Review Article

National Education Policy 2020: What is in it for a student, a parent, a teacher, or us, as a Higher Education Institution/University?

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ABSTRACT

Ministry of Human Resource Development of Government of India has projected an elaborate and all-encompassing National Education Policy 2020 (NEP2020). Before independence, the education in India was under the complete control of the "Masters, the British Empire." The education policies, like the one drawn by Macaulay, as would be obvious, were not for providing any quality education to the Indians, but to churn out the "Babus;" clerks and bureaucrats, to serve the masters, pure and simple. After independence, the society went through series of changes, policies were charted and certain reforms were brought in, but the impact was still not achieved. In 2015, the GOI adapted, "2030 Agenda for Sustainable Development (SD)" and since then the impetus has been initiated. The final culmination of a long drawn and all-inclusive process is NEP2020. NEP2020 has been a very elaborate planning document. The salient features of the issues, principles, aims, vision, challenges and solutions have been dealt with in this article. The main focus has been on the higher education and its implementation. Due importance also has been accorded to other issues such as vocational education, research and online and digital education to mention a few. Overall, it is a commendable and a very positive step forward on the part of the government. Only the time will judge, how much net effective output is actually garnered.

Keywords: National Education Policy 2020, Higher Education Institutes, Professional education, Online and digital education

PREAMBLE

Recently, Ministry of Human Resource Development of Government of India unveiled the new policy on education, National Education Policy 2020 (NEP2020). It was approved by the Union Cabinet of India on July 29, 2020 and it outlines the vision of India's new education system.[1,2]

On August 17–18, 2020, Association of Universities (AIU) in collaboration with National Law University, Delhi, organized the Annual National Conference of Vice Chancellors on "Reimagining Indian Universities" (through virtual mode). Dr. Ramesh Pokhariyal "Nishank," Hon'ble Minister of Education, delivered an inaugural address and various eminent and learned personalities such as, chairman and vice chairman of UGC, president AIU, many chancellors and vice chancellors, governors of some states and certain social reformers, delivered their opinions and thought processes.[3,4] In addition, AIU has started a "Weekly Essay Series" on their website. These essays are written by renowned authorities and distinguished academicians from different fields, covering variety of topics specifically related to "Reimagining Indian Universities," with

their individual uniqueness and impact on the minds of the reader. These have been compiled already by AIU into a book, aptly titled, "Reimagining Indian Universities," available at their website, which indeed is very enlightening and awe inspiring.[5] All of these are geared up to elaborate deeply on the NEP2020.

INTRODUCTION

During the past 8–9 months, the entire humanity has undergone a near-total transformation, due to COVID-19 pandemic. The life as we knew has become more or less obsolete and we have already transformed into a new world order/system, a system, which is governed by Covid-19 and all the issues related to it.

A simple act of going out of the closed confines of one's home has become a major area of concern. The previous carefree demeanor has changed into, making one seriously ponder over, "Shall I really go out?," "Do I really need the things, I want to go out to buy?," "Is it really safe to visit, that public space?," "have I done thorough enough preparation before I embark on such a 'perilous journey'?," and most importantly, "have I put on my mask or not?" so on and so forth…!

However, life has to go on. After facing all "lockdowns/ curfews" and other isolatory events, one understands, in spite of all the restrictions/limitations and taboos because life is a dynamic and constantly changing process and survival is possible only for those who adapt become the fittest. "Survival of the fittest" a famous term borrowed by Charles Darwin from the original text of Herbert Spencer in his 1864 book "Principles of Biology."[6] Here, the emphasis is on the word "fittest," which whether clarified by Darwin himself or not, but is absolutely true, "It is not the strongest of the species that survives, not the most intelligent that survives. It is the one that is the most adaptable to change."[7]

In the famous words of Albert Einstein, "We cannot solve our problems with the same thinking we used when we created them."[8] So by corollary and same logic, the present-day problems, especially related to the education and implementation of policies related with it cannot be solved using the older/erstwhile policies. With changing India or emerging "new" India, the policy on education needed to be reinvented and reimagined.

As a result,

National Education Policy 2020, (NEP 2020)!

EVOLUTION OF INDIAN UNIVERSITIES AND THE EDUCATION POLICIES

Historically, India had a rich and well-established tradition of spreading knowledge and imparting education for centuries gone. On record, there were at least 15 universities or centers of higher learning in existence in ancient India such as, Takshashila, Nalanda and Mithila to mention a few. Under the constant incursions of barbaric invaders and attackers, they fell apart and were completely destroyed. However, the rich ethos of teachings and traditions persisted under "Gurukul" system.

Under the British Empire, the new era of establishment of universities with English dominance came into existence. Especially under the skewed policies of Macaulay and his vested strategies of creating the generations of bureaucrats and clerical workforce, who would unhesitatingly and loyally serve their masters, of the British Raj! A system of mediocrity and servitude was created and perpetuated. The values such as scholarship, innovative thinking and critical analytical attitude were shunned and brutally suppressed. Successive administrators furthered this mentality/plan and artificially transplanted this system, sidelining and replacing the traditional, cultural and indigenously valid ideology.

After the independence, in 1948, a commission headed by the second president of Independent India and one of the greatest teachers (in fact, the Teacher's day is celebrated on the occasion of his birth anniversary); Dr. S. Radhakrishnan commission, tried to revamp the old policies and tried to align them for the present and future.[9] After a long gap of nearly 18 years, Kothari commission in 1966, National Education Policy 1968 and then in 1986, which was modified in 1992 (1986/92), Yashpal Committee of 1993, National Knowledge Commission of 2006, Tandon Committee of 2009 and 3rd NEP of 2019, were the major milestones in the evolution of educational reforms in India to shape the policies in correlation with the evolving challenges.

POLICY IN FOCUS

In 2015, India adopted what is called as "2030 Agenda for Sustainable Development (SD)." Under this agenda, Goal 4 (SDG 4) seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities to all by 2030." Based on five main foundation pillars, namely, access, equity, quality, affordability and accountability, NEP2020 has been aligned to 2030 Agenda for Sustainable Development.

As we progress and proceed more and more, toward, the information and communication technology (ICT) oriented and artificial intelligence-dependent society, the unskilled and semi-skilled level jobs, shall be taken over by machines and computer/mathematics and technical based jobs shall be more in demand. With growing challenges due to pollution, climatic alterations, crises in basic needs and most importantly, constant looming threat of pandemics, there shall be increased requirement of jobs in physics, chemistry, biology, social sciences and infectious diseases

control in an integrated manner. All of this point to a need of multidisciplinary teaching/learning process.

Thus, it would seem to be prudent to make sure that the education must have less of "content" and more of thought process, critical analysis and problem solving approach. It should make, the learner, a more creative, innovative, adaptive and multidisciplinary thinker. The pedagogy should aim to make education more "experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centered, discussion-based, flexible and, of course, enjoyable." The curriculum must include basic arts, crafts, humanities, games, sports and fitness, languages, literature, culture and values, in addition to science and mathematics, to develop all aspects and capabilities of learners; and make education more well-rounded, useful and fulfilling to the learner. Education must build character, enable learners to be ethical, rational, compassionate and caring, while at the same time prepare them for "gainful, fulfilling employment."[1,2] The fundamental and paradigm shift between NEP2020 and previous policies is, "revision and revamping" of all the aspects of educational structure including its regulation and governance, to create a new system, that is aligned with the 21st century aspired educational goals while building on the India's traditional value system with more stress on developing the creative potential of each individual.

NEP2020

Principles[1,2]

The fundamental principles both for the entire education system as well as individual institutions included in it are as follows:
- Recognizing, identifying and fostering the unique capabilities of each student. This is to be achieved by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres
- Achieving foundational literacy and numeracy by all students by Grade 3 as the highest priority
- Flexibility incorporated in the process of learning so that learners have the ability to choose their learning trajectories and programs and thereby choose their own paths in life according to their talents and interests
- No hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc., to eliminate harmful hierarchies among and silos between different areas of learning
- Multidisciplinarity and a holistic education across the sciences, social sciences, arts, humanities and sports to ensure the unity and integrity of all knowledge
- Emphasis on conceptual understanding rather than rote learning and learning for examinations.

- Creative and critical thinking to encourage logical decision-making and innovation
- Ethics and human and constitutional values such as empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality and justice
- Promoting multilingualism and the power of language in teaching and learning
- Life skills such as communication, cooperation, teamwork and resilience
- Focused regular formative assessment for learning rather than the summative assessment that encourages today's "coaching culture;"
- Extensive use of technology in teaching and learning, removing language barriers, increasing access for *Divyang* students and educational planning and management
- 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 that all students are able to thrive in the education system
- Synergy in curriculum across all levels of education from early childhood care and education to school education to higher education
- Teachers and faculty as the heart of the learning process – their recruitment, continuous professional development, positive working environments and service conditions
- A "light but tight" regulatory framework to ensure integrity, transparency and resource efficiency of the educational system through audit and public disclosure while encouraging innovation through autonomy, good governance and empowerment
- Outstanding research as a corequisite for outstanding education and development; a continuous review of progress based on sustained research and regular assessment by educational experts
- A rootedness and pride in India and its rich, diverse, ancient and modern culture, knowledge systems and traditions
- Education is a public service; access to quality education must be considered a basic right of every child
- Substantial investment in a strong, vibrant public education system, as well as the encouragement and facilitation of true philanthropic private and community participation.

The vision of this policy

1. An education system rooted in Indian ethos
   a. That contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society

b. By providing high-quality education to all and thereby making India a global knowledge superpower.

2. The curriculum and pedagogy of our institutions must develop among the students a deep sense of respect toward
   a. The fundamental duties and constitutional values
   b. Bonding with one's country
   c. A conscious awareness of one's roles and responsibilities in a changing world.

3. To instill among the learners a deep-rooted pride in being Indian.
   a. Not only in thought but also in spirit, intellect and deeds, as well as
   b. To develop knowledge, skills, values and dispositions that support.
      i. Responsible commitment to human rights
      ii. Sustainable development and living
      iii. Global well-being, thereby reflecting a truly global citizen.

Actual policy

There are mainly four parts, the first three being various levels of learning followed by the actual implementation.
- **Part I – School education**
- **Part II – Higher education**
- **Part III – Other key areas of focus**
- **Part IV – Making it happen (implementation).**

Part I – School education

1. Ensuring universal access to all levels of schooling from pre-primary to Grade 12
   The ultimate target to be achieved shall be 100% gross enrollment ratio (GER). To achieve this, following initiatives shall be undertaken
   a. Provision of effective and sufficient infrastructure
   b. Alternative and innovative education centers to minimize/reverse the dropout rate
   c. Careful tracking of learning level of students for their universal participation
   d. Continuous interaction between the teachers, counselors and specially trained social workers with the students and their parents for their continued attendance.

2. Early childhood care education
   a. Emphasis on criticality of early years so as to ensure quality early childhood care and education for all the children between 3 and 6 years by 2025
   b. A National Curricular and Pedagogical Framework for Early Childhood Care and Education for children up to age of 8 years by NCERT

c. All of these activities shall be a joint venture of Ministries of HRD, Women and Child Development, Health and Family Welfare and Tribal Affairs.

3. New curricular and pedagogical structure
i. Main aims shall be
   a. "Experiential learning" to achieve the holistic development, with reduction in "content" to promote essential learning and critical thinking
   b. Wider flexibility and choices of subjects for them to pursue the paths of their own liking, according to their talent and interests
   c. No rigid boundary or separation between arts and science, curricular and extra-curricular activities, vocational and academic streams. All shall be integrated
   d. Equal emphasis accorded to all subjects such as science, social sciences, art, languages, sports and mathematics

ii. Design shall be [Figure 1]
- The present day 10+2 structure of school curricula is to be replaced by a 5+3+3+4 (total of 15 years) curricular structure corresponding to ages 3–8 (5) + 8–11 (3) + 11–14 (3) + 14–18 (4) years, respectively
- This will bring the up until now, uncovered group of age group of 3–6 years under school curriculum, globally accepted as the crucial stage of mental faculty development
- Three years of pre-school/Anganwadi + 12 years of schooling
- Essentially, there shall be four stages:
  - Foundation stage: 5 years duration: Divided into two parts, namely; 3 years of pre-school/Anganwadi, covering ages 3–6 years + 2 years of
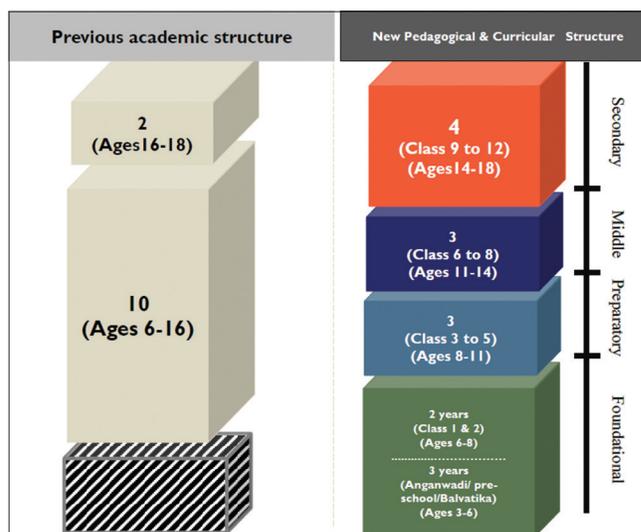

Figure 1: Diagrammatic representation of existing and proposed newer curricular and pedagogical structures.

primary school in Grades 1–2, covering ages 6–8 years

- Preparatory stage: 3 years duration: Grades 3–5, covering ages 8–11 years
- Middle stage: 3 years duration: Grades 6–8, covering ages 11–14 years
- Secondary stage: 4 years duration: Grades 9–12 in two phases, first phase – Grades 9 and 10, while second phase – Grades 11-12, covering ages 14–18 years.

NCERT shall be entrusted to develop a new and comprehensive National Curricular Framework for School Education (NCFSE 2020–21).

NCERT and SCERT shall develop high-quality textbooks and other materials. States will take the initiative in preparing their own curricula/textbooks incorporating their own local state flavor and material, with prioritizing the availability of these in all regional languages. Reducing the textbooks load and school bag weight shall be ensured.

4. Attaining foundational literacy and numeracy

A national mission on foundational literacy and numeracy will be set up so as to focus on early language and mathematical skills from Grades 1–3 by 2025. A national book promotion policy shall be created

5. Multilingualism and power of language

The medium of instruction at least until Grade 5, but preferably till Grade 8 and beyond will be in local/regional language/mother tongue. A project "Languages of India shall be conducted between Grades 6 and 8, for every student. "Sanskrit" will be offered as an option, at all the levels of school/higher education under three language formulas. Classical Indian languages as well as many foreign languages will be at the secondary level. Indian Sign Language will be standardized, for offering.

6. Reforms in assessment

A new National Assessment Center, performance assessment, review and analysis of knowledge for holistic development (PARAKH) will be set up. There shall be a paradigm shift from summative to regular and formative assessment, which shall be competency based. The board examinations of 10th and 12th shall continue, but for each of them, the individual will be allowed to take each of these on two occasions during one school year, one main examination and one for improvement. The school examinations in the 3rd, 5th and 8th grade will be conducted by the designated authority.

7. National entrance test

The principles for university entrance examinations will be similar. The National Testing Agency (NTA) will work to offer a high-quality common aptitude test, as well as specialized common subject examinations in the sciences, humanities, languages, arts and vocational subjects, at least twice every year.

8. Equitable and inclusive education

Special emphasis will be for socially and economically disadvantaged group (SEDGs) inclusive of gender identities (female and transgender), sociocultural (SC, ST, OBCs and minorities), geographical (rural), disabilities (specially learning disabilities) and socioeconomic (migrants, low income, orphans and any other vulnerable) groups. Special attention will be provided to the children with disabilities, both physical and learning. Special "Bal Bhavans" and "Samajik Chetna Kendras" will be established to assist the students.

9. Support for gifted students/students with special talents

There are innate talents in every student, which must be discovered, nurtured, fostered and developed. 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. Topic-centered and project-based clubs and circles will be encouraged and supported at the levels of schools, school complexes, districts and beyond. Examples include science circles, math circles, music and dance performance circles, chess circles, poetry circles, language circles, drama circles, debate circles, sports circles, eco clubs, health and well-being clubs/ yoga clubs and so on. Olympiads and competitions in various subjects will be conducted across the country.

10. Teacher recruitment and career path

Recruitment, promotions, assessment of Teachers will be carried out, through, a robust, transparent and merit based process. "National Professional Standards for Teachers (NPST)" will be developed by 2022, by National Council for Teacher Education (NCTE), in collaboration with NCERT, SCERTs. There shall be a review/revision in 2030 and every 10 years thereafter.

11. School governance

To be streamlined.

12. Accreditation and standard setting of school education

A State School Standards Authority will be set up. SCERTs shall develop, school quality assessment and accreditation framework. There shall be same assessment and accreditation criteria, benchmarks and processes for both public and private schools.

13. Vocational education

The target of at least 50% of learners being exposed to vocational education, both at school and the higher education level, has been planned to be achieved by 2015. The students are planned to be oriented with vocational education at middle and secondary school, which will then be integrated into higher education, through it is, polytechnics, even local industry. They will learn at least one vocation, with orientation to many. Ten days of internship between 6 and 8 grades with, local experts such as carpenters, potters and gardeners same program being followed every year during vacation in Grades 6–12.

Part II – Higher education

1. Establishment of new quality universities and colleges
   i. Aim: The main aim is to create good, thoughtful, well rounded and creative individuals. Such individuals may be allowed to study one or more specialized area in depth so that values such as intellectual curiosity, creativity, ethics & morality, scientific temperament and social commitment are allowed to develop, without the rigid barriers of streams, specializations
   ii. To create more universities and colleges (HEIs) which offer multidisciplinary undergraduate as well as graduate programs/education with medium of instruction in local/Indian and other languages
   iii. To establish a National Research Foundation
   iv. Institutional and faculty autonomy
   v. Increased access, equity, inclusion by revamping of curriculum, pedagogy and assessment.

2. Institutional Restructuring and consolidation
   i. All HEIs to be multidisciplinary by 2040. Single stream HEIs shall either be phased out or will have to move to be multidisciplinary or as a part of multidisciplinary HEI clusters
   ii. By 2030 at least one large multidisciplinary HEI, in or every district
   iii. GER to be increased from 26.3% (2018) to 50% (2035)
   iv. Public as well as private HEIs, but emphasis on PUBLIC
   v. University will get redefined as: Those which place equal importance on teaching and research as Research-Intensive Universities (RIU) or those which place greater emphasis on teaching but still conduct significant research as Teaching-Intensive Universities (TIU)
   vi. Large multidisciplinary institutions, which have main focus on undergraduate teaching and grant mainly the undergraduate degrees, will be labeled as Autonomous Degree Granting College (AC). Concept of "affiliated colleges" shall be gradually phased out in next 15 years (by 2035)
   vii. These and HEIs, shall undergo a gradual, stage wise assessment mechanism before granting graded autonomy. HEIs can have autonomy to gradually move from one category to other
   viii. There shall be essentially no rigid categorization between these three institutions, namely, these three different institutions, RIUs, TIUs and AC, shall be in continuum. These shall impart both professional and vocational education in an integrated manner
   ix. There shall be cooperation between HEIs, in their development, community engagement and service, support to school education in various fields and faculty development

x. The HEIs have an option to run open distance learning (ODL) and online programs, after getting due accreditation
xi. All the present-day confusing and complex nomenclature pertaining to HEIs such as, "Deemed to be University," "Affiliating University," "Affiliating Technical University," and "Unitary University" shall be replaced by simply "University" after fulfilling stipulated criteria and norms.

3. Toward a more holistic and multidisciplinary education
   i. All undergraduate (UG) programs, be it professional, technical and vocational streams, shall be more holistic. For example, even a purely technical profession such as engineering shall offer humanities, arts, vocational and soft skills and vice versa
   ii. The UG degree programs will be of 3 or 4 years duration with multiple exit options in built and with appropriate certification in any discipline/field inclusive of professional/vocational/technical streams. For example;
      a. A certificate after completion of 1 year
      b. A diploma after completion of 2 years
      c. A bachelor's degree after completion of 3 years
      d. Preference shall be for multidisciplinary degree after 4 years.
   iii. A 4-year program may also culminate in to a "Degree with Research," if rigorous research project in the major area/s of study as specified by HEI, has been carried out
   iv. An Academic Bank of Credit, for digital storing of academic credits earned from various HEIs, so that degree from a HEI can be awarded
   v. Departments such as art, dance, economics, education, indology, language, literature, mathematics, music, philosophy, pure and applied science, sociology, sports, statistics, translation and interpretation shall be established and strengthened in all the HEIs.
   vi. Credit-based courses in community service, environmental education and value based education will be integral part of HEI
   vii. Multidisciplinary Educational and Research Universities (MERUs) – Model public universities for holistic and holistic education at par with IITs, IIMs shall be established.

4. Optimal learning environment and support for students
   i. HEIs and their faculty will have autonomy to innovate in terms of curriculum, pedagogy and assessment within a broad framework
   ii. CBCS shall be reinvented and revived. Assessment, including final, shall be decided by HEI with a criterion based grading system. The emphasis will be on the continuous and comprehensive evaluation
   iii. High-quality support centers, professional academic and career counseling for all

iv. Standardization, regulation and accreditation of ODL will take priority.

5. Internationalization
   i. The international students shall be facilitated to take admission in Indian Universities and whatever it takes to achieve this and project India as the global study destination for premium education at affordable costs
   ii. At each HEI, an international students office will be established for facilitation of foreign students
   iii. Research/teaching collaborations, faculty/student exchange and liaisons with foreign universities on one hand and opening of offshore campuses of high profile Indian universities in foreign countries on the other, will be encouraged
   iv. The top foreign universities will be permitted to operate in India, by executing special legislative frameworks.

6. Student activity
   i. There will be provision of all the facilities required to provide, comfortable, safe and quality education such as, adequate hostels, medical facilities, counseling center, various clubs like, sports, art, culture, eco, activity community service so on and so forth will be established
   ii. Financial support, especially, the students belonging to SC, ST, OBC and other SEDGs, will be supported with scholarships, sponsorships.

7. Faculty motivated, energized and capable
   i. Faculty shall have autonomy to design their own curriculum and pedagogical modalities within approved framework
   ii. Faculty recruitment and promotions as per clear, well-defined and transparent process.

8. Equity and inclusion of higher education – government and HEIs equal partners
   i. Approach by the government
      a. Assistance to SEDGs, financial and other, irrespective whether public or private HEI
      b. Assistance to fairer gender
      c. Earmark HEIs in promising districts/create special education zones
      d. Improve technologies.
   ii. Approach by HEIs
      a. Regulate the fees and other expenditure to the students
      b. Provide scholarships, sponsorships and other financial assistance
      c. Make admissions, curriculum and opportunities more inclusive
      d. Make all the facilities available for the differently abled and disadvantaged

   e. Non-discrimination, non-harassment and gender equality are the basic tenets
   f. Develop Institutional Development Plan which contains special plans for SEDGs

9. Impetus on vocational education
   i. Vocational education to be integrated in to school, higher education and other professional institutions in phase wise manner
   ii. B.Voc degree program (2013) to continue but vocational courses to be included in all the bachelor's degree programs (3 or 4 years)
   iii. By 2025, 50% of learners shall have exposure to vocational education
   iv. HEIs to provide vocational education individually or in collaboration with industry/NGOs
   v. "Lok Vidya;" the traditional Indian vocational knowledge will be integrated
   vi. Vocational education through ODL mode will be explored
   vii. National Committee for Integration of Vocational Education under Ministry of Human Resources and Development (MHRD) will be established
   viii. Indian Standards (ISI) to be aligned with International Standard Classification of Occupations
   ix. With the help of credit-based framework, cross mobility between the "general" and vocational education to be facilitated.

10. Research: Catalyzing quality academic research in all the fields through a New National Research Foundation (NRF)
    i. Establishment of a new, NRF
    ii. Goal; to establish and permeate the "Research Culture" throughout our HEIs/universities
    iii. A rotating board of governors (BOG), consisting of eminent researchers and innovators will govern this
    iv. Sphere of activities includes.
       a. Find peer-reviewed, competitive grant proposals from all types and all streams/disciplines
       b. Initiate, facilitate and promote research at HEIs
       c. Act as a Liaison between researchers and government branches.

11. Transformation of regulatory system of HEIs
    i. Under one umbrella of Higher Education Commission of India (HECI), four independent verticals will be set up, to govern the four major aspects, namely,
       a. Regulation will be named as National Higher Education Regulatory Council (NHERC). It will function as a "single" point regulator for all the education, including teacher education, except medical and legal
       b. Accreditation – National Accreditation Council (NAC), which will base its assessment of the

institutions on the basis of basic infrastructure, public self-disclosure, good governance and outcomes

c. Funding – Higher Education Grants Council (HEGC) will do funding/financing using transparent criteria

d. Education – General Education Council (GEC) will frame the learning outcomes on the basis of specially formulated National Higher Education Qualification Framework (NHEQF)

ii. All the four bodies as well the mother body shall function on the basis of transparency, public self-disclosure and the use of technology to avoid the human bias

iii. Existing professional councils such as Indian Council of Agricultural Research, Veterinary Council of India, NCTE, Council of Architecture and National Council for Vocational Education and Training will act as Professional Standard Setting Bodies.

12. Curbing commercialization of education

i. All education institutes will be audited at similar standard and disclosure as "not for profit" entity

ii. NAC shall provide complementary check and NHERC will take this in to consideration as one of the key regulations

iii. All HEIs including private shall transparently disclose all fees and charges and there shall not be any arbitrary increase of fees/charges during enrolment.

13. Effective governance and leadership for HEIs

i. Over next 15 years, with graded accreditation and associated graded autonomy, all the HEIs in India, will aim to become, independent self-governing institutions pursuing excellence and innovation under specially selected BOG

ii. BOG of an institution will be empowered to govern the institution free of any external interference

iii. BOG will be accountable to hold all the regulatory guidelines of HECI though NHERC.

Part III – Other key areas of focus

1. Professional education: Health-care education

a. All stand-alone universities be it, agricultural, health sciences, legal, technical shall transform themselves as multidisciplinary and holistic education providing HEIs

b. All institutions offering either professional or general education will aim to organically evolve into institutions/clusters offering both seamlessly and in an integrated manner by 2030

c. Health-care education needs to be re-envisioned so that the duration, structure and design of the educational programs need to match the role requirements that graduates will play

d. Students will be assessed at regular intervals on well-defined parameters primarily required for working in primary care and in secondary hospitals

e. Given that people exercise pluralistic choices in health care, our health-care education system must be integrative meaning thereby that all students of allopathic medical education must have a basic understanding of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy and vice versa

f. There shall also be a much greater emphasis on preventive health care and community medicine in all forms of health-care education.

2. Technology in education

a. An autonomous body National Educational Technology Forum (NETF) will be created to provide a platform for free exchange of ideas on the use of technology for
i. Learning
ii. Assessment
iii. Planning
iv. Administration.

b. Technology-based education platforms such as "Diksha/Swayam" will be better integrated.

3. Online and digital education

a. New circumstances and realities require new initiatives. The recent epidemics/pandemics necessitate that the alternative modes of quality education are utilized whenever and wherever traditional and in-person modes of education are not possible

b. Need to carry out carefully designed and appropriately scaled pilot studies to determine advantages/disadvantages

c. In the meantime, the existing digital platforms and ongoing ICT-based educational initiatives must be optimized and expanded to meet the current and future challenges in providing quality education for all

d. The use of technology for online and digital education must adequately address concerns of equity

e. Teachers require suitable training and development to be effective online educators, as good teacher in a traditional classroom may not be a good teacher in an online classroom

f. Aside from changes required in pedagogy, online assessments also require a different approach, with multiple challenges to conducting online examinations at scale, including limitations on the types of questions that can be asked in an online environment, handling network and

power disruptions and preventing unethical practices

g. Certain types of courses/subjects, like health sciences practical have limitations in the online/digital education space, which can be overcome to a partial extent with innovative measures

h. Further, unless online education is blended with experiential and activity-based learning, it will tend to become a screen-based education with limited focus on the social, affective and psychomotor dimensions of learning.

4. The recommended key initiatives

a. Pilot studies for online education involving appropriate agencies – To evaluate the benefits of integrating education with online education while mitigating the drawbacks such as, student device addiction, most preferred formats of e-content

b. Digital infrastructure – There is a need to invest in creation of open, interoperable, evolvable, public digital infrastructure in the education sector that can be used by multiple platforms and point solutions, to solve for India's scale, diversity, complexity and device penetration

c. Online teaching platform and tools – Existing e-learning platforms such as SWAYAM and DIKSHA will be extended to provide teachers with a structured, user-friendly, rich set of assistive tools for monitoring progress of learners. Tools, such as two-way video and two-way audio interface for holding online classes, are a real necessity as the present pandemic has shown

d. Content creation, digital repository and dissemination – A digital repository of content including creation of coursework, learning games and simulations, augmented reality and virtual reality will be developed

e. Addressing the digital divide – The population whose digital access is highly limited, the existing mass media, such as television, radio and community radio will be extensively used for telecast and broadcasts. A special focus on content in all Indian languages will be emphasized

f. Virtual labs – Existing e-learning platforms such as DIKSHA, SWAYAM and SWAYAMPRABHA will also be leveraged for creating virtual laboratories so that all students have equal access to quality practical and hands-on experiment-based learning experiences

g. Training and incentives for teachers – Teachers will undergo rigorous training in learner-centric pedagogy and on how to become high-quality online content creators themselves using online teaching platforms and tools

h. Online assessment and examinations – Appropriate bodies, such as the proposed National Assessment Centre or PARAKH, School Boards, NTA and other identified bodies, will design and implement assessment frameworks encompassing design of competencies, portfolio, rubrics, standardized assessments and assessment analytics

i. Blended models of learning – The importance of face-to-face in-person learning is not forgotten. Accordingly, different effective models of blended learning will be identified for appropriate replication for different subjects

j. Laying down standards – As research on online/digital education emerges, NETF and other appropriate bodies shall set up standards of content, technology and pedagogy for online/digital teaching-learning for setting up guidelines.

Part IV – Making it happen (implementation)

1. Strengthening Central Advisory Board of Education
2. Redesignation of MHRD as Ministry of Education
3. Financial and other infrastructural support.

SUMMARY AND CONCLUSION

NEP2020 has been unveiled, with lot of thought process, optimism, as well as fanfare by Government of India. The proposed delivery of education is extremely broad based, circumspect and all-encompassing. There are no specific compartments, boundaries and divisions. The predicted timespan is significantly prolonged, with nearly 20 + years of duration envisaged. It starts at the grass root; school level goes through the graduate and even higher level of education. Main thrust as contemplated is on multidisciplinary, holistic and broad-based education. There is also main emphasis on vocational education, which is supposed to start earlier in school phase itself. The policy is mainly divided in to three parts of delivery as per the level of the learner and fourth part as the ways to make it happen. The levels are school, higher education and other areas, specifically professional education.

At school level, the old 10+2 system shall be replaced with new 5+3+3+4. More stress on the local/Indian languages, more help to SEDGs and teachers to be assisted in self-improvement and thus upgradation.

At university/HEI level, no single stream/discipline university shall remain in existence but transformed into multidisciplinary, holistic delivery systems. A single nomenclature, "University," shall prevail. There shall be MERUs, research shall be on forefront. A single body National Research F shall be the controlling body. There shall be HECI to govern the higher education. Four aspects, namely, regulation – will be under

NHERC, accreditation by NAC, funding by HEGC and education by GEC with the help of NHEQF.

At professional level, a health-care education shall undergo tremendous transformation, by integrating the various systems of medicine. In view of the ongoing pandemic and possibility of such things happening, a strong stress on online and digital modality of the delivery of the content is not only warranted, but is imperative.

Declaration by authors

The article has been constructed to explain a declared and published National Education Policy NEP2020. Since it is in the public domain, so authors want to declare that the content from the NEP2020, in part or in totality, has been liberally used in constructing this article. It is the explicit intention of authors to try and summarize the main policy.

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Declaration of patient consent

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Conflicts of interest

There are no conflicts of interest.

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