely based on the voluntary involvement and support of the people, and resulted in significant increases in national literacy during the period of 1991–2011, including among women, and also initiated dialogue and discussions on pertinent social issues of the day such as alcoholism.

**21.4.** Strong government initiatives for adult education - in particular, to facilitate and encourage community involvement - will be effected as soon as possible to truly expedite this all-important aim of achieving 100% literacy.

**21.5.** First, an outstanding adult education curriculum framework will be developed by a new and well-supported constituent body of the NCERT that is dedicated to adult education, so as to develop synergy with and build upon NCERT's existing expertise in establishing outstanding curricula for literacy, numeracy, basic education, vocational skills, and beyond. The curriculum framework for adult education will include at least five types of programmes: (a) foundational literacy and numeracy; (b) critical life skills (including financial literacy, digital literacy, commercial skills,

health care and awareness, child care and education, and family welfare); (c) vocational skills development (with a view towards obtaining local employment); (d) basic education (including preparatory, middle, and secondary stage equivalency); and (e) continuing education (including engaging liberal adult education courses in arts, sciences, technology, culture, sports, and recreation, as well as other topics of interest or use to local learners, such as more advanced material on critical life skills). The framework would keep in mind that adults in many cases will require rather different teaching-learning methods and materials than those designed for children.

**21.6.** Second, suitable infrastructure will be ensured so that all interested adults will have access to adult education. A key initiative in this direction will be to use schools (after school hours and on weekends) and public library spaces for adult education courses, which will be ICT-equipped when possible. The sharing of infrastructure for school, adult, and vocational education will be critical for ensuring efficient use of both physical and human resources as well as for creating synergy among these three types of education. For these reasons, adult education centres could also be included as an integral part of school complexes, or in other public institutions such as public libraries, vocational training centers, etc.

**21.7.** Third, a cadre of excellent instructors / educators / preraks will be required to deliver the curriculum framework to mature learners. Instructors for all five types of adult education as described in the adult education curriculum framework will be trained by the national, state, and district level resource support institutions to organise and lead learning activities at adult education centres, as well as coordinate with volunteer instructors and tutors. Qualified community members will be encouraged and welcomed to take a short training course and volunteer, on a large scale, as adult literacy instructors, or to serve as one-on-one volunteer tutors, and will be recognised for their critical service to the nation.

**21.8.** Fourth, all efforts will be undertaken to ensure participation of community members in adult education. Social workers traveling through their communities to track and ensure participation of non-enrolled students and dropouts (as in §3) will also be requested, during their travels, to gather data of parents, adolescents, and others interested in adult education opportunities (both as learners and as teachers/tutors); the social workers will then connect them and provide their information to local Adult Education Centres (AECs). Opportunities for adult education will also be widely publicised, through advertisements and announcements and through events and initiatives of NGOs and other local organisations.

**21.9.** Finally, any national literacy mission must mobilise community organisations 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 to teach foundational literacy and numeracy, and other adult education course material, under the guidance and coordination of Adult Education Centres. Governments will work closely with NGOs and other community organisations, and support them as necessary, in order to enhance efforts towards literacy and adult education. If every literate member of the community could commit to help/teach one person how to read, it would change the country's landscape very quickly; this mission will be highly encouraged, supported, and funded.

## **22. Promotion of Indian Languages, Arts, and Culture**

**22.1.** India is a treasure trove of culture-developed over millennia and manifested in the form of arts, works of literature, customs, traditions, linguistic expressions, artifacts, heritage sites, and more. Crores of people from around the world partake in, enjoy, and benefit from this cultural wealth daily, in the form of visiting India for tourism, experiencing Indian hospitality, purchasing India's beautiful handicrafts and handmade textiles, reading the classical literature of India, practicing yoga and meditation, being inspired by Indian philosophy, participating in India's unique festivals, appreciating India's diverse music and art, and watching Indian films, amongst many other aspects. It is this cultural and natural wealth that truly makes India, "Incredible!ndia", as per India's tourism slogan. The preservation and promotion of India's cultural wealth must be considered a high priority for the country, as it is truly important for the nation's identity as well as for its economy.

**22.2.** The promotion of Indian arts and culture is important not only for the nation but also for the individual. Cultural awareness and expression are among the major competencies considered important to develop in children, in order to provide them with a sense of identity, belonging, as well as an appreciation of other cultures and identities. It is through the development of a strong sense and knowledge of their own cultural history, arts, languages, and traditions that children can build a positive cultural identity and self-esteem. Thus cultural awareness and expression are important contributors both to individual as well as societal well-being.

**22.3.** The arts form a major medium for imparting culture. The arts - besides strengthening cultural identity and awareness, and uplifting societies - are well known to enhance cognitive and creative abilities in individuals and increase individual happiness from early childhood and through adulthood. The happiness / well-being, cognitive development, and cultural identity of individuals are form important reasons that Indian arts of all kinds must be promoted and offered mandatorily to students at all levels of education, starting with early childhood education.

**22.4.** Language, of course, is inextricably linked to art and culture. Different languages 'see' the world differently, and the structure of a language therefore determines a native speaker's perception of experience. In particular, languages influence the way people of a given culture speak with others, including with family members, authority figures, peers, and strangers, and influence the tone of conversation. The tone, perception-of-experience, and familiarity/'apnapan' inherent in conversations among speakers of a common language are a reflection and record of a culture. Culture is thus encased in our languages. Art, in the form of literature, plays, music, film, etc. cannot be fully appreciated without language. In order to preserve and promote culture, one must preserve and promote a culture's languages.

**22.5.** Unfortunately, Indian languages have not received their due attention and care, with the country losing over 220 languages in the last 50 years alone. UNESCO has declared an additional 197 Indian languages as 'endangered'. Various unscripted languages are particularly in danger of becoming extinct. When senior member(s) of a tribe or community that speak such languages pass away, these languages often perish with them; too often, no concerted actions or measures are taken to preserve or record these rich languages / expressions of culture.

**22.6.** Moreover, even those languages of India that are not officially on such endangered lists - such as the 22 Schedule 8 languages -are facing serious difficulties on many fronts. For languages to remain relevant and vibrant, there must be a steady stream of high-quality learning and print materials in these languages -including textbooks, workbooks, videos, plays, poems, novels,

magazines, etc. Languages must also have consistent official updates to their vocabularies and dictionaries, widely disseminated, so that the most current issues and concepts can be effectively discussed in these languages. Enabling such learning materials, print materials, and translations of important materials from world languages, and constantly updating vocabularies, are carried out by countries around the world - for languages such as English, French, German, Hebrew, Chinese, Korean, and Japanese - but India has remained quite slow in producing such learning and print materials and dictionaries to help keep its languages optimally vibrant and current with integrity.

**22.7.** A number of initiatives at the pre-primary through secondary school level have already been discussed at length in §4, including: a greater emphasis on music, arts, and crafts throughout all levels of school; early implementation of the three-language formula to promote multilingualism, including teaching in the home/local language whenever possible; the hiring of outstanding local artists, writers, craftspersons, and other experts as specialised instructors in various subjects of local expertise; accurate inclusion of traditional Indian knowledge (including tribal and other local knowledge) throughout the curriculum, across the humanities, sciences, arts, crafts, and sports, whenever relevant; and a much greater flexibility in the curriculum, especially in high school and in higher education, so that students can choose the ideal balance among courses for themselves to develop their own creative, artistic, cultural, and academic paths.

**22.8.** To enable these key latter initiatives, a number of further actions will be taken in tandem at the higher education level and beyond. First, to develop and teach many of the courses of the type mentioned above, an excellent team of teachers and faculty will have to be developed. Strong departments and programmes in Indian languages, comparative literature, creative writing, arts, philosophy, archaeology, etc. across the country will be launched and developed, and degrees (including dual 4-year B.Ed. dual degrees) will be developed in these subjects. Furthermore, the NRF will fund high-quality research in these areas. More programmes in higher education will aim to make use of Indian languages as a medium of instruction or as one of the media of instruction. Outstanding local artists and craftspersons will be hired as guest faculty to promote local music, art, languages, and handicraft.

**22.9.** High-quality programmes and degrees in Translation and Interpretation, Art and Museum Administration, Artefact Conservation, Graphic Design, and Web Design within the higher education system will also be created. Advanced countries the world over all have strong programmes in these areas; India must urgently develop such programmes as well -in order to preserve and promote its art and culture, develop high-quality materials in various Indian languages, conserve artefacts, develop highly qualified individuals to curate and run museums and heritage/tourist sites - thereby also vastly strengthening the tourism industry.

**22.10.** Creating such programmes in higher education, across the arts, languages, and humanities, will also come with expanded high-quality opportunities for employment that can make effective use of these qualifications. There are already hundreds of Akademies, museums, art galleries, and heritage sites in dire need of qualified individuals for their effective functioning. As positions are filled with suitably qualified candidates, and further artefacts are procured and conserved, additional museums, galleries, and heritage sites may open to expand this important component of India's tourism industry and its heritage conservation efforts.

**22.11.** India will also urgently expand its translation and interpretation efforts in order to make high-quality learning materials and other important written and spoken material available to the



public in various Indian languages. For this, a proposed Indian Institute of Translation and Interpretation (IITI) will be established. Such an institute would provide a truly important service for the country, as well as employ numerous multilingual language experts, and experts in translation and interpretation, which will help to promote all Indian languages. The IITI could naturally grow with time, and be housed in multiple locations across the country as demand and the number of qualified candidates grows.

**22.12.** India will similarly expand its institutes and universities studying classical languages and literature, with strong efforts to collect, preserve, translate, and study the numerous manuscripts that have not yet received their due attention. Sanskrit institutes and departments across the country will be strengthened, with adequate training given to large new batches of students, to handle these large numbers of manuscripts and their interrelations with other subjects. Institutes for other classical languages too will be built and strengthened. All such classical language institutes will aim to be affiliated or merged with universities so that faculty may work and students too may be trained as part of robust and rigorous multidisciplinary programmes. Similar initiatives will be carried out for institutes and universities studying Indian arts, art history, and Indology. Research for outstanding work in all these areas will be supported by the NRF.

**22.13.** Finally, efforts to preserve and promote all Indian languages will be taken on more seriously and with new vigour, including Schedule 8 languages, all other currently spoken Indian languages (including tribal languages), endangered languages, and classical languages. Technology and crowd sourcing, with extensive participation of the people, will play a crucial role in these efforts.

**22.14.** First and foremost, Academies will be established for each of the Schedule 8 languages – consisting of some of the greatest scholars and native speakers of each language – to determine simple yet accurate vocabulary for the latest concepts, and to release the latest dictionaries on a regular basis (analogous to the successful efforts for many other languages around the world). The Academies would also consult with each other, and in some cases take the best suggestions from the public, in order to construct these dictionaries – attempting to adopt common words whenever possible (e.g., if an excellent word for an emerging concept exists in Tamil, multiple languages could adopt it to optimise communication in and across Indian languages). These dictionaries would be widely disseminated, for use in education, journalism, writing, speechmaking, and beyond, and would be available on the web as well as in book form. The Academies for Hindi and Sanskrit, as well as for other languages that do not belong primarily to any one state such as Urdu and Sindhi, would be established by the Central Government. The Academies for other Schedule 8 as well as other highly spoken Indian languages would be established by State Governments in collaboration with and with suitable support from the Centre.

**22.15.** Second, all languages in India, and their associated arts and culture, will be documented via a web-based platform/portal/wiki, in order to preserve endangered and all Indian languages and their associated rich local arts and culture. The platform will contain videos, dictionaries, recordings, and more, of people (especially elders) speaking the language, telling stories, reciting poetry, and performing plays, folk songs and dances, and more. People from across the country will be invited to and able to contribute to these efforts by adding relevant material onto these platforms/portals/wikis. Universities and their research teams will work with each other and with communities across the country towards attaining rich such platforms. These preservation efforts, and their associated research projects, e.g., in history, archaeology, linguistics, etc., will be funded by the NRF.

**22.16.** Scholarships for people of all ages to study and promote Indian Languages, Arts, and Culture with local masters and/or within the higher education system, will be established. Finally, every higher education institution, and even every school or school complex, will aim to have Artist(s)-in-Residence in order to expose students to art, creativity, and the rich treasures of the country.

### **23. Technology Use and Integration**

**23.1.** India is a global technology leader in information and communication, and in other cutting-edge domains such as space. The Digital India Campaign is helping to transform the entire nation into a digitally empowered society and knowledge economy. While education will play a critical role in this transformation, technology itself will play an important role in the improvement of educational processes and outcomes; thus, the relationship between technology and education (at all levels) is bi-directional.

**23.2.** Given the explosive pace of technological development allied with the sheer creativity of tech-savvy teachers and entrepreneurs (including student entrepreneurs), it is certain that technology will impact education in multiple ways, only some of which can be foreseen at the present time. New technologies involving artificial intelligence, machine learning, block chains, smart boards, handheld computing devices, adaptive computer testing for student development, and other forms of educational software and hardware will not just change what students learn in the classroom but how they learn, and thus these areas and beyond will require extensive research both on the technological as well as educational fronts.

**23.3.** All use and integration of technology to improve multiple aspects of education will be supported and adopted, provided these interventions are rigorously and transparently evaluated in relevant contexts before they are scaled up. An autonomous body, the National Educational Alliance for Technology (NEAT), will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration, and so on. The aim of the NEAT will be to facilitate decision making on the induction, deployment, and use of technology, by providing to the leadership of educational institutions, state and central governments, and other stakeholders the latest knowledge and research as well as the opportunity to consult and share best practices with each other. The NEAT will have the following roles: (a) provide independent evidence-based advice to central and state governmental agencies on technology-based interventions; (b) build intellectual and institutional capacities in educational technology; (c) envision strategic thrust areas in this domain; and (d) articulate new directions for research and innovation.

**23.4.** To remain relevant in the fast-changing field of educational technology, the NEAT will maintain a regular inflow of authentic data from multiple sources including educational technology innovators and practitioners, particularly at the grass-roots level, and will engage with a diverse set of researchers to analyse this data. It will act as a forum for harnessing the distributed energy that democratising technology can unleash, particularly among the youth of the country who continually prove their capacity to innovate and lead, while also bringing a scholarly emphasis to ensure that the overall impact of these efforts is positive. To support the development of a vibrant body of knowledge and practice, NEAT will organise multiple regional and national conferences, workshops, etc. to solicit inputs from national and international educational technology researchers, entrepreneurs, and practitioners.

**23.5.** A rich variety of educational software will be developed and made available for students and teachers at all levels. All such software will be available in all major Indian languages and will be accessible to a wide range of users including students in remote areas and differently-abled students. Video-viewing equipment will be made available to teachers at all schools so that teachers can suitably integrate open educational videos into teaching-learning practices.

**23.6.** The thrust of technological interventions will be for the purposes of improving teaching-learning and evaluation processes, supporting teacher preparation and professional development, enhancing educational access, and streamlining educational planning and management including processes related to admissions, attendance, assessments, etc.

**23.7.** Particular attention will need to be paid to emerging disruptive technologies that will necessarily transform the education system and what it teaches to students. When the 1986/1992 National Policy on Education was formulated, it was difficult to predict the disruptive effect that the internet was about to have. Our present education system's inability to cope with these rapid and disruptive changes places us (individually and nationally) at a perilous disadvantage in an increasingly competitive world. For example, while computers have largely surpassed humans in leveraging factual and procedural knowledge, our education at all levels excessively burdens students with such knowledge at the expense of developing their higher-order competencies.

**23.8.** This policy has been formulated at a time when an unquestionably disruptive technology - Artificial Intelligence (AI) - has emerged. As the cost of AI-based prediction falls, AI will be able to match or outperform - and therefore be a valuable aid to - even skilled professionals such as doctors in certain predictive tasks. AI's disruptive potential in the workplace is clear, and the education system must be poised to respond quickly. One of the permanent tasks of the Advisory Council of the RSA (see §24) will be to categorise emergent technologies based on their potential and estimated time-frame for disruption, and to periodically present this analysis to the RSA. Based on these inputs, the RSA will formally identify those technologies whose emergence demands responses from the education system. The NITI Aayog's timely discussion paper, "National Strategy for Artificial Intelligence: #AIForAll" - endorsed by this Policy models one way in which the RSA can propose technology-specific policy changes.

**23.9.** In response to the RSA's formal recognition of a new disruptive technology, the National Research Foundation will initiate or expand research efforts in the technology, including fundamental research in the domain, development of the technology (including possible mega-projects), and assessment of its socio-economic impact. In the context of AI, NRF may consider a three-pronged approach: (a) advancing core AI research, (b) developing and deploying application-based research, and (c) establishing international research efforts to address global challenges in areas such as healthcare, agriculture, and climate change using AI.

**23.10.** 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. Once the technology has attained a level of maturity, Tier 3 institutions will be ideally placed to scale these teaching and skilling efforts, which will include targeted training for job readiness. Disruptive technologies will make certain jobs redundant, and hence approaches to skilling and deskilling that are both efficient and ensure quality will be of increasing importance to create and sustain employment. Institutions will have autonomy to approve institutional and non-

institutional partners to deliver such training, which will be integrated with skills and higher education frameworks.

**23.11.** All universities will offer PhD and Masters programmes in core areas (such as Machine Learning) as well as multidisciplinary fields (“AI + X”) and professional areas (healthcare, agriculture and law). They may also develop and disseminate authoritative courses in these areas via platforms such as SWAYAM. For rapid adoption, HEIs may blend these online courses with traditional teaching in undergraduate and vocational programmes. The Colleges may also offer targeted training in low-expertise tasks for supporting the AI value chain such as data annotation, image classification, and speech transcription. Efforts to teach languages to school students will be dovetailed with efforts to enhance Natural Language Processing for India’s diverse languages.

**23.12.** As disruptive technologies emerge, schooling and continuing education will assist in raising the general populace’s awareness of their potential disruptive effects and will also address related issues. This awareness is necessary to have informed public consent on matters related to these technologies. In school, the study of current affairs and ethical issues will include a discussion on disruptive technologies such as those identified by RSA. Appropriate instructional and discussion materials will also be prepared for continuing education.

**23.13.** Data is a key fuel for AI-based technologies, and it is critical to raise awareness on issues of privacy, laws and standards associated with data handling and data protection, etc. It is also necessary to highlight ethical issues surrounding the development and deployment of AI-based technologies. Education will play a key role in these awareness-raising efforts.

## **IV. Making it Happen**

### **24. Establishing an Apex Advisory Body for Indian Education**

**24.1.** Achieving successful implementation of this policy demands a long-term vision, availability of expertise on a sustained basis, and concerted action from all concerned actors encompassing national, state, institutional, and individual levels. In this context, the policy recommends the creation of a Rashtriya Shiksha Aayog (RSA) / National Education Commission (NEC) as an apex advisory body for Indian education, duly replacing the Central Advisory Board on Education (CABE). The existing CABE mechanism has added a lot of value to the Indian education system, but has fallen short of leading the much needed radical changes required for a great leap forward; not only was CABE an ad hoc body that was unable to meet regularly, but was not having any expert body to work on key matters on a continuous basis.

**24.2.** The RSA will be chaired by the Minister of Education and shall consist of 30 members, 2/3rd of whom shall be eminent educationists, researchers, and leading professionals from various fields such as the arts, science, business, health, agriculture, and social work, from India and from across the world; these members shall be of high expertise, unimpeachable integrity, and independence. Membership of the RSA shall also include some of the Union Ministers, in rotation, whose ministries impact education directly (e.g. Health, Woman and Child Development, Finance), as well as a few Chief Ministers of States, in rotation, Vice-Chairperson of the Niti Aayog, the Secretaries in the Ministry of Education, and other such senior bureaucrats/administrators as the government may deem appropriate. The RSA shall be responsible for developing, articulating, evaluating, and revising the vision of education in the country on a continuous and sustained basis,

in close collaboration with the corresponding apex bodies of States. It shall also create and continuously review the institutional frameworks that shall help attain this vision.

**24.3.** The RSA will have a Permanent Secretariat of the Rashtriya Shiksha Aayog (PSRSA) that will be headed by an Executive Director who shall be a person of eminence in education, with deep understanding of India's education system, a record of stellar public contribution, and broad experience of administration and leadership. The ED will have a five-year term of appointment, which will be renewable one time. The ED shall be empowered to hire up to 15 experts in education and related fields either on loan from educational institutions or recruited on a tenure basis. The PSRSA will be charged with translating the vision of the RSA into action, assessing progress through continually analysing data and making recommendations for corrective actions as needed.

24.4. Similar to the RSA, a Rajya Shiksha Aayog (RjSA) / State Education Commission (SEC) may be constituted in each State, chaired by the Education Minister. The respective SECs can have as its members ministers of other stakeholder departments, eminent educationists and professionals a senior representative from the RSA, the secretaries in the Department of Education, and other such senior bureaucrats/administrators as the government may deem appropriate. The State Education Ministries too may consider having Permanent Secretariats for continuous expert analysis and recommendations for corrective actions. The creation of the RjSAs in the States will also facilitate better coordination with the RSA.

24.5. Finally, in order to bring the focus back on education and learning, the Ministry of Human Resource Development (MHRD) shall be re-designated as the Ministry of Education (MoE). The existing functions and roles within the Ministry of Education (and related ministries) shall be reviewed, mapped, and harmonised with the RSA for complementarity.

## **25. Financing: Affordable and Quality Education for All**

**25.1.** The Policy commits to significantly raising educational investment, as there is no better investment towards a society's future than the high-quality education of our young people. Unfortunately, public (government) expenditure on education in India has hovered around 3% of GDP; currently, only around 10% of the total Government spending goes towards education (Economic Survey 2017-18). These numbers are far smaller than most developed and developing countries. Public spending on education has not yet even come close to the recommended level of 6% of GDP, as envisaged by the 1968 Policy, reiterated in the Policy of 1986, and which was further reaffirmed in the 1992 review of the Policy.

**25.2.** In order to attain the goal of world-class education in India, and the corresponding multitude of benefits to this Nation and its economy, this Policy unequivocally endorses and envisions an increase in public investment in education -by both the Central government and all State Governments -to 20% of all public expenditure over a 10-year period.

**25.3.** In particular, financial support will not be compromised on the various critical elements and components of education, such as learning resources, nutritional support, matters of student safety and well-being, adequate staffing, teacher development, and support for all initiatives to ensure equitable high-quality education for underprivileged and underrepresented groups.

**25.4.** In addition to one-time expenditures, primarily related to infrastructure and resources, this

Policy identifies the following key longer-term thrust areas for financing to cultivate a world-class education system: (i) expanding and continually improving early childhood education; (ii) ensuring foundational literacy and numeracy; (iii) providing adequate and appropriate resourcing of school complexes; (iv) providing food and nutrition (breakfast and midday meals); (v) investing in teacher education and continuing professional development of teachers; (vi) revamping colleges and universities to foster excellence; and (vii) cultivating research.

**25.5.** Financial governance and management will focus on the smooth, timely and appropriate flow of funds, and their usage with probity. This will be enabled by the new suggested regulatory regime, with clear separations of roles, empowerment and autonomy to institutions, appointment of outstanding qualified educationists to leadership positions, and enlightened oversight.

**25.6.** The Policy also calls for the rejuvenation, active promotion, and support for private philanthropic activity in the education sector.

**25.7.** The matter of commercialisation of education has been dealt with by the Policy through multiple relevant fronts, including: the ‘light but tight’ regulatory approach that mandates full public disclosure of finances, procedures, course and programme offerings, and educational outcomes; the substantial investment in public education; and mechanisms for good governance of all institutions, public and private.

## **26. Implementation**

**26.1.** Any policy is only as good as its implementation. Such implementation will require multiple initiatives and actions, which will have to be taken by multiple bodies in a synchronised and systematic manner. Therefore, the Policy outlines key actions to be led by various bodies (including MHRD, RSA, Union and State Governments, education-related Ministries, State Departments of Education, Boards, NTA, the regulatory bodies of school and higher education, NCERT, SCERTs, schools, and HEIs) along with timelines and a plan for review, in order to ensure that the Policy is implemented in its spirit and intent, through coherence in planning and synergy across all these bodies involved in education.

**26.2.** Implementation will be guided by the following principles. First, implementation of the spirit and intent of the Policy will be the most critical matter. While the Policy provides much detail, the intent and the spirit of the Policy must serve as the most important consideration. Second, it is important to implement the policy initiatives in a phased manner, as each policy point has several steps, each of which requires the previous step to be implemented successfully. Third, prioritisation will be important in ensuring optimal sequencing of policy points -and that the most critical and urgent actions are taken up first - thereby enabling a strong base. Fourth, comprehensiveness in implementation will be key; as this Policy is interconnected and holistic, only a full-fledged implementation, and not a piecemeal one, will ensure that the desired objectives are achieved. Fifth, since education is a concurrent subject, it will need careful planning, joint monitoring, and collaborative implementation between the Centre and States. Sixth, timely infusion of requisite resources - human, infrastructural, and financial - at the Central and State levels will be key for the satisfactory execution of the Policy. Finally, careful analysis and review of the linkages between multiple parallel implementation steps will be necessary in order to ensure effective dovetailing of all initiatives. This will also include early investment in some of the specific actions (such as the setting up of early childhood education infrastructure) that will be imperative to

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ensuring a strong base and a smooth progression for all subsequent programmes and actions.

**26.3.** Yearly joint reviews of the progress of implementation of the policy, in accordance with the targets set for each action, will be conducted by a designated team constituted by RSA and the corresponding State body. By 2030, it is expected that the past decade would have provided ample opportunities for evaluation, fine tuning as well as major changes, if called for, to be effected. Thereafter, a comprehensive review of the status of the implementation of the policy in its entirety will be undertaken. In the decade of 2030-40, the entire policy will be in an operational mode, following which another comprehensive review will be undertaken. It is, of course, expected that annual reviews will continue throughout.

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