

Report of the Six Member Committee
on
National Education Policy 2020 and Kerala



The Kerala State Higher Education Council
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FOREWORD

On July 29, 2020, the Union cabinet gave its approval to a document *The National Education Policy 2020* which was to replace the earlier policy of 1986. However, since education belongs to the Concurrent List in the Seventh Schedule of the Constitution, a national education policy can be finalized only through the concurrence of both the Centre and the states. And as state governments had not been consulted during the preparation of the new document released by the Centre, it was felt that this document now had to be debated by the state governments before a final National Education Policy could be evolved, based on their reactions.

To help this debate, the Kerala State Higher Education Council set up a small Committee of literati and educationists under my Chairpersonship to prepare a report on the Centre's document. What follows is the text of our report.

I would like to thank the many scholars who attended a day-long conference called by the Kerala State Higher Education Council to discuss the Central document. I would also like to thank those who gave us comments when our draft report was put up for public discussion. Their inputs helped us greatly. Finally, we are grateful to the KSHEC for their help in preparing this report.

Prof. Prabhat Patnaik

(Chairman)

Report of the Six Member Committee on National Education Policy 2020 and Kerala

The Kerala State Higher Education Council formed a six -member committee to study and report on the New Education Policy 2020 approved by the Centre. The committee was appointed to scrutinise the recommendations in the new policy, with special reference to Kerala and on matters pertaining to higher education. The committee was entrusted to consider the views of all sections of society including University /College teachers on the matter before submitting their views to the Council. Following are the members of the Committee.

1	Prof.PrabhatPatnaik (Chairman)	Jawaharlal Nehru University (JNU), New Delhi
2	Prof.RajanGurukkal P.M.	Vice Chairman, KSHEC
3	Dr.GanganPrathap	National Institute for Interdisciplinary Science and Technology (NIIST)
4	Prof.K.Sachithanandan	Writer
5	Dr.Kumkum Roy	Centre for Historical Studies, JNU
6	Dr. Rajan Varughese	Member Secretary, KSHEC (Convenor)

Section-I is a general estimate of the policy perspectives of NEP. Section-II takes up specific issues that need to be taken up for discussion with the Central Government/ Central regulatory authorities with a view to the implementation of NEP in Kerala and Section – III is a note on Research and Innovation in the HE sector in Kerala - Problems and Prospects.

Section - I NEP: General Observations

Introduction

NEP 2020 replaces the thirty-four year old National Policy on Education (NPE), 1986. , This policy is aligned to the 2030 Agenda for Sustainable Development; its professed aim is to transform India into a “vibrant knowledge society” and “global knowledge superpower” by making both school and college education more “holistic, flexible and multidisciplinary”, suited to 21st century needs and bring out the “unique capabilities of each student”. The National Education Policy 2020 was expected to objectively review the achievements and failures of the previous National Policies on Education, assess the new challenges that have emerged in the intervening years, and articulate a vision that can robustly connect ground realities and democratic aspirations to Constitutional directives.

Despite the claims stated above, the NEP has failed to identify and address the socio-economic challenges that have daunted India’s educational progress. While the cost of quality education continues to rise, particularly with the advent of self financing educational institutions, an increasing number of pupils is forced to drop out even before completing a minimum level of education. Scientific temper is steadily on a decline and civic values are

facing vicious attacks from an environment that is actively promoting obscurantism, social divisions and a backlash against the marginalised sections.

The Policy sets up an ambitious GER target of 50% to be achieved by 2035 for higher education without earmarking public funds for education in general and Higher Education in particular. The policy depends heavily on the market and private/ philanthropic investment in higher education for the realization of its ambitious objectives. The dismantling of the affiliating system advocated in the policy will adversely affect pooling of resources and the access of students from a non-affluent background to higher education in rural and remote areas of the country.

The Policy fails to recognise the Constitutional obligation by the Centre to recognize in an appropriate manner the power of states on matters of education. The Policy has virtually robbed the states of their Constitutional rights and gives overarching powers to the Centre. It proposes to create an excessively centralised structure of authority. The States have neither the freedom to prescribe their own priorities nor to position themselves critically against the policies of the Centre.

The National Education Policy undermines social equity and democratic access to education. It impedes unconventional, critical thinking and free enquiry by tying value-education up with a Vedic belief system that is not in consonance with current times and Constitutional principles. Moreover, by a blatant valorisation of and recurring fetish for a Vedic past, the policy suppresses the cultural multiplicity and diversity of the evolution of knowledge production in the country and reduces the same to a few sacred texts from the ancient period. Further, by entrusting a centralised National Research Foundation (NRF) as the sole authority to identify, approve and fund all research projects and topics, it scant scant regard for constitutionally-sanctioned principles and practices of decentralisation.

1. A Paradigm Shift: An Overview

The NEP involves a paradigm shift in India's education system that is highly retrograde and deleterious. This shift is from a conception of education as a means of "nation-building" to one that prepares students to become mere fodder for neo-liberal capitalism, even while giving them a dash of cultural chauvinism. The NEP thus visualizes an education that conforms to the *weltanschauung* of a Corporate-Hindutva alliance.

The existing education system no doubt is deeply flawed and can scarcely be credited with serving such a lofty goal as "nation-building"; nonetheless it has certain markers, whose removal, suggested by the NEP, will be severely damaging for the nation. The first removal is of inclusiveness; the NEP, contrary to its claims, will make education confined, more so than before, to a socially and economically privileged elite. This is clear from the fact that nowhere in the document is there any mention of "reservations" for *dalits*, OBCs and other deprived groups, even though the document devotes sizeable space to the need to draw what it calls "Socially and Economically Disadvantaged Groups" into the ambit of education. Its total silence on "reservations" suggests an unwillingness to continue with them.

A further reason for considering the NEP to be exclusionary is that it envisages significant privatization of education, which will clearly make it more expensive, well beyond the pockets of the socially and economically deprived. The NEP no doubt talks of scholarships being given by private Higher Educational Institutions; but such scholarships will raise the fees for non-scholarship-holders even further. This will destroy all collegiality among students, with rich students sneering at the poor ones encouraging the latter to get demoralized and drop out.

Education of the poor in private institutions has *got* to be tax-financed; the NEP does not recognize this.

In fact, the possibility of such dropping out is implicitly acknowledged in the NEP. Its enthusiastic references to Open Distance Learning and to Vocational Education are a cover for such exclusion. With state examinations, now instituted even at Class III, V and VIII levels, it can be claimed that those who get bad grades and have to drop out will be “accommodated” in these alternative streams. These streams however cannot substitute academic education. Vocational training should follow only after a certain minimum level of academic education; and open distance learning cannot replace formal education, since the latter involves *social* interaction which is a crucial aspect of learning. Likewise, a person dropping out from college after one or two years is to be provided under the NEP with a consolation piece of paper called a “certificate” or a “diploma”. Notwithstanding this piece of paper however a drop out will still remain a drop-out.

Exclusion is thus a central feature of the NEP; those excluded can at best be vocationally-trained in some “skills” but they would not get a comprehensive education. The vision is that a few, depending on the needs of neo-liberal capitalism, will acquire an education that will enable them to fill executive and official positions; others excluded from such education will be given skills, and will join that vast and growing segment of the work-force among whom the limited number of available jobs are rationed out with declining per capita earnings over time. The dualism characterizing the economy at present will also characterize the education system, not just *de facto* but also *de jure*.

Those who receive education and are destined for proper jobs, will have a curriculum that imitates those of metropolitan universities. The globalization of capital, characteristic of neo-liberal capitalism, also creates a global labour market which requires in turn a homogeneous education across countries. This detaches education completely from its Indian setting. A student of economics, for instance, simply cannot understand the Indian economy without reckoning with the legacy of colonialism; but a student in the metropolis, even a student of Development Economics, does not learn anything about colonialism, has not heard of the “drain of surplus” or “deindustrialization”. Having an imitative curriculum, which becomes necessary if foreign universities are invited to set up shop in India, as the NEP visualizes, will therefore make Indian students ignorant of their past and incapable of understanding the present. It is a panacea for uncritical, imitative and erroneous thinking that dooms the education system to mediocrity though ironically this imitativeness is introduced in the name of “excellence” and for creating “world class” institutions.

To camouflage this imitativeness, the NEP suggests imbuing students with what is essentially a Hindutva-type chauvinism. The curriculum is supposed to harp on the glories of ancient India and to instil in students a pride in being Indian. The Indian society alas has also been marked by horrendous practices like untouchability which nobody can be proud of. To overcome such practices, students must learn to abhor them. Instilling pride in them for being Indian amounts to shutting out this abhorrence, to ignoring or prettifying caste-oppression and other injustices. It is to make them conformists in a world marked by oppression and exploitation.

This accent on breeding conformism among students and teachers permeates the NEP. It suggests a “tenure-track” for teachers which opens up the possibility of victimization, through denial of tenure, in case a teacher protests against government policies or university decisions. Boards of Governors in colleges are to be all-powerful vis-à-vis both teachers and students. Departmental Headships and Deanships are no longer to be rotated among teachers, but to be entrusted to those with “leadership” qualities, which will mean a return to the old days

of feudal subservience. Altogether therefore the democratization of universities that had occurred over the last several decades by creating an atmosphere of greater equality among faculty members, is being rolled back under the NEP.

The intellectual passion among teachers and students that this democratization had generated in several institutions which in turn had produced good quality teaching and research, is now being lost. It had also given rise to a range of new subjects, straddling multiple disciplines, such as Dalit Studies, Gender Studies, and Labour Studies. Admittedly, these subjects fragmented the study of the oppressed; but they did at least study the oppressed. The NEP, despite stressing multi-disciplinary, does not mention any of these subjects, which reinforces one's belief that it fosters conformism.

Education belongs to the Concurrent List of the Constitution; but the NEP has been formulated without consulting states, which represents a drive towards centralization. The proposed research-supervisory body, the National Research Foundation, is the best example. The apex decision-making body on higher education, the Higher Education Commission of India, will be headed by the central Education Minister. The syllabi will be centrally prepared, with states adding only local flavour. The State-level Secondary Boards will be devalued, with undergraduate admission being determined by a centrally-administered entrance test. This indubitable tendency towards centralization complements the anti-democratic thrust of the NEP and constitutes a part of the paradigm shift.

2. Neglect of the Federalist Principle and Centralisation

There has been no systematic consultation with the states in the process of formulating this policy, even though education belongs to the Concurrent List. This is in marked contrast to the procedure adopted during the preparation of the Kothari Commission Report (1966) as well as the National Policy of Education (1986/1992). The neglect of CAGE is particularly noteworthy in this context. Even Parliament has not been involved, and the policy has been introduced without any parliamentary debate, let alone parliamentary approval. This simply cannot be allowed to happen. We strongly assert that no education policy can be introduced in the country without consulting CAGE and without the approval of the Parliament.

3. About GER Target

The NEP states that its aim is to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% in 2018 to 50% by 2035. The importance of raising the GER cannot be overstressed. Access to higher education is an essential component of human development and many countries have succeeded in raising their GER to 60 percent. But in these countries the increase in GER has been achieved mainly as a result of an increase in public investment in higher education, even though they also have high quality private institutions. But in the case of India the strategy that is unfolded through the NEP is to increase GER through the expansion not so much of public investment as of private and philanthropic investment. Any increase in GER achieved through this route will adversely affect access and quality of higher education in the country. This is clearly evident from the increase in GER that has occurred in several states in India through an unregulated expansion of self financing institutions especially in the realm of professional education. Indeed several studies published by the National Institute of Educational Planning and Administration testify to this fact. Hence, any private sector-, and even philanthropic sector-led expansion of higher education, even it manages to raise the GER as envisaged in the NEP, will both exclude the poor from its ambit

and lower the quality of higher education in the country. It will serve only to further the process of commoditisation of education.

4. Expenditure for Education - 6% of GDP

The NEP calls for increasing public expenditure in education to 6% of GDP. This was envisaged originally by the 1968 policy, and was reiterated in the policy of 1986/1992. This goal was also included in the Common Minimum Programme of the UPA -1 government (2004). The current public expenditure of both centre and state on education is around 4.43% of GDP and only around 10 % of the total government spending towards education. The NEP noted that these numbers are far smaller than most developed and developing countries. In the draft document there was a suggestion to increase budget expenditure on education by both the central government and all state governments to 20% over a 10 year period. But this suggestion is missing in the final NEP document. Given the economic situation in the country, it will be extremely difficult to achieve this targeted expenditure on education. The alternative suggested in the document is private – philanthropic funding of higher education. This will pave the way for commercialisation of higher education as new generation educational entrepreneurs are motivated more by immediate return on their investment than on the social gains. Given the sharp decline in the GDP caused by the pandemic/ lockdown and economic crisis, public expenditure on education may not come up to the targeted level. Increase in public expenditure devoted to education is scarcely possible unless the tax – GDP ratio is deliberately raised, and the best way of doing so is through wealth taxation. But the NEP is completely silent on the subject. To be meaningful—education will require consistent and sustained support. Also, the basis on which a share of the resources would be allocated to states needs to be explicitly spelt out, as well as the proportions to be spent on different levels of education.

5. National Research Foundation

NEP states that the National Research Foundation will be setup through an act of parliament as an autonomous body of Government of India with an annual grant of 20 thousand crores (0.1% of GDP) which will be increased progressively over the next decade as the country's capacity for quality research is developed. The overarching goal of the NRF will be to enable/ develop a culture of research to permeate through our universities, through suitable incentives. The NRF will competitively fund research in all disciplines through close linkages with governmental agencies, industry and private/ philanthropic organisations. The foundation will have four major divisions to start with- Sciences, Technology, Social Sciences, Arts and Humanities. Institutions that currently fund research at some level such as DST, DAE, DBT etc. will continue to independently fund research according to their priorities and needs. NRF will coordinate with other funding agencies and will work with Science and Engineering and other Academics.

This centralised mechanism of NRF undermines the autonomy of higher education institutions to determine their own research priorities, and capacities and identifying research potential. The NRF violates the federal spirit, as it does not allow diverse state level research initiatives to emerge organically from different regional or local areas. The NRF is mandated to synergise the research potentials in HEIs with the R & D requirements of the Industry and it is bound to prioritise commercially attractive research proposals over socially valuable or critically inclined research.

In India universities were slow to develop research capacity because of the historical division of labour between national research institutions and universities. This weak research culture in universities is already a source of concern as it is regarded as the principal cause of poor quality in higher education. The establishment of a central agency like the NRF is against the repeated recommendations and initiatives for better integration of research with education or forging linkages between the two. Decisions related to research devoid of academic supervision of universities may further accentuate the existing hiatus between research and higher education in the country.

The provisions with regard to the NRF indicate its wide-ranging scope. What needs to be ensured is that the NRF must not have monopoly control over research and that research agendas must not be set exclusively by it. The NRF must also be open to public scrutiny—whether through RTI or other mechanisms, so that it is accountable with regard to its policies and deployment of resources.

6. Access to Higher Education - Policies of Reservation

- a. While the document mentions scholarship and financial support, there is, as noted earlier, no explicit mention of the reservation system, which provided a certain minimal level of support to marginalized groups. This makes us apprehensive that the government is planning to abandon reservations, a move that will have to be fought. If the government wants its claim that it is not abandoning reservations to be taken seriously, then it must explicitly incorporate this into the NEP.
- b. Apart from physical access, there are disciplines / interdisciplinary domains that have emerged to address the concerns of marginalized groups—including Dalit studies, women / gender studies, studies of discrimination and exclusion, to name a few. These do not find a mention in the NEP. The continued focus on, and development of, these interdisciplinary spaces must be insisted upon.

NEP focuses on the drive to establish HEIs in backward and remote districts of India. Social divisions based on caste, class, gender, disability and religious identity are important determinants of access to higher education. These divisions might impinge on the educational prospects of those sections that are marginalised on the basis of these barriers. There is no discretion or review of the accomplishments or challenges in implementing the Reservation Policy on admissions and appointments just as there is no discussion of the challenges faced by students with disabilities in accessing higher education.

It is necessary to insist that reservations, not only for students, but also for faculty and administrative staff positions, be implemented in letter and spirit as a bare minimum to ensure an equitable educational environment. Similarly the extent of financial support—both in terms of scholarships as well as in terms of meeting hidden costs, needs to be spelt out categorically instead of being described in terms of incentivization.

7. The challenge of language

Note the special status accorded to Sanskrit in 4.17:] “Sanskrit, while also an important modern language mentioned in the Eighth Schedule of the Constitution of India, 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 (known as ‘Sanskrit Knowledge

Systems’)... Sanskrit will thus be offered at all levels of school and higher education as an important, enriching option for students, including as an option in the three-language formula”

Giving students the opportunity to learn various languages including Sanskrit is of course welcome. But any insistence on a three-language formula must be eschewed. And even while acknowledging the richness of its linguistic heritage, Sanskrit too should be taught only as an optional language.

Given the need to learn English for various purposes, English and the language of the state need to be taught to all students in any particular state. These have to be introduced as compulsory languages at suitable levels; in addition students must be left the *option* to take any additional languages if they so wish.

8. The National Testing Agency And Autonomy

The NEP proposes to cut out learning by rote by making the Board examinations easy and flexible; and towards this end it suggests that a **National Testing Agency (NTA)** will work to offer a high-quality common aptitude test, as well as specialized common subject exams in the sciences, humanities, languages, arts, and vocational subjects, at least twice every year.

This however is wholly impractical. But given the pressures on students who have to enter an extremely crowded job market, the NTA-run test itself will now become the location where rote-learning will be regurgitated. The report’s proposal therefore will not get rid of rote-learning; it will only shift its location from the Board examination to the NTA-run test.

While the claimed gains from shifting emphasis from Board examinations to an NTA-conducted test are non-existent, this shift is a massive move towards centralization. It will destroy whatever diversity currently exists across the states with regard to curriculum, subjects and topics within each subject. It will therefore detach the learning of students even more completely from the environment where they are born and brought up.

Likewise, many provisions in the NEP, as already mentioned, subvert the academic autonomy of teachers and researchers, who will now become subservient to the new “bosses” consisting of Boards of Governors (BOGs) and Institutional Leaders (who are to be specially developed for Executive and Administrative purposes over time). Autonomy of teachers is further hit by the absence of any democratically elected representation of the academic community in the decision-making chain. The proposal to do away with democratic composition is not only at variance with the larger democratic principle of authority in public institutions, but also weakens the voice of the academic community in considerable ways.

9. Three-tier Institutional System and Affiliation

The NEP proposes three types of institutions – Multidisciplinary Research Universities (Type 1), Multidisciplinary Teaching Universities (Type 2), and Autonomous Multidisciplinary Colleges (Type 3). These have standardised and homogenous functions, but these are at cross purposes with many HEIs that have been founded by specific legislations in order to cater to specific regional and communitarian needs. Additionally, in recommending the closure of affiliating-type universities and affiliated colleges, the NEP overlooks the positive potential of these type of institutions. Affiliating systems allow for a pooling of resources and increased access to higher education for ordinary students in distant and remote villages in the country.

The NEP envisages a process of standardization. The case for standardization however is a dubious one. Each state has diverse institutions in the different categories, and these diverse institutions with their distinct histories tend to enrich the educational environment. The

insistence on standardization is part of the mindset that sees education as a (necessarily standardized) commodity.

10. Institutional Restructuring and Consolidation (HECI, NHERC, NAC, HEGC &GEC)

There will be a single overarching umbrella body for promotion of higher education- the higher education commission of India (HECI) with independent bodies for standard setting- the General Educating Council; for funding –Higher Education Grants Council (HEGC); for accreditation –National Accreditation Council (NAC); and for regulation –National Higher Education Regulatory Council (NHERC). Regulation will be ‘light but tight’ to ensure financial probity and public-spiritedness to eliminate conflicts of interest with transparent self-disclosure as the norm not an inspectorial regime. The regulatory body will function through a faceless intervention, and will have powers to penalise HEIs not conforming to norms and standards. Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.

There are four aspects this new structure that require clarification.

- (a) To what extent will states have autonomy to work out their own procedures?
- (b) Given that there is provision for credit banks, which are supposed to operate across the country, how much space does that leave for academic autonomy?
- (c) The structures suggest a top down approach in terms of regulation, accreditation, learning outcomes and funding. In this context, safeguards for academic autonomy need to be visualized and put in place.
- (d) Finally, in being accountable to four separate institutions, it is likely that there will be considerable duplication of paperwork/ online processes, which may add to the administrative burden and further bureaucratize HEIs.

11. Liberal Arts Approach and Lack of Feasibility of Four-year Degree Programmes

The Liberal Arts approach expects students to develop a multi-disciplinary and composite perspective on issues and chart their own course of study. However, in order to make it practical, the Liberal Arts approach requires an academic and cultural environment that completely absorbs students and rigorously engages them to their fullest potential. It may be a successful model in many fully residential universities that are well endowed with resources to cater to all practical needs of students and teachers. Unfortunately, the practical scenario in most Indian universities and colleges is different. The Liberal Arts programme proposed in the NEP combines academic disciplines with vocational education and does not insist on a student’s core competence in any discipline/subject of study. It runs the danger of diluting the focus of undergraduate education and leaving students with half-baked ideas that may cripple the imagination instead of empowering it.

In order to be fully implementable, the Liberal Arts approach requires the extension of the existing three-year degree programme in the Arts and Sciences to a fourth year. The additional year, despite exit points provided at the end of the third year, will impose additional financial burden on students. Students from the marginalised sections, especially women and the poor may be discouraged to continue up to the fourth year. Moreover, a four-year Bachelor in Liberal Arts/ Liberal Education (BLA/BLE) will automatically devalue the existing B.A. and B.Sc. degrees. It will create problems in the optimal utilisation of resources, result in fluctuating subject workloads and create problems in determining teaching posts in Universities and Colleges. It will introduce a chaotic state of affairs.

12. Internationalization

The NEP suggests that India will be promoted as a global study destination providing premium education at affordable costs thereby helping to restore its role as a Vishwa Guru, that an International Students Office at each HEI hosting foreign students will be set up, that ... research/teaching collaborations and faculty/student exchanges with high-quality foreign institutions will be facilitated.... That high-performing Indian universities will be encouraged to set up campuses in other countries, and that selected universities e.g., those from among the top 100 universities in the world will be facilitated to operate in India.

Nowhere is the paradigm shift mentioned earlier as clearly visible as in this proposal, whose fundamental assumption is that education is a homogeneous entity, that what is considered a proper education in India should be exactly the same as in the U.S.. This view is completely blind to the idea that the purpose of education in India should be, if one may borrow a term from Antonio Gramsci, to produce “organic intellectuals” of the people of a free India.

An international exposure for the products of the education system is of course hugely beneficial, but not “internationalization” of the sort visualized by the NEP, which will only produce homogenization. Such homogenization destroys creativity, and excludes the bulk of the marginalized sections within the country from the ambit of education. It sees education only as a globally exchangeable commodity that can be purchased by anyone who can afford it.

13. Recommendations on Recruitment and Service Conditions

The NEP does not address the long-standing concerns and insecurities of people employed in HEIs. Short-term contractual employment, arbitrary freezes in permanent recruitment, cuts in pensions and other post-retirement benefits, the withdrawal of time-bound career progression schemes, quantified productivity like API, and the marginalisation of teachers from academic decision-making have together made the academic profession an unattractive one. The National Education Policy says nothing about the need to fill the numerous vacancies, nor about the need to do away with the overexploited group of teachers called “guest lecturers” who work hard but are paid a pittance.

A system of promotions based on seniority provides greater incentives to teachers and non-teaching employees than any measures proposed by the NEP. Likewise a rigorous application of the principle of “equal pay for equal work” currently violated in the case of “guest lecturers” would be far more incentivizing than any NEP measure. Hence, time-bound promotions should be allowed to continue. The insistence on quantifiable and visible outcomes has already adversely affected higher education, resulting in an avoidable proliferation of bogus journals and publishing firms.

14. Absence of gender related themes: Gender-related themes and provisions across curriculum and the need to recognise gender as a cross-cutting concept is missing in the document. The policy fails to recognize that gender is not just a women and girls’ issue, it also pertains to boys, men, and the LGBT community, and hence the document is inherently discriminatory both in policy and implementation. The fact that there is a gap in representation in academic positions across genders and that the number of women in Science, Technology, Engineering and Mathematics research and higher education is abysmally low has not been considered anywhere in the policy.

15. ICT and Digital Online Learning: There is no evidence to suggest that digital communication and online courses can serve as a viable alternative to classroom-based teaching and learning. Digital technology and interactive multimedia have thrown up many interesting possibilities but there is no substitute for contact mentoring and guidance that students need. The spontaneous and collective energy of a classroom is also completely missing in online courses and cannot be simulated. Laboratory practical experiments have complex dimensions that cannot be simulated on virtual platforms. While digital technology can certainly complement regular classroom and laboratory-based work, it cannot replace the wholesome atmosphere of learning in the classroom.

16. Motivated, Energized, and Capable Faculty

An extremely important demotivating factor is the prevalence of Guest lecturers. The NEP nowhere takes into account the ground reality that there are between 20 to 40 % vacancies in several HEIs, and many institutions are relying on ad hoc faculty/ guest lecturers to run their programmes. These guest lecturers have little opportunity to contribute to the long-term development of the institutions.

17. Teacher Education

Teacher education will gradually be moved by 2030 into multidisciplinary colleges and universities (5.22). By 2021, a new and comprehensive National Curriculum Framework for Teacher Education, NCFTE 2021, will be formulated by the NCTE in consultation with NCERT, based on the principles of enunciated by the National Education Policy 2020 (5.28.). In order to maintain uniform standards for teacher education, the admission to pre-service teacher preparation programmes shall be through suitable subject and aptitude tests conducted by the National Testing Agency, and shall be standardized keeping in view the linguistic and cultural diversity of the country(15.7.).

The problem here again is homogenization and centralization. The richness of diversity that could be generated by having autonomous but accountable teachers' training institutions across the country gets lost when everybody has to follow a single national curriculum framework devised, for all practical purposes, by the central government.

18. Reimagining Vocational Education

By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and timelines will be developed (16.5.).

But vocational education has two pre-requisites: it must not be considered a substitute for a certain level of academic education and must come only after this level of academic education has been imparted; second, vocational education must not just mean providing a veneer of respectability to a reserve army of unemployed labour, it must be followed by absorption into a *vocation*. Overall, given that the pandemic and lockdowns as well as the overarching economic crisis have made the employment situation extremely difficult, merely providing vocational education without overcoming the employment crisis makes a mockery of such education.

19. Indirect promotion of Commercialization and mention of Curbing Commercialization of Education

The encouragement to private philanthropy at various levels, from schools to HEIs, may indicate the withdrawal of state funding, as we have seen happening in public health.. This needs to be viewed seriously. The most vulnerable and marginalized are likely to suffer with increased commercialization/ privatization, as indeed has been happening. To remedy even the present situation a central legislation setting limits to the tuition and other fees chargeable by the HEIs which are fair and non exploitative should be introduced in the parliament in consultation with the state governments.

20. Effective Governance and Leadership for Higher Education Institutions

”Upon receiving the appropriate graded accreditations that deem the institution ready for such a move, a Board of Governors (BoG) shall be established ... The BoG of an institution will be empowered to govern the institution free of any external interference, make all appointments including that of head of the institution, and take all decisions regarding governance. There shall be overarching legislation that will supersede any contravening provisions of other earlier legislation and would provide for constitution, appointment, modalities of functioning, rules and regulations, and the roles and responsibilities of the BoG. New members of the Board shall be identified by an expert committee appointed by the Board; and the selection of new members shall be carried out by the BoG itself. Equity considerations will also be taken care of while selecting the members” (19.2).

This entire model runs counter to existing structures, where there is provision for institutions such as Boards of Studies, Academic Councils etc. which include students and faculty members. The proposed model is likely to prove detrimental, as it will harm the process of democratization, and bring unacademic persons into positions of authority in academic institutions thereby subverting the latter’s autonomy and hence quality.

Conclusion

The National Education Policy’s discontinuous engagement with evolving challenges in the field of Education is marked by a singular disdain for democratic principles, federal governance and public trust. It ignores the balance of power in the Indian Constitution and gives all decision-making powers to the Executive, leaving nothing for the Parliament and state legislatures that have hitherto been actively involved in creating many institutions and resources for educational development. The Policy which sets out to align India’s Education Policy with the needs of private investment and techno capitalism, has ignored the collective aspirations of sub national levels of governments including teachers and students. The central government has to initiate wider consultations with civil society, academics and the state governments for critically examining and modifying the various aspects of higher education in the NEP document.

Section – II

National Education Policy 2020 and Higher Education in Kerala

Introduction

The higher education scenario in the state is impressive in quantitative terms. But there are several issues related to the quality/ equity in higher education. The growth of non philanthropic investment in higher education, emphasis on marketable disciplines, dearth of qualified teachers, constraints imposed by central laws and regulation etc. are some of the major factors in this regard.

The state's emphasis on distributive justice, reflected in the state government's effort to facilitate access to higher education for all segments of the population, is incompatible with the exclusionary approach of competitive selection and vertical privileging that is in vogue at the national level, as is evident from several policy pronouncements including the NEP 2020. Problems of higher education of Kerala need special attention which the NEP of 2020 ignores. Changes to the larger system must be done in consultation with those who are at the core of this process of knowledge production and reproduction, namely State governments, universities, teachers and students. The following specific issues need to be highlighted.

1. Enhance Devolution of Funds from the Centre to States for Increasing GER.

A progressive perspective on higher education today should address the concerns of expansion, excellence and equity, in the overall context of the country as a whole and the specific context of the State of Kerala in particular. Kerala has made substantial progress in education during the last two centuries. With universal literacy, near total retention at school level and GER of 37% of the relevant age group in higher education, Kerala is far ahead of most other states in the country in terms of the spread of education . These achievements are severely undermined by the rapidly escalating unmet demand for higher education, unwieldy expansion of the self-financing sector, and the weakening of the university system .To achieve the target of 50 % GER in higher education, as envisaged in the NEP 2020, larger devolution of funds from the Centre in the higher education sector is necessary for the state of Kerala. The fund distribution formula of 60:40 between the Centre and the States for central schemes with several constraining conditions severely impinge on the state's autonomy and economic capabilities

2. Establishment of Higher Education Institutions of Multidisciplinary Nature

The current expansion of higher education in the southern states has been largely in the private sector, and the bulk of it has been restricted to professional courses ranging from engineering and medicine to relatively new vocational programmes. The real challenge is to nurture and strengthen our universities without destroying their diversity by forcing them into a straitjacket of a standardized frame. To ensure quality and access and to meet the growing demand for higher education, more Higher Education Institutions (HEIs) of national importance in teaching and research of a multidisciplinary nature have to be established in the state with the help of the centre. It may be noted that central investment in higher education in Kerala is relatively low compared to the national average.

3. Strengthen SAAC Model of State Level Public Agencies of Assessment and Accreditation

Ranking of universities at the global level has gained prominence in the last decade due to the demands of global capitalism in the context of the emergence of the knowledge economy, the spread of the higher education system and the growing importance of universities in the field of research. Such rankings, analogous to the rankings of countries by credit-rating agencies, though useful for international capital, miss the social role of the HEI which is associated with its specific location.

Not surprisingly, national and international rankings obscure the commendable achievements and social commitment of state universities. Educational programmes cannot be evaluated merely on some crude quantitative indices since such indices ignore the mission of education. Research ranking systems likewise, which focus on citation indices, or lab-industry interfaces, ignore the qualitative importance of research. Besides, they cannot be applied uniformly to sciences and non Science programmes.

Kerala State Higher Education Council established the State Level Assessment and Accreditation Centre (SAAC) in 2019. Along with national criteria for assessment SAAC has developed state specific criteria of assessment for evaluating the performance of HEIs in the state. It is also in the process of developing the Kerala Institutional Ranking Framework (KIRF) based on the quantitative and qualitative data gathered by the SAAC. State level public agencies of assessment and accreditation rooted on qualitative state specific criteria of evaluation should be recognised. The pioneering effort of KSHEC in establishing the State Assessment and Accreditation Centre (SAAC) of Kerala under the Kerala State Higher Education Council deserves support and recognition.

4. National Research Foundation.-Fund Socially Productive Research

The proposal to establish an NRF with an annual grant of Rs. 20000 cr for promotion of research, which in current prices is .01 % of GDP, is too paltry an effort to meet the research requirement of the country. Besides, even this sum needs to be expended on socially productive areas . For this, a part of this sum must be shared with state governments. And both at the level of the centre and the states, adequate representation should be given to academics from all disciplines and regions in the country in the research-funding bodies. Efforts should be made to forge close interaction with universities and research institutions and funds should be made available to socially productive, region specific research projects undertaken by the state institutions of higher studies and research.

5. The Scheme of Cluster of Colleges –Central Assistance Inevitable.

Kerala also followed the UGC directive to establish clusters of colleges way back in 2010 under the leadership of the Kerala State Higher Education Council and financed by the government of Kerala. The concept of cluster of colleges needs to be examined seriously in the context of the opportunities the system provides for collaborative learning .Different models of clusters have emerged across the world. Clusters have been set up around administrative structures, which would co-ordinate the functioning of the units. Individual institutions have also grouped together on their own to share the benefits of mutual cooperation. There are also clusters with one dominant member supporting smaller units. Clusters have been formed for specific purposes, like sharing Information Communication Technologies (ICT) in teaching-

learning, civic engagement by institutions of higher education etc. Apart from sharing resources, the clusters have provided opportunities for teachers to develop and offer new courses. Students have gained by exposure to experts in different institutions. The possibilities of opening up new areas of knowledge have emerged in the process. Obviously clusters have developed in response to the infrastructure and academic needs. Special central assistance is required to strengthen this pioneering initiative of Kerala which can remedy several problems associated with the affiliating system.

6. Ensure Greater Access to the Marginalized Sections - Reaffirm The Commitment To Policies Of Reservation

The NEP needs to categorically reaffirm a commitment to policies of reservation for students, teachers and other employees of educational institutions, as this is the bare minimum that is required in terms of affirmative action. Kerala stands for reservation based admission and appointments in Higher Educational Institutions and this policy should be clearly stated in the NEP. In any case, Kerala must continue to follow the policy of reservations as it has been doing both in admissions and in appointments. This is necessary not just for social justice but for excellence as well: since talent is evenly distributed across the different social groups, the achievement of excellence demands that the composition of a student population or a teacher population should approximate as closely as possible the composition of the general population. Reservations, far from being at the expense of quality as is often suggested, actually serve therefore to achieve academic quality.

7. Affiliation System – Need for Credible Alternative

Dismantling of the affiliating system cannot be justified simply on the ground that it exists only in India. The change envisaged in this regard, should put in place effective mechanism to ensure greater access to all marginalized sections in society especially the rural poor and the SC/ST section in the states as the affiliating system in spite of its systemic weaknesses has increased GER in the country. The proposal to give degree granting powers to colleges cannot be implemented without the concurrence of state governments as most of the colleges in the state are affiliated to the universities at present.

8. Establish Centres for Translation or Studies in Languages in Universities in the State.

In a multilingual society like India, no one language can ever replace all others as the vehicle of knowledge. The present situation in which knowledge of English (rather than intellectual ability and curiosity) is given disproportionate weightage in higher education is undemocratic. Teaching often needs to be done in more than one language and for this purpose the cultivation of all languages is necessary. This is especially true for universities where students can write their examinations in more than one language.

Further, primary research, especially in the social sciences and humanities, involves interaction with peoples and texts written in different languages. This necessitates the ability to speak in regional languages and mastering other skills in that language which may or may not be familiar to the student. This requires greater focus on translation. In fact, a large part of teaching and research in universities globally relies on translation, beginning with the texts taught (many are often translated into English) and including research (where the data are gathered using other languages and translated into English by the researcher.)The way forward

for the Indian system of higher education is one that fosters knowledge creation in Indian languages while improving student and faculty access to English. Translations must be conducted by universities from regional languages to other regional languages and from regional languages to English. Policies may be framed at Central/ UGC level to establish Centres for Translation or Studies in Languages in the Universities in the State.

9. Ensure Academic Autonomy in HEIs

Steps need to be taken to ensure that there is genuine autonomy in HEIs. This can be ensured by providing regular rather than sporadic financial support, based on accountability, and estimates of the requirements of institutions arrived at through discussions amongst faculty, students and administration rather than through an arbitrary top-down mode.

10. Incentivise States that Successfully Implemented UGC Plan of Action

As per the UGC Plan Of Action (POA), Universities in Kerala have introduced several reforms including examination reforms, implementation of the Choice based Credit-Semester system (CBCSS) and equitable and transparent student admission. The Choice Based Credit-Semester system (CBCSS) and grading by providing for maximum diversity in course content, learning strategies and testing methods, with the active participation of students and teachers is one of the major achievements of the state in higher education. Now University Level Quality Standardisation and Teacher Training Programmes are being initiated in the state universities in Kerala to improve the quality of UG programmes based on Outcome Based Education (OBE). These include academic protocols which Universities the world over maintain. They are a) Graduate Attributes, b) Academic Programme Outcomes and c) Course Outcomes There is need for developing a system at the central level for incentivising universities and states which have successfully implemented UGC schemes and directives in academic, administrative and examination realms.

11. New fields of studies should be encouraged – Gender /Media/ Dalit Studies etc.

Space needs to be created for sustained research and teaching in all existing disciplines and fields as well as those that emerge in future irrespective of whether they seem to be immediately relevant or not. Fields of study such as Women's Studies or Gender studies, cultural studies, Media Studies, Dalit Studies, Studies of Discrimination and Exclusion, Environmental Studies and Development Studies all of which have developed in challenging ways over the last three or four decades need to find a space and active encouragement in the educational policy.

12. Reduce Faculty Shortages & Formulate Faculty Development Plan

Higher education with multidisciplinary focus and with imaginative curriculum and pedagogy to be delivered by competent faculty, is seen as a way to improve the quality of teaching and research. For this, faculty shortage should be reduced and faculty development plan should be prepared and implemented. The process of consultation with the state governments and universities should be initiated in this regard. The central government should adequately fund higher education institutions in the states to meet the faculty shortages, provide scholarships to students and act as a major source of funding instead of leaving things to philanthropic and private investments.

13. Proliferation of Self-Financing Colleges: Need for Regulatory Mechanism

The unwieldy growth of self-financing colleges at all levels (professional, arts & science, Managements) is posing severe threat to the quality and equity in higher education. The existing regulatory mechanism both by the State Govt. and the Universities is inadequate. Proper legislation to ensure quality and equity based on proper consultation with the state governments should be brought forward to regulate new age educational entrepreneurs in this sector. The approval of teachers in self-financing colleges should be made mandatory by the university. Assessment and Accreditation as mandated by the UGC Regulation 2012 should be implemented for all higher education institutions. A central legislation for regulating fee and other activities of self-financing institutions should be enacted in consultation with the state governments and CABE.

14. Operation of Private Universities – Need for State Regulation

The mushrooming of Private Universities in the country will pave the way for complete commercialization of higher education in Kerala. The performance of private universities in the country is dismal except perhaps a handful institutions. In several cases, self-financing institutions are elevated to the level of universities. This complete autonomy to private self-financing institutions to operate as university level institutions poses the biggest threat to the quality of education in the country. State Governments must have adequate supervisory powers to check clandestine operations of Private Universities and their off campuses in their states.

15. Problems of PhD Researchers in the State Universities

The decision to disallow retired faculty to act as research supervisor taken at the national level by the UGC has adversely affected research in the state universities in Kerala. In Kerala the teachers' superannuation age is 60 in universities and 56 in affiliated colleges. This has compounded the problem compared to the national situation where teachers retire at the age of 65 in central universities. Disallowing retired faculty therefore means that in a state like Kerala a Ph.D. supervisor will necessarily be a person of limited experience.

The modification issued by the UGC in Ph. D. Regulation should be withdrawn or amended, permitting research guides to continue in this capacity up to the age of 65 years in the larger interest of research in the country.

16. The Question of Affordability

Public education must be affordable by all. For students enrolled in Undergraduate and Masters programmes this means keeping fees, including hostel charges, at a bare minimum level and having a large number of scholarships, as was practiced successfully by universities like the JNU for long. For those enrolled for Ph.D. it must mean that *parents should not be asked to pay for their children's doctoral studies. All Ph.D. students must be covered by Teaching or Research Assistant grants which take care of their fees and subsistence requirements.*

The immediate objection to this proposal which does not figure in the NEP, would be that students will enrol for Ph.D. while marking time in quest of employment. The following points however can be made against this objection.

First, this problem of marking time requires solution at a different level, by creating more jobs so that young people are not kept unemployed for long. There is no reason to restrict research admissions only to the affluent students, at the expense not just of equity but of quality as well, just because not enough jobs are being created in the economy.

Second, there has to be fairly tight supervision of the progress of the student's work on the dissertation by his or her guide, including the student being asked to give regular seminars to other research students and members of the faculty, to ensure that a serious effort is being put in.

Third, every Ph.D. student must be asked to take tutorials of undergraduate students each of whom should have to submit one essay every week. One of the greatest weaknesses of our undergraduate programme (which is the advantage that universities like Oxford and Cambridge have over us) is the absence of regular obligatory essay writing. We could improve the entire quality of university education if we insist on undergraduates writing regularly and use research students to read and comment upon these essays (with a faculty member exercising oversight). This way the research students too would be earning their own fees and subsistence.

17. Undergraduate Programme

The idea of having two undergraduate streams, one of three years and the other of four years makes little sense and introduces unnecessary complications into the architecture of higher education. We see no reason why the current system of a three-year undergraduate programme should be tampered with. Whatever lacuna it has can be overcome within its three-year format without adding an extra year and introducing further hierarchy.

18. The National Testing Agency and Common Entrance Exam for Universities.

The NEP put forward the suggestion that National Testing Agency (NTA) will work to offer high quality common aptitude test as well as specialised common subject exams at least twice every year. The proposed entrance examination for university admission may increase the pressure on students and shift the location of rote learning from Board examinations to NTA entrance test. It can impose additional cost on students, weaken the teaching - learning process and spread the 'coaching culture' to non - professional courses also. The well established system of Centralised Admission Process (CAP) implemented by the affiliating universities in Kerala has ensured equity and transparency in the admission process. Hence the State may not entertain the common entrance examination for university admissions proposed by the NTA.

Addendum

Research and Innovation in the HE sector in Kerala - Problems and Prospects

(Note submitted by Dr. Gangan Prathap)

Preamble

Nearly three thousand years ago, Solomon, wrote down in three verses, the hierarchy leading from instruction to inventiveness:

10 Receive my **instruction**, and not *silver*; and **knowledge** rather than choice *gold*.

11 For **wisdom** is better than *rubies*; and all the things that may be desired are not to be compared to it.

12 I **wisdom** dwell with **prudence**, and find out knowledge of **witty inventions**.

Thermodynamics teaches us today that processes have a favoured direction but this must have been an alien thought to the early Semitic minds, just as it must have been to civilizations elsewhere. Yet embedded in the three lines above is the implicit idea that it is much easier to turn instruction, knowledge and wisdom to silver, gold and rubies than it is to do the opposite. It was only with the rise of the formal corporate university in Bologna (organized as a guild of students) in 1088, and the introduction of the research-intensive university in what is called the Humboldtian model of higher education (German: *Humboldtsches Bildungsideal*, literally: Humboldtian education ideal) in the early 19th century as a holistic combination of research and studies, that research and invention became the logical end of the chain from training to innovation. This was why the British philosopher Alfred North Whitehead could say that “the greatest invention of the 19th century was the invention of the method of invention.”

India was slow to take up this process. The three oldest, namely the University of Calcutta, the University of Mumbai and the University of Madras were instituted in 1857, mainly to fulfil the role of examining bodies and continued in this manner for an exceptionally long time. India has come a long way since then, and presently about 993 higher educational institutions are recognised as universities, with 39931 colleges and 10725 Stand Alone Institutions affiliated to most of these universities. Thus, most of universities remain as examining bodies with very restricted or no research functions at all.

The first university in Kerala was set up in the erstwhile state of Travancore in 1937 at Trivandrum (now Thiruvananthapuram). Two of the princely states that went on to become constituent parts of Kerala, namely Cochin and Travancore were at the forefront of other states of the Indian union at the time of independence; indeed they ranked No. 1 and No. 2 in the literacy rates. The need for a university of its own for the region was insistent and the University of Travancore began functioning as an affiliating type university with 10 colleges (six being Government colleges and four under private management) first for the princely state

of Travancore, and in due course became the University of Kerala after the reorganization of states in 1956 for Travancore, Cochin and the Malabar District of the Madras Presidency. In 1939, the College of Engineering started functioning in Trivandrum to impart instruction in degree and diploma courses in civil, mechanical and electrical engineering. Even earlier, with considerable prescience, a Department of Research was started at the University to promote research in scientific and technological fields. By 1939, this had evolved into a Central Research Institute with a mandate to engage in both theoretical and applied scientific and technological research. From such auspicious beginnings, Kerala has not been able to consolidate its position as a leading destination for higher education or for research in the country although it now has 23 institutions at the tertiary level. Because of the self-affiliating nature of most of the universities, most of the colleges are constituents of these universities.

Tilak [1] had argued nearly 20 years ago that Kerala could not transform itself into a prosperous developed state despite high levels of literacy, near universal enrolment in elementary education, high levels of social and human development, because of the neglect of higher education in the state. Tilak [1] finds that “Kerala’s higher education system has not expanded as much as one expects in a state where in elementary education is nearly universal and secondary education has expanded reasonably well.”

This is clear from the statistics available in the latest ALL INDIA SURVEY ON HIGHER EDUCATION (2018-19) [2]. Among the 993 universities assigned to 32 states and union territories in India, Kerala with 23 universities ranks 20th. Out of the 39931 colleges in India, Kerala with 1348 ranks 11th among the states. The position looks better when one looks at the number of colleges per lakh of eligible population (in the age group of 18-23) – Kerala with 45 colleges per lakh of eligible population compares well with the All India average of 28 and Kerala finds itself at 6th position among the 36 states and union territories for which data is available. When it comes to average enrolment per college, Kerala with 568 (corresponding All India average is 693) comes in the 24th position if larger sizes are considered to be better, and at 13th position if the small is beautiful position is invoked. Kerala with a Gross Enrolment Ratio of 37.0 (All India GER is 26.3) is ranked 8th among 36 states and union territories.

In what follows, we report the status at the level of innovation and research in Kerala and its prospects over the next 20-30 years.

Present status of Research and Innovation in the HE sector in Kerala

We first restrict attention to the present status of research activities of the higher educational sector in Kerala and the visibility of the research output in the global context. From Table 6 of the AISHE Report [2], out of the total enrolment of 3,73,99,388 students in India, there are

3,880 students enrolled in Integrated Ph.D. in addition to 1,69,170 students enrolled at Ph.D. Level, i.e. a miniscule 0.46%. We find that out of 10,95,842 students enrolled in the higher education sector in Kerala (University departments, constituent colleges and affiliated colleges), only 6686 are pursuing their PhD degrees. This is just 0.61% of the total, but this compares well with the All India figure of 0.46%.

Because of the many aggregators of bibliometric data like Web of Science, Google Scholar or Scopus, it is possible to use data analytical techniques to make cross-university and cross-country comparisons of research performance in a nuanced and fine-grained way. Indeed, nearly 40 such world university ranking exercises take place on an annual basis with India having its own adaptation called the National Institutional Ranking Framework (NIRF).

Global ranking of academic universities was first introduced in 2003 by the Shanghai Jiao Tong University in what is now known as the Academic Ranking of World Universities [3]. Since then, many university rankings have emerged, the most prominent being the Times Higher Education World University Rankings (since 2004) [4]. Other well recognised efforts are the QS (Quacquarelli Symonds) World University Ranking (since 2004) and The Performance Ranking of Scientific Papers for World Universities by the Higher Education Evaluation and Accreditation Council of Taiwan, HEEACT (since 2007). These rankings, as well as many other similar rankings, e.g. the Leiden rankings (CWTS, Netherlands), the EU Assessment of University-Based Research (AUBR), the Scimago rankings [5] are based mainly on research indicators and focus predominantly on indicators related to the research function of universities. Very few HEIs from India make it to such list, and not surprisingly, even fewer from Kerala. The most prestigious, and also the most controversial ranking is that of ARWU – only one institution from India made it to the Top 500 list, namely the Indian Institute of Science in Bangalore. One of the largest ranking exercises is that found in the Scimago Institutions Rankings and in their report for 2020, out of the 3897 institutions that were ranked globally from the higher educational sector, only 241 (6.18%) were from India and of these, only eight were represented from Kerala (i.e. 3.32% of the Indian total); see Table 1. On a demographic basis, Kerala which has about 0.5% of the world population should have had nearly 20! The Republic of Slovenia which is nearly seventeen times smaller than Kerala on a demographic basis has five in the list.

Table 1. The eight HEIs from Kerala and the five from the Republic of Slovenia in the Scimago Institutions Rankings for 2020.

Higher Educational Inst	2019		2020	
	Indian Rank	World Rank	Indian Rank	World Rank
Kerala				
Sree Chitra Tirunal Institute for Medical Sciences and Technology	58	730	40	742
Mahatma Gandhi University	49	719	44	747
University of Kerala	80	756	70	778
National Institute of Technology Calicut	101	782	80	794
Cochin University of Science and Technology	92	771	89	803
University of Calicut	96	776	95	812
Kerala Agricultural University	NA	NA	102	822
College of Engineering, Thiruvananthapuram	110	796	127	859
Slovenia	Rank	World Rank	Rank	World Rank
University of Ljubljana	1	411	1	441
Jozef Stefan International Postgraduate School	2	688	2	703
University of Maribor	2	688	3	722
University of Nova Gorica	4	715	4	726
University of Primorska	5	728	5	773

The most rigorous exercise is the ShanghaiRanking's Global Ranking of Academic Subjects 2020 (GRAS 2020) which was released on Monday, June 29, 2020 at Shanghai, People's Republic of China by ShanghaiRanking Consultancy. Since 2009, ShanghaiRanking Consultancy (SRC) has published the Academic Ranking of World Universities (ARWU) by academic subjects. Rankings are made in 54 subjects across Natural Sciences, Engineering, Life Sciences, Medical Sciences, and Social Sciences. More than 4000 universities were ranked and of these more than 1800 from 90 countries and regions appear a total of 19100 times on the league table. Universities from the United States appear 4826 times, followed by Chinese universities (2647 times) and universities from the United Kingdom (1607 times). University of British Columbia, the University of New South Wales, University of Michigan-Ann Arbor, The Ohio State University-Columbus, The University of Melbourne and McGill University are presented on the league table in more than 50 subjects, more than any other universities. The Engineering rankings are available for twenty-two engineering subjects. Across four major

Science fields: Natural Sciences, Life Sciences, Medical Sciences, and Social Sciences, there are thirty-two subjects.

Not a single institution from Kerala has made it into any one of these 54 lists! The University of Ljubljana in Slovenia appears in 30 subjects in 2020. This is a sobering, if not worrying comparison. The Republic of Slovenia is a small nation state on the Adriatic Sea, bordering Italy to the west, Austria to the north, Croatia to the south and southeast, and Hungary to the northeast. It had a population of 2.08 million in 2020. It is therefore smaller than each of the nine most populous districts of Kerala (Malappuram with a population of 4.11 million according to the 2011 Census was the largest and Alappuzha with 2.12 million was the ninth largest district). The University of Ljubljana is the oldest, the largest (61,000 students) and the best ranked university in Slovenia. Yet there is no department in a university or college in Kerala with a critical mass large enough to perform at this level in a single one of these 54 fields.

The NEP 2020 perspective

The National Education Policy 2020 (NEP 2020) outlines the vision of India's new education system. It replaces the previous National Policy on Education, 1986. It is an ambitious and comprehensive framework for elementary education to higher education as well as vocational training and hopes to transform India's education system by 2030. The Draft and Final Reports devote considerable attention to the research and innovation angle. Among the most relevant to the integration of research and innovation into the education change are the following sections from the Final Draft:

*9.3 (f) establishment of a National Research Foundation to fund outstanding peer-reviewed **research** and to actively seed research in universities and colleges*

*10.3. A university will mean a multidisciplinary institution of higher learning that offers undergraduate and graduate programmes, with high quality teaching, **research**, and community engagement. The definition of university will thus allow a spectrum of institutions that range from those that place equal emphasis on teaching and research i.e., **Research-intensive Universities**, those that place greater emphasis on teaching but still conduct significant research ...*

*10.4. Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university - in the latter case, it would be fully a part of the university. With appropriate accreditations, Autonomous degree-granting Colleges could evolve into **Research-intensive** or **Teaching-intensive Universities**, if they so aspire.*

17.3. Despite this critical importance of **research**, the research and innovation investment in India is, at the current time, only 0.69% of GDP as compared to 2.8% in the United States of America, 4.3% in Israel and 4.2% in South Korea.

Earlier, in the Draft Report of 2019, some more sections have a significant import:

PI0.3 a Type 1: Research universities. These will focus equally on research and teaching: they will dedicate themselves to cutting-edge research for new knowledge creation while at the same time offering the highest quality teaching across undergraduate, masters, Ph.D., professional, and vocational programmes. Many graduate and research institutions do not currently offer undergraduate education, which is essential for ensuring that knowledge from the best institutions gets passed on, on a wide scale, to the next generation. These institutions will be encouraged to introduce undergraduate programmes as well. It is expected that, over a period of two decades, a couple of hundred institutions, say 150–300, will belong to the Type 1 category, and each will aim for on-campus enrolments between 5000 to 25000 or more students. They will aim to become world-class research universities and compete with global institutions.

Chapter 14

The number of **researchers** per lakh of population was **shockingly** only 15 in India, compared to 111 in China, 423 in the United States, and 825 in Israel (Economic Survey of India 2016-17).

A1.4.7. Universities and Colleges

<i>Additional expenditure required for:</i>	<i>% to Total Government Expenditure*</i>
<i>1. Type 1: 150-300 HEIs (research universities)</i>	<i>1.0</i>
<i>2. Type 2: 1000-2000 HEIs (teaching universities)</i>	<i>3.5</i>
<i>3. Type 3: 5000-10000 HEIs (colleges)</i>	<i>0.5</i>
<i>Total additional expenditure required for Higher Education</i>	<i>5.0</i>

It may be in order here to revise Table A1. 4.7 above. Perhaps, a better strategy will be to consolidate the colleges into university-scale bodies so that we have 200 research universities and 1800 teaching universities, for a total of 2000 such institutions. Approximately, 3% should be Kerala's share in 2040, i.e. about 60 universities spread over the state.

Table 2. A re-interpretation of Table A1.4.7 above.

<i>Additional expenditure required for:</i>	<i>% to Total Government Expenditure*</i>
<i>1. Type 1: 200 HEIs (research universities)</i>	<i>1.0</i>
<i>2. Type 2: 1800 HEIs (teaching universities)</i>	<i>4.0</i>
<i>Total additional expenditure required for Higher Education</i>	<i>5.0</i>

*Since in India, government spending is approximately 20% of GDP, this will mean that about 1% of GDP will go to the HE sector.

Research and Innovation in the HE sector in Kerala – The Prospective View

Here we peer into the crystal ball and envisage a sustainable model of the Higher Education enterprise in Kerala using a simple Fermi estimation. We expect that by 2040, India's population will grow to 1.6 billion. At current ratios, Kerala would then have a population of around 43 million. If approximately 10% of this will be in the college going cohort (18-23), at a GER of 50%, the college going population in Kerala will be approximately 2.15 million. Note that as per the latest AICTE report this population is about 1.1 million now, i.e. the college going population will double in 20 years. Following the NEP to its logical conclusion, these students should be enrolled in about 60 universities, with an average enrolment of 35,000 students. Only at this size, will we have the scale and spread to compete with universities like the University of Ljubljana, let alone Harvard, Oxford, or Tsinghua!

All this is easier said than done. Government must use carrot-and-stick measures to bring about the consolidation of the very heterogeneous set up now (23 universities and 1348 colleges) into such a system where critical mass to undertake research-intensive activities is facilitated. Universities are of course free to set up extension centres and campuses to reach remote regions to make the teaching-only component of higher education accessible to students in such areas.

It is worthwhile to enquire into the economics of such a consolidation. NIRF 2020 data that is available shows that the cost of a student per year in an engineering institution varies from Rs. 10 lakhs at a premier IIT, 5 lakhs at a premier NIT, to Rs 2 lakhs at a top state university like Anna or Jadavpur. For most engineering colleges, these costs are as low as Rs. 50,000 per student per year. For arts and science colleges, the costs range from about Rs. 20,000 to about Rs. 4 lakhs in the exclusive liberal arts colleges that have recently sprung up. Costs of a medical education are significantly larger, but the numbers are very small. It is reasonable to assume an average cost per student in 2040 (taking a totality of all 60 universities) of Rs. 1 lakh per year, to work out a requirement of about Rs. 20 thousand crores per year. Kerala's GDP in 2040 may be Rs. 20 lakhs crores (assuming a doubling to take place), and this means that the

HE budget is just a modest 1% of the GDP of the state. This is consistent with figures we have computed earlier in Table 2.

Many studies have shown that a country or region that devotes about 3% of its GDP to gross expenditure on R&D (GERD) needs about half a percent of its population to be gainfully employed in its research and innovation activities (i.e. about 500 per lakh of population). This compares with the estimate of 15 researchers per lakh of population in India made by the Economic Survey of India 2016-17. Kerala, with a population of 43 million in 2040 should have about 215,000 R&D workers, and given current trends, these would be mainly in the knowledge and service sector. Given that an active R&D worker may have a tenure of 40 years (age 30 to 70), we need to replace the R&D population at the rate of about 5400 PhDs a year. At present, only 6686 are pursuing their PhD degrees, i.e. a flow of about 1600 PhDs a year in all. Even if one uses a very generous estimate, that about half of these doctorates are in science, technology, engineering, and mathematics (STEM), that will mean only about 800 PhDs. Thus in 20 years, we need to scale this up by a factor of 6 or 7!

Concluding remarks

This is a very modest proposal to plan the way ahead in reforming the HE enterprise in Kerala from the research and innovation point of view. The Slovenian example is a good and meaningful target. With a GDP of USD 56 billion in 2020, which is only a fraction (40%) of the USD 140 billion of Kerala, it has a thriving world-class research-intensive university that puts Kerala to shame. For Kerala to reinvent itself as world-class destination for service and knowledge-intensive research and delivery, it needs to produce about 5400 PhDs a year in STEM by 2040. Unless its universities scale up to this level of performance this will be an elusive target.

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Appendix - I

SALIENT FEATURES OF NEP 2020: HIGHER EDUCATION

1. THE FUNDAMENTAL PRINCIPLES OF THE POLICY:

- **recognizing, identifying, and fostering the unique capabilities of each student**, by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres.
- **according the highest priority to achieving Foundational Literacy and Numeracy** by all students by Grade 3.;
- **flexibility**, so that learners have the ability to choose their learning trajectories and programmes, 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. in order 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 for a multidisciplinary world in order to ensure the unity and integrity of all knowledge;
- **emphasis on conceptual understanding** rather than rote learning and learning-for-exams.;
- **creativity and critical thinking** to encourage logical decision-making and innovation;
- **ethics and human & Constitutional values** like 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;
- **focus on 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 and out-of-the-box ideas through **autonomy, good governance, and empowerment**;
- **outstanding research** as a corequisite for outstanding education and development;
- **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 and 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.

2. THE VISION OF THIS POLICY

- An education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower.
- The curriculum and pedagogy of our institutions must develop a deep sense of respect towards the fundamental duties and Constitutional values, bonding with one's country, and a conscious awareness of one's roles and responsibilities in a changing world.
- To instill a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen.

3. QUALITY UNIVERSITIES AND COLLEGES: A NEW AND FORWARD-LOOKING VISION FOR INDIA'S HIGHER EDUCATION SYSTEM

- Quality higher education must aim to develop good, thoughtful, well-rounded, and creative individuals.
- It must enable an individual to study one or more specialized areas of interest at a deep level, and also develop character, ethical and Constitutional values, intellectual curiosity, scientific temper, creativity, spirit of service, and 21st century capabilities across a range of disciplines including sciences, social sciences, arts, humanities, languages, as well as professional, technical, and vocational subjects.
- A quality higher education must enable personal accomplishment and enlightenment, constructive public engagement, and productive contribution to the society.
- It must prepare students for more meaningful and satisfying lives and work roles and enable economic independence.
- Some of the major problems currently faced by the higher education system in India include:
 - a severely fragmented higher educational ecosystem;
 - less emphasis on the development of cognitive skills and learning outcomes;
 - a rigid separation of disciplines, with early specialisation and streaming of students into narrow areas of study;
 - limited access particularly in socio-economically disadvantaged areas, with few HEIs that teach in local languages
 - limited teacher and institutional autonomy;
 - inadequate mechanisms for merit-based career management and progression of faculty and institutional leaders;
 - lesser emphasis on research at most universities and colleges, and lack of competitive peer-reviewed research funding across disciplines;
 - suboptimal governance and leadership of HEIs;
 - an ineffective regulatory system; and
 - large affiliating universities resulting in low standards of undergraduate education.

- This policy envisions the following key changes to the current system:
 - moving towards multidisciplinary universities and colleges, with more HEIs across India that offer medium of instruction in local/Indian languages;
 - moving towards a more multidisciplinary undergraduate education;
 - moving towards faculty and institutional autonomy;
 - revamping curriculum, pedagogy, assessment, and student support
 - reaffirming the integrity of faculty and institutional leadership positions
 - establishment of a National Research Foundation
 - governance of HEIs by independent boards having academic and administrative autonomy;
 - “light but tight” regulation by a single regulator for higher education;
 - increased access, equity, and inclusion

4. INSTITUTIONAL RESTRUCTURING AND CONSOLIDATION

- By 2040, all higher education institutions (HEIs) shall aim to become multidisciplinary institutions, each of which will aim to have 3,000 or more students.
- There shall, by 2030, be at least one large multidisciplinary HEI in or near every district.
- The aim will be to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035.
- Growth will be in both public and private institutions, with a strong emphasis on developing a large number of outstanding public institutions
- A university will mean a multidisciplinary institution of higher learning that offers undergraduate and graduate programmes, with high quality teaching, research, and community engagement.
- The definition of university will thus allow a spectrum of institutions that range from those that place equal emphasis on teaching and research i.e., Research-intensive Universities. Those that place greater emphasis on teaching but still conduct significant research i.e. Teaching-intensive Universities.
- Autonomous degree-granting College (AC) will refer to a large multidisciplinary that grants undergraduate degrees and is primarily focused on undergraduate teaching though it would not be restricted to that.
- A stage-wise mechanism for granting graded autonomy to colleges, through a transparent system of graded accreditation, will be established. HEIs will have the autonomy and freedom to move gradually from one category to another, based on their plans, actions, and effectiveness.
- These three broad types of institutions are not in any natural way a rigid, exclusionary categorization, but are along a continuum.
- HEIs will support other HEIs in their development, community engagement and service, contribution to various fields of practice, faculty development for the higher education system, and support to school education.
- Institutions will have the option to run Open Distance Learning (ODL) and online programmes, provided they are accredited to do so.

- Single-stream HEIs will be phased out over time, and all will move towards becoming vibrant multidisciplinary institutions or parts of vibrant multidisciplinary HEI clusters.
- The system of ‘affiliated colleges’ will be gradually phased out over a period of fifteen years through a system of graded autonomy, and to be carried out in a challenge mode.
- The overall higher education sector will aim to be an integrated higher education system, including professional and vocational education.
- The present complex nomenclature of HEIs in the country such as ‘deemed to be university’, ‘affiliating university’, ‘affiliating technical university’, ‘unitary university’ shall be replaced simply by ‘university’ on fulfilling the criteria as per norms.

5. TOWARDS A MORE HOLISTIC AND MULTIDISCIPLINARY EDUCATION

- A holistic and multidisciplinary education would aim to develop all capacities of human beings -intellectual, aesthetic, social, physical, emotional, and moral in an integrated manner.
- Such a holistic education shall be, in the long term, the approach of all undergraduate programmes, including those in professional, technical, and vocational disciplines.
- Even engineering institutions, such as IITs, will move towards more holistic and multidisciplinary education with more arts and humanities. Students of arts and humanities will aim to learn more science and all will make an effort to incorporate more vocational subjects and soft skills.
- Imaginative and flexible curricular structures will enable creative combinations of disciplines for study, and would offer multiple entry and exit points.
- Departments in Languages, Literature, Music, Philosophy, Indology, Art, Dance, Theatre, Education, Mathematics, Statistics, Pure and Applied Sciences, Sociology, Economics, Sports, Translation and Interpretation, etc. will be established and strengthened at all HEIs.
- Curricula of all HEIs shall include credit-based courses and projects in the areas of community engagement and service, environmental education, and value-based education.
- The undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g., a certificate after completing 1 year in a discipline or field including vocational and professional areas, or a diploma after 2 years of study, or a Bachelor’s degree after a 3-year programme. The 4-year multidisciplinary Bachelor's programme, however, shall be the preferred option.
- An Academic Bank of Credit (ABC) shall be established which would digitally store the academic credits earned from various recognized HEIs so that the degrees from an HEI can be awarded taking into account credits earned.

- The 4-year programme may also lead to a degree 'with Research' if the student completes a rigorous research project in their major area(s) of study as specified by the HEI.
- Model public universities for holistic and multidisciplinary education, at par with IITs, IIMs, etc., called MERUs (Multidisciplinary Education and Research Universities) will be set up and will aim to attain the highest global standards in quality education.
- HEIs will focus on research and innovation by setting up start-up incubation centres, technology development centres, centres in frontier areas of research, greater industry- academic linkages, and interdisciplinary research including humanities and social sciences research.

6. OPTIMAL LEARNING ENVIRONMENTS AND SUPPORT FOR STUDENTS

- Institutions and faculty will have the autonomy to innovate on matters of curriculum, pedagogy, and assessment within a broad framework of higher education qualifications
- All assessment systems shall also be decided by the HEI, including those that lead to final certification. The Choice Based Credit System (CBCS) will be revised for instilling innovation and flexibility.
- HEIs shall move to a criterion-based grading system that assesses student achievement based on the learning goals for each programme
- HEIs shall also move away from high-stakes examinations towards more continuous and comprehensive evaluation.
- Each institution will integrate its academic plans ranging from curricular improvement to quality of classroom transaction - into its larger Institutional Development Plan (IDP)
- High-quality support centres and professional academic and career counselling will be made available to all students.
- Norms, standards, and guidelines for systemic development, regulation, and accreditation of ODL will be prepared, and a framework for quality of ODL that will be recommendatory for all HEIs will be developed.
- All programmes, courses, curricula, and pedagogy across subjects, including those in-class, online, and in ODL modes as well as student support will aim to achieve global standards of quality.

7. INTERNATIONALIZATION

- Larger numbers of international students studying in India, and greater mobility to students in India visit, study at, transfer credits to, or carry out research at institutions abroad, and vice versa.
- India will be promoted as a global study destination providing premium education at affordable costs

- An International Students Office at each HEI hosting foreign students will be set up to coordinate all matters relating to welcoming and supporting students arriving from abroad.
- Research/teaching collaborations and faculty/student exchanges with high-quality foreign institutions will be facilitated
- High performing Indian universities will be encouraged to set up campuses in other countries
- Similarly, selected universities e.g., those from among the top 100 universities in the world will be facilitated to operate in India.
- A legislative framework facilitating such entry will be put in place, and such universities will be given special dispensation regarding regulatory, governance, and content norms on par with other autonomous institutions of India.

8. STUDENT ACTIVITY AND PARTICIPATION

- Plenty of opportunities for participation in sports, culture/arts clubs, eco-clubs, activity clubs, community service projects, etc.
- In every education institution, there shall be counselling systems for handling stress and emotional adjustments.
- Increasing hostel facilities as needed.
- All HEIs will ensure quality medical facilities for all students in their institutions.

9. FINANCIAL SUPPORT FOR STUDENTS

- Efforts will be made to incentivize the merit of students belonging to SC, ST, OBC, and other SEDGs.
- Private HEIs will be encouraged to offer larger numbers of free ships and scholarships to their students.

10. MOTIVATED, ENERGIZED, AND CAPABLE FACULTY

- All HEIs will be equipped with the basic infrastructure and facilities, including clean drinking water, clean working toilets, blackboards, offices, teaching supplies, libraries, labs, and pleasant classroom spaces and campuses.
- Every classroom shall have access to the latest educational technology that enables better learning experiences.
- Faculty will be given the freedom to design their own curricular and pedagogical approaches within the approved framework.
- HEIs will have clearly defined, independent, and transparent processes and criteria for faculty recruitment.

11. EQUITY AND INCLUSION IN HIGHER EDUCATION

- Actions that are specific to higher education shall be adopted by all Governments and HEIs.
- Steps to be taken by Governments
 - (a) Earmark suitable Government funds for the education of SEDGs
 - (b) Set clear targets for higher GER for SEDGs
 - (c) Enhance gender balance in admissions to HEIs
 - (d) Enhance access by establishing more high-quality HEIs in aspirational districts and Special Education Zones
 - (e) Develop and support high-quality HEIs that teach in local/Indian languages or bilingually
 - (f) Provide more financial assistance and scholarships to SEDGs in both public and private HEIs
 - (g) Conduct outreach programs on higher education opportunities and scholarships among SEDGs
 - (h) Develop and support technology tools for better participation and learning outcomes.
- Steps to be taken by all HEIs
 - (a) Mitigate opportunity costs and fees for pursuing higher education
 - (b) Provide more financial assistance and scholarships
 - (c) Conduct outreach on higher education opportunities and scholarships
 - (d) Make admissions processes more inclusive
 - (e) Make curriculum more inclusive
 - (f) Increase employability potential of higher education programmes
 - (g) Develop more degree courses taught in Indian languages and bilingually
 - (h) Ensure all buildings and facilities are wheelchair-accessible and disabled-friendly
 - (i) Develop bridge courses for students that come from disadvantaged educational backgrounds
 - (j) Provide socio-emotional and academic support and mentoring
 - (k) Ensure sensitization of faculty, counsellor, and students on gender-identity issue and its inclusion in all aspects of the HEI, including curricula
 - (l) Strictly enforce all no-discrimination and anti-harassment rules
 - (m) Develop Institutional Development Plans that contain specific plans for action on increasing participation from SEDGs.

12. REIMAGINING VOCATIONAL EDUCATION

- Vocational education will be integrated into all school and higher education institutions in a phased manner over the next decade.
- By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and timelines will be developed.
- Higher education institutions will offer vocational education either on their own or in partnership with industry and NGOs.

- 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 multidisciplinary Bachelor's programmes.
- 'Lok Vidya', i.e., important vocational knowledge developed in India, will be made accessible to students through integration into vocational education courses.
- The possibility of offering vocational courses through ODL mode will also be explored.
- MHRD will constitute a National Committee for the Integration of Vocational Education (NCIVE), consisting of experts in vocational education and representatives from across Ministries, in collaboration with industry, to oversee this effort.
- Incubation centres will be set up in higher education institutions in partnership with industries.
- Indian standards will be aligned with the International Standard Classification of Occupations maintained by the International Labour Organization.
- The credit-based Framework will also facilitate mobility across 'general' and vocational education.

13. CATALYSING QUALITY ACADEMIC RESEARCH IN ALL FIELDS THROUGH A NEW NATIONAL RESEARCH FOUNDATION

- 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.
- The NRF will be governed, independently of the government, by a rotating Board of Governors consisting of the very best researchers and innovators across fields.
- The primary activities of the NRF will be to:
 - fund competitive, peer-reviewed grant proposals of all types and across all disciplines;
 - seed, grow, and facilitate research at academic institutions
 - act as a liaison between researchers and relevant branches of government as well as industry; so as to allow breakthroughs to be optimally brought into policy and/or implementation; and
 - recognise outstanding research and progress

14. TRANSFORMING THE REGULATORY SYSTEM OF HIGHER EDUCATION

- Regulatory system of higher education will ensure that the distinct functions of regulation, accreditation, funding, and academic standard setting will be performed by distinct, independent, and empowered bodies.
- These four structures will be set up as four independent verticals within one umbrella institution, the Higher Education Commission of India (HECI).
 - The first vertical of HECI will be the National Higher Education Regulatory Council (NHERC). It will function as the common, single point regulator for

the higher education sector including teacher education and excluding medical and legal education.

- The second vertical of HECI will, be a 'meta-accrediting body', called the National Accreditation Council (NAC). Accreditation of institutions will be based primarily on basic norms, public self-disclosure, good governance, and outcomes, and it will be carried out by an independent ecosystem of accrediting institutions supervised and overseen by NAC.
- The third vertical of HECI will be the Higher Education Grants Council (HEGC), which will carry out funding and financing of higher education based on transparent criteria.
- The fourth vertical of HECI will be the General Education Council (GEC), which will frame expected learning outcomes for higher education programmes, also referred to as 'graduate attributes'. A National Higher Education Qualification Framework (NHEQF) will be formulated by the GEC.
- The functioning of all the independent verticals for Regulation (NHERC), Accreditation (NAC), Funding (HEGC), and Academic Standard Setting (GEC) and the overarching autonomous umbrella body (HECI) itself will be based on transparent public disclosure, and use technology extensively to reduce human interface to ensure efficiency and transparency in their work.
- The professional councils, such as the Indian Council for Agricultural Research (ICAR), Veterinary Council of India (VCI), National Council for Teacher Education (NCTE), Council of Architecture (CoA), National Council for Vocational Education and Training (NCVET) etc., will act as Professional Standard Setting Bodies (PSSBs).
- The separation of functions would mean that each vertical within HECI would take on a new, single role which is relevant, meaningful, and important in the new regulatory scheme.

15. CURBING COMMERCIALIZATION OF EDUCATION

- All education institutions will be held to similar standards of audit and disclosure as a 'not for profit' entity. Surpluses, if any, will be reinvested in the educational sector.
- There will be transparent public disclosure of all these financial matters with recourse to grievance-handling mechanisms to the general public.
- The accreditation system developed by NAC will provide a complementary check on this system, and NHERC will consider this as one of the key dimensions of its regulatory objective.
- All fees and charges set by private HEIs will be transparently and fully disclosed, and there shall be no arbitrary increases in these fees/charges during the period of enrolment of any student. This fee determining mechanism will ensure reasonable recovery of cost while ensuring that HEIs discharge their social obligations.

16. EFFECTIVE GOVERNANCE AND LEADERSHIP FOR HIGHER EDUCATION INSTITUTIONS

- Through a suitable system of graded accreditation and graded autonomy, and in a phased manner over a period of 15 years, all HEIs in India will aim to become independent self-governing institutions pursuing innovation and excellence.
- Upon receiving the appropriate graded accreditations that deem the institution ready for such a move, a Board of Governors (BoG) shall be established. Equity considerations will also be taken care of while selecting the members.

- The BoG of an institution will be empowered to govern the institution free of any external interference. It is envisaged that all HEIs will be incentivized, supported, and mentored during this process, and shall aim to become autonomous and have such an empowered BoG by 2035.
- The BoG shall be responsible and accountable to the stakeholders through transparent self- disclosures of all relevant records. It will be responsible for meeting all regulatory guidelines mandated by HECI through the National Higher Education Regulatory Council (NHERC).

17. PROFESSIONAL EDUCATION

- Stand-alone agricultural universities, legal universities, health science universities, technical universities, and stand-alone institutions in other fields, shall aim to become multidisciplinary institutions offering holistic and multidisciplinary education.
- 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.
- 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.
- 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 and promote sustainable methodologies.
- Legal education needs to be competitive globally, adopting best practices and embracing new technologies for wider access to and timely delivery of justice.
- Healthcare education needs to be re-envisioned so that the duration, structure, and design of the educational programmes need to match the role requirements that graduates will play.
- Given that people exercise pluralistic choices in healthcare, our healthcare 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 (AYUSH), and vice versa.
- There shall also be a much greater emphasis on preventive healthcare and community medicine in all forms of healthcare education.
- Technical education will also aim to be offered within multidisciplinary education institutions and programmes and have a renewed focus on opportunities to engage deeply with other disciplines.
- India must also take the lead in preparing professionals in cutting-edge areas that are fast gaining prominence, such as Artificial Intelligence (AI), 3-D machining, big data analysis, and machine learning, in addition to genomic studies, biotechnology, nanotechnology, neuroscience, with important applications to health, environment, and sustainable living that will be woven into undergraduate education for enhancing

employability of the youth.

18. PROMOTION OF INDIAN LANGUAGES, ARTS, AND CULTURE

- 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.
- Indian arts of all kinds must be offered to students at all levels of education, starting with early childhood care and education.
- Teaching and learning of Indian languages need to be integrated with school and higher education at every level.
- 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.
- A number of initiatives to foster languages, arts, and culture in school children: greater emphasis on music, arts, and crafts throughout all levels of school; early implementation of the three-language formula to promote multilingualism; teaching in the home/local language wherever possible; conducting more experiential language learning; the hiring of outstanding local artists, writers, craftspersons, and other experts as master instructors; accurate inclusion of traditional Indian knowledge including tribal and other local knowledge throughout into the curriculum, across humanities, sciences, arts, crafts, and sportsetc.
- Strong departments and programmes in Indian languages, comparative literature, creative writing, arts, music, philosophy, etc. will be launched and developed across the country, and degrees including 4-year B.Ed. dual degrees will be developed in these subjects.
- Every higher education institution and even every school or school complex will aim to have Artist(s)-in-Residence to expose students to art, creativity, and the rich treasures of the region/country.
- More HEIs, and more programmes in higher education, will use the mother tongue/local language as a medium of instruction, and/or offer programmes bilingually.
- High-quality programmes and degrees in Translation and Interpretation, Art and Museum Administration, Archaeology, Artefact Conservation, Graphic Design, and Web Design within the higher education system will also be created.
- Touring by HEI students to different parts of the country, which will not only give a boost to tourism but will also lead to an understanding and appreciation of diversity, culture, traditions and knowledge of different parts of India.
- Indian Institute of Translation and Interpretation (IITI) will be established. The IITI

shall also make extensive use of technology to aid in its translation and interpretation efforts.

- Sanskrit will be mainstreamed with strong offerings in school - including as one of the language options in the three-language formula - as well as in higher education. Sanskrit Universities too will move towards becoming large multidisciplinary institutions of higher learning.
- India will similarly expand its institutes and universities studying all classical languages and literature, with strong efforts to collect, preserve, translate, and study the tens of thousands of manuscripts that have not yet received their due attention.
- Sanskrit and all Indian language institutes and departments across the country will be significantly strengthened
- Classical language institutes will aim to be merged with universities, while maintaining their autonomy, so that faculty may work, and students too may be trained as part of robust and rigorous multidisciplinary programmes.
- Universities dedicated to languages will become multidisciplinary
- National Institute (or Institutes) for Pali, Persian and Prakrit will also be set up within a university campus.
- For each of the languages mentioned in the Eighth Schedule of the Constitution of India, Academies will be established consisting of some of the greatest scholars and native speakers. These Academies for Eighth Schedule languages will be established by the Central Government in consultation or collaboration with State Governments. Academies for other highly spoken Indian languages may also be similarly established by the Centre and/or States.
- All languages in India, and their associated arts and culture will be documented through a web-based platform/portal/wiki, in order to preserve endangered and all Indian languages and their associated rich local arts and culture.
- Scholarships for people of all ages to study Indian Languages, Arts, and Culture with local masters and/or within the higher education system will be established.

SALIENT FEATURES OF NEP 2020

NEP 2020 is the first education policy of the 21st century and replaces the thirty-four year old National Policy on Education (NPE), 1986. Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, this policy is aligned to the 2030 Agenda for Sustainable Development and aims to transform India into a vibrant knowledge society and global knowledge superpower by making both school and college education more holistic, flexible, multidisciplinary, suited to 21st century needs and aimed at bringing out the unique capabilities of each student.

The policy has been formulated after a very detailed consultative process, unprecedented in depth and scale. Consultation involved over 2 lakh suggestions from 2.5 lakhs Gram

Panchayats, 6600 Blocks, 6000 ULBs, 676 Districts. The MHRD had initiated a collaborative, inclusive, and highly participatory consultation process from January 2015. In May 2016, '*Committee for Evolution of the New Education Policy*' under the Chairmanship of Late Shri.T.S.R. Subramanian, Former Cabinet Secretary, submitted its report. Based on this, the Ministry prepared '*Some Inputs for the Draft National Education Policy, 2016*'. In June 2017 a '*Committee for the Draft National Education Policy*' was constituted under the Chairmanship of eminent scientist **Padma Vibhushan, Dr. K. Kasturirangan**, which submitted the Draft National Education Policy, 2019 to the Hon'ble Human Resource Development Minister on 31st May, 2019. The Draft National Education Policy 2019 was uploaded on MHRD's website and at 'MyGov Innovate' portal eliciting views/suggestions/comments of stakeholders, including public.

The salient features of the policy are as follows :

SCHOOL EDUCATION

Ensure Universal Access at All Levels of schooling from pre-primary school to Grade 12

NEP 2020 aims to achieve 100% Gross Enrollment Ratio in school education by 2030. The initiatives that will be undertaken for this include provision of effective and sufficient infrastructure, alternative and innovative education centres to ensure that children who are dropping out of school are brought back into mainstream education, universal participation in school by carefully tracking students, as well as their learning levels. Counsellors or well-trained social workers connected to schools/school complexes and teachers will continuously work with students and their parents to ensure that all school-age children are attending and learning in school.

Early Childhood Care Education:

NEP 2020 emphasises on the criticality of the early years to ensure quality early childhood care and education for all children between 3-6 years by 2025. The children in the ages of 3-5 will be catered to by the current system of anganwadis and pre-schools, and age 5-6 will be included with the schooling system in a seamless integrated manner, with a play-way based curriculum to be prepared by the NCERT. A National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE) for children up to the age of 8 will be developed by NCERT. The planning and implementation of early childhood education will be carried out jointly by the Ministries of HRD, Women and Child Development (WCD), Health and Family Welfare (HFW), and Tribal Affairs.

New Curricular and Pedagogical Structure:

With emphasis on Early Childhood Care and Education, the 10+2 structure of school curricula is to be replaced by a 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively. This will bring the hitherto uncovered age group of 3-6 years under school curriculum, which has been recognized globally as the crucial stage for development of mental faculties of a child. The new system will have 12 years of schooling with three years of Anganwadi/ pre schooling. The new system will cover four

stages: **Foundational Stage** (in two parts, that is, 3 years of Anganwadi/pre-school + 2 years in primary school in Grades 1-2; both together covering ages 3-8), **Preparatory Stage** (Grades 3-5, covering ages 8-11), **Middle Stage** (Grades 6- 8, covering ages 11-14), and **Secondary Stage** (Grades 9-12 in two phases, i.e., 9 and 10 in the first and 11 and 12 in the second, covering ages 14-18).

The curricula will aim for **holistic development of learners**, equipping them with the key 21st century skills, reduction in curricular content to enhance essential learning and critical thinking and greater focus on **experiential learning**. Students will have increased flexibility and choice of subjects so that they choose their own paths according to their talents and interests. There will be **no rigid separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams**. The objective is to give equal emphasis on all subjects-science, social sciences, art, languages, sports, mathematics - with integration of vocational and academic streams in school.

A new and comprehensive **National Curricular Framework for School Education**, NCFSE 2020-21, will be developed by the NCERT.

High-quality textbook materials will be developed by NCERT and SCERTs. States will prepare their own curricula and prepare textbooks incorporating state flavour and material. The availability of textbooks in all regional languages will be a top priority. Reducing the weight of school bags and textbooks will also be ensured by suitable changes in curriculum load.

Attaining Foundational Literacy and Numeracy:

A National Mission on Foundational Literacy and Numeracy will be set-up on priority to focus on early language and mathematical skills from Grades 1 to 3 by 2025. Strategies include: developing school readiness through interim 3- month play-based school preparation module for all Grade 1 students; increased focus on reading, writing, speaking, counting, arithmetic, and mathematical thinking; continuous assessment and adaptive testing; national repository of high-quality resources on foundational literacy and numeracy; filling teacher vacancies; peer-tutoring and volunteer activities; setting up school libraries in every village;.A National Book Promotion Policy will be formulated, and initiatives to ensure the availability, accessibility, quality, and readership of books across geographies, languages, levels, and genres will be undertaken.

Multilingualism and the power of language:

NEP 2020 lays great emphasis on promoting multilingualism so that children know and learn about the rich and vast array of languages of their country. The medium of instruction until at least Grade 5, but preferably till Grade 8 and beyond, will be the home language/ mother tongue /local language/regional language. Every student in the country will participate in a fun project/activity on 'The Languages of India', sometime in Grades 6-8, such as, under the '*Ek Bharat Shrestha Bharat*' initiative. Sanskrit will be offered at all levels of school and higher education as an important, enriching option for students,

including as an option in the three-language formula. 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 for students. Foreign languages, such as Korean, Japanese, Thai, French, German, Spanish, Portuguese, and Russian, will also be offered at the secondary level. Indian Sign Language (ISL) will be standardized across the country, and National and State curriculum materials developed, for use by students with hearing impairment.

Assessment Reforms

There will be a shift from summative assessment to regular and formative assessment, which is more competency-based, promotes learning and development, and tests higher-order skills, such as analysis, critical thinking, and conceptual clarity. Board exams for Grades 10 and 12 will be continued, but be reformed to eliminate the need for taking coaching classes. Board exams will be redesigned to encourage holistic development; and will also be made 'easier', by testing core capacities/competencies. All students will be allowed to take Board Exams on up to two occasions during any given school year, one main examination and one for improvement, if desired. All students will take school examinations in Grades 3, 5, and 8 which will be conducted by the appropriate authority.

A new **National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development)**, will be set up as a standard-setting body for setting norms, standards, and guidelines for student assessment and evaluation for all recognized school boards of India, guiding the State Achievement Survey (SAS) and undertaking the National Achievement Survey (NAS), monitoring achievement of learning outcomes and encouraging and helping school boards to shift their assessment patterns towards meeting the skill requirements of the 21st century.

Equitable and inclusive education

NEP 2020 aims to ensure that no child loses any opportunity to learn and excel because of the circumstances of birth or background. Special emphasis will be given on Socially and Economically Disadvantaged Groups (SEDGs) which include: gender identities (particularly female and transgender individuals), socio-cultural identities (such as Scheduled Castes, Scheduled Tribes, OBCs, and minorities), geographical identities (such as students from villages, small towns, and aspirational districts), disabilities (including learning disabilities), and socio-economic conditions (such as migrant communities, low income households, children in vulnerable situations, victims of or children of victims of trafficking, orphans including child beggars in urban areas, and the urban poor).

A **separate Gender Inclusion fund** will be created as also **Special Education Zones** for disadvantaged regions and groups.

Children with disabilities will be enabled to fully participate in the regular schooling process from the foundational stage to higher education. Recruitment of special educators with cross-disability training, and establishment of resource centres, wherever needed, especially for children with severe or multiple disabilities will be supported. Schools and school complexes will be supported for providing all children with disabilities accommodations and support mechanisms tailored to suit their needs and to ensure their full participation in the classroom. Assistive devices and appropriate technology-based tools, will be made available

to help children with disabilities integrate more easily into classrooms and engage with teachers and their peers.

Every State/District will be encouraged to establish “**Bal Bhavans**” as a special daytime boarding school, to participate in art-related, career-related, and play-related activities. The unutilized capacity of school infrastructure will be used to promote social, intellectual, and volunteer activities for the community and to promote social cohesion during non-teaching / schooling hours and may be used as a “**Samajik Chetna Kendra**”.

Teacher recruitment and career path

Teachers will be recruited through robust, transparent processes. Promotions will be merit-based, and a mechanism for multi-source periodic performance appraisals will be put in place. Progression paths to become educational administrators or teacher educators will be available for the teachers. A common **National Professional Standards for Teachers (NPST)** will be developed by 2022, by the National Council for Teacher Education, in consultation with NCERT, SCERTs, teachers from across levels and regions, expert bodies in vocational education, and higher education institutions etc. The standards would cover expected roles of the teacher at different levels of expertise/stage, and the competencies required for that stage. This could be adopted by states to determine all aspects of teacher career management, including tenure, professional development efforts, salary increases, promotions, and other recognitions. The professional standards will be reviewed and revised in 2030, and thereafter every ten years.

School Governance: Schools can be organized into school complexes or clusters which will be the basic unit of governance and administration that will ensure availability of all resources including infrastructure, like academic libraries and human resources e.g. art and music teachers along with a strong professional teacher community.

Standard-setting and Accreditation for School Education

Regulation and operations of schools will be carried out by separate bodies to eliminate conflicts of interest. It is envisaged to have clear, separate systems for policy making, regulation, operations and academic matters. To ensure that all schools follow certain minimal professional and quality standards, States/UTs will set up independent, State-wide body, **State School Standards Authority (SSSA)**. Transparent public self-disclosure of all the basic regulatory information, as laid down by the SSSA, will be used extensively for public oversight and accountability. The SCERT will develop a **School Quality Assessment and Accreditation Framework (SQAAF)** through consultations with all stakeholders.

Public and private schools will be assessed and accredited on the same criteria, benchmarks, and processes, emphasizing online and offline public disclosure and transparency, so as to ensure that public-spirited private schools are encouraged.

Vocational Education: By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education. Beginning with vocational exposure at early ages in middle and secondary school, quality vocational education will be integrated smoothly into higher education. Vocational education will be integrated in the

educational offerings of all secondary schools in a phased manner over the next decade. Towards this, secondary schools will also collaborate with ITIs, polytechnics, local industry, etc. Every child to learn at least one vocation and exposed to several more. A 10-day bagless period sometime during Grades 6-8 to intern with local vocational experts such as carpenters, gardeners, potters, artists, etc. Similar internship opportunities to learn vocational subjects to students throughout Grades 6-12, including holiday periods. Vocational courses through online mode will also be made available.

HIGHER EDUCATION

Increase GER in higher education to reach at least 50% by 2035.

The aim will be to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035.

Holistic Multidisciplinary Education

The policy envisages a broad-based multi-disciplinary holistic education at the undergraduate level for integrated, rigorous exposure to science, arts, humanities, mathematics and professional fields having imaginative and flexible curricular structures, creative combinations of study, integration of vocational education and multiple entry/exit points. A holistic and multidisciplinary education will help develop well-rounded individuals who possess critical 21st century capacities in fields across the arts, humanities, languages, sciences, social sciences, and professional, technical, and vocational fields; an ethic of social engagement; soft skills, such as communication, discussion and debate; and rigorous specialization in a chosen field or fields. Such a holistic education shall be, in the long term, the approach of all undergraduate programmes, including those in professional, technical, and vocational disciplines.

The **undergraduate degree will be of either 3 or 4-year duration**, with multiple exit options within this period, with appropriate certifications- a certificate after completing 1 year in a discipline or field including vocational and professional areas, or a diploma after 2 years of study, or a Bachelor's degree after a 3-year programme. The 4-year multidisciplinary Bachelor's programme shall be the preferred option since it allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student. An **Academic Bank of Credit (ABC)** shall be established which would digitally store the academic credits earned from various recognized HEIs so that the degrees from an HEI can be awarded taking into account credits earned.

Model public universities for holistic and multidisciplinary education, **Multidisciplinary Education and Research Universities (MERUs)** will be set up and will aim to attain the highest standards for multidisciplinary education across India.

A number of initiatives will be taken to ensure **optimal learning environments** are created that are engaging and supportive, and enable all students to succeed. All institutions and faculty will have the autonomy to innovate on matters of curriculum, pedagogy, and assessment within a broad framework of higher education qualifications that ensures consistency across institutions and programmes and across the ODL, online, and the traditional 'in-class' modes. HEIs shall move to a criterion-based grading system that assesses student achievement based on the learning goals for each programme, and also

move away from high-stakes examinations towards more continuous and comprehensive evaluation.

Universities and colleges will set up **high-quality support centres** and will be given adequate funds and academic resources to encourage and support students from socio-economically disadvantaged backgrounds. **Professional academic and career counselling** will be available to all students, as well as counsellors to ensure physical, psychological and emotional well-being.

Rationalised Institutional Architecture

A new vision and architecture for higher education has been envisaged with large, well-resourced, vibrant multidisciplinary institutions. Higher Education Institutions will be transformed into large multidisciplinary universities, colleges, and HEI clusters/Knowledge Hubs, each of which will aim to have 3,000 or more students. A university will mean a multidisciplinary institution of higher learning that offers undergraduate and graduate programmes, with high quality teaching, research, and community engagement. The definition of university will allow a spectrum of institutions that range from Research-intensive Universities, Teaching-intensive Universities and Autonomous degree-granting Colleges (ACs).

The system of affiliation will be phased out over 15 years and a stage-wise mechanism for granting graded autonomy to colleges, through a transparent system of graded accreditation, will be established. Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university.

National Research Foundation(NRF)

A new entity will be set up to catalyze and expand research and innovation across the country. The overarching goal of the NRF will be to enable a culture of research to permeate through our universities, 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. The NRF will competitively fund research in all disciplines. Successful research will be recognized, and where relevant, implemented through close linkages with governmental agencies as well as with industry and private/philanthropic organizations

Financial support for students: Efforts will be made to incentivize the merit of students belonging to SC, ST, OBC, and other SEDGs. The National Scholarship Portal will be expanded to support, foster, and track the progress of students receiving scholarships. Private HEIs will be encouraged to offer larger numbers of free ships and scholarships to their students.

Open and distance learning will be expanded, thereby playing a significant role in increasing the Gross Enrolment Ratio to 50%. Measures such as online courses and digital repositories, funding for research, improved student services, credit-based recognition of

MOOCs, etc., will be taken to ensure it is at par with the highest quality in-class programmes.

Internationalization of education will be facilitated through both institutional collaborations, and student and faculty mobility and allowing entry of top world ranked Universities to open campuses in our country.

Motivated, Energized, and Capable Faculty

NEP 2020 recognises that the success of higher education institutions is the quality and engagement of its faculty. HEIs will have clearly defined, independent, and transparent processes and criteria for faculty recruitment. Faculty will be given the freedom to design their own curricular and pedagogical approaches within the approved framework. Excellence will be further incentivized through appropriate rewards, promotions, recognitions, and movement into institutional leadership. Faculty not delivering on basic norms will be held accountable.

Effective Governance and leadership in HEIs

Through a suitable system of graded accreditation and graded autonomy, and in a phased manner over a period of 15 years, all HEIs in India will aim to become independent self-governing institutions pursuing innovation and excellence. Measures will be taken at all HEIs to ensure leadership of the highest quality and promote an institutional culture of excellence. Institutional governance based on autonomy - academic, administrative and financial - is envisioned with each higher education institution having an Board of Governors. All leadership positions and Head of institutions will be offered to persons with high academic qualifications and demonstrated administrative and leadership capabilities along with abilities to manage complex situations

Regulation

There will be a single overarching umbrella body for promotion of higher education- the Higher Education Commission of India (HECI)- with independent bodies for standard setting- the General Education Council; funding-Higher Education Grants Council (HEGC); accreditation- National Accreditation Council (NAC); and regulation- National Higher Education Regulatory Council (NHERC). Regulation will be 'light but tight' to ensure financial probity and public-spiritedness to eliminate conflicts of interest with transparent self-disclosure as the norm not an inspectorial regime. The regulatory body will function through a faceless intervention through technology for regulation & will have powers to penalise HEIs not conforming to norms and standards. Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.

Teacher Education: The 4-year integrated stage-specific, subject- specific Bachelor of Education offered at multidisciplinary institutions would be the way forward. A new and comprehensive National Curriculum Framework for Teacher Education, NCFTE 2021, will be formulated by the NCTE in consultation with NCERT. By 2030, the minimum degree qualification for teaching will be a 4-year 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. Stringent action will be taken against substandard stand-alone Teacher Education Institutions (TEIs).

A **National Mission for Mentoring** shall be established, with a large pool of outstanding senior/retired faculty – including those with the ability to teach in Indian languages – who would be willing to provide short and long-term mentoring/professional support to university/college teachers.

Professional Education

All professional education will be an integral part of the higher education system. Stand-alone technical universities, health science universities, legal and agricultural universities, or institutions in these or other fields, will aim to become multi-disciplinary institutions.

Technology in Education

An autonomous body, the **National Educational Technology Forum** (NETF), will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration. Appropriate integration of technology into all levels of education will be done to improve classroom processes, support teacher professional development, enhance educational access for disadvantaged groups and streamline educational planning, administration and management. Technology-based education platforms, such as DIKSHA/SWAYAM, will be better integrated across school and higher education. HEIs will play an active role in conducting research on disruptive technologies and in creating instructional materials and courses including online courses in cutting-edge domains.

Online Education and Digital Education: A comprehensive set of recommendations for promoting online education consequent in the recent rise in epidemics and pandemics in order to ensure preparedness with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible, has been covered. A dedicated unit for the purpose of orchestrating the building of digital infrastructure, digital content and capacity building will be created in the MHRD to look after the e-education needs of both school and higher education.

Adult Education

The policy aims to achieve 100% youth and adult literacy by 2030.

Promotion of Indian languages

To ensure the preservation, growth, and vibrancy of all Indian languages, several initiatives are envisaged. More HEIs, and more programmes in higher education, will use the mother tongue/local language as a medium of instruction, and/or offer programmes bilingually, in order to increase access and GER and also to promote the strength, usage, and vibrancy of all Indian languages. An Indian Institute of Translation and Interpretation (IITI) will be established. Sanskrit and all Indian language institutes and departments across the country will be significantly strengthened. National Institute (or Institutes) for Pali, Persian and Prakrit will be set up. Efforts to preserve and promote all Indian languages including classical, tribal and endangered languages will be undertaken.

Financing Education

Education is a public service and must not be a commercial activity or a source of profit. Multiple mechanisms with checks and balances will combat and stop the commercialization of higher education. All education institutions will be held to similar standards of audit and disclosure as a 'not forprofit' entity. The Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest.

The **Central Advisory Board of Education will be strengthened** to ensure coordination to bring overall focus on quality education. The remodeled and rejuvenated CAGE shall also be responsible for developing, articulating, evaluating, and revising the vision of education in the country on a continuous basis, in close collaboration with MHRD and the corresponding apex bodies of States. It shall also create and continuously review the institutional frameworks that shall help attain this vision.

Ministry of Education: In order to bring the focus back on education and learning, it may be desirable to re-designate MHRD as the Ministry of Education (MoE).
