Special Issue

on

IMPLEMENTATION STRATEGIES FOR NATIONAL EDUCATION POLICY—2020

Governance Reforms and Financing of Higher Education

on the occasion of

AIU SOUTH ZONE VICE CHANCELLORS' MEET—2021

at

GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT (GITAM), VISAKHAPATNAM

on

February 24-25, 2021

#Let'sBeatCoronaTogether

Applications invited for the post of
Vice Chancellor

Applications are invited from academic leaders with an exceptional track record of leading universities in senior roles and having national and international exposure to higher education institutions. Qualifications and experience must match the minimum requirements established as per Deemed-to-be-University UGC (Institutions Deemed-to-be-Universities) Regulations, 2019.

Critical Attributes of the Vice Chancellor

- **Visionary academic leadership** with the ability to work closely with the founders in implementing their vision

- Demonstrated **capability to deliver**

- **Strategically manage structural change** to institutional advantage

- Nurture a **culture of teamwork**, care for students and financial sustainability

- **Manage regulatory imperatives dexterously** while creating long term value for the institution

- Promote an environment that **values and rewards high quality research** and publication in reputed journals

- Network, enable and create **national and international collaborations**

Aspiring candidates may click on www.cvv.ac.in/career?cid=3 for more details of the position. They may send their CV detailing their higher education, leadership experience, academic track record and stellar accomplishments in research and publications by email to Secretary, Search Committee (secretary.scscvc@cvv.ac.in) by **10 March 2021** or follow the instructions on the URL given below. Alternatively, candidates may send a complete CV and covering letter by courier to:

The Secretary, Search Committee
Chinmaya Vishwavidyapeeth
Adi Sankara Nilayam, Veliyanad,
Ernakulam, Kerala 682313
Ph: +91 75588 97000

Shortlisted candidates will be invited to interview with the Search Cum Selection Committee appointed for the purpose of recommending the best candidates to the Chancellor of CVV.

For details of the role
www.cvv.ac.in/career?cid=3

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Gandhi Institute of Technology and Management (GITAM), Visakhapatnam : A Profile

GITAM (Deemed to be University), Visakhapatnam is hosting the South Zone Vice Chancellors' Meet-2020-21 of the Association of Indian Universities (AIU) being held on February 24-25, 2021.

Gandhi Institute of Technology and Management (GITAM) was established in 1980 with a College of Engineering at Visakhapatnam. Over the years, a number of institutes/schools have been added viz., Institute of Management, School of International Business, Institute of Science and Institute of Pharmacy. GITAM was declared as a Deemed to be University in August 2007 u/s 3 of the UGC Act, 1956. Responding to the expanding industrial and societal needs in diverse fields of knowledge, the University established Centre for Distance Learning, School of Architecture, School of Law, GITAM Institute of Medical Sciences & Research, Institute of Nursing, and School of Gandhian Studies at its Visakhapatnam Campus.

GITAM Hyderabad Campus, started in 2009, has seven constituent institutes – GITAM School of Tech- nology, Hyderabad Business School, GITAM School of Science, GITAM School of Pharmacy, GITAM School of Architecture, GITAM School of Humanities & Social Sciences and Kautilya School of Public Policy.

GITAM Bengaluru Campus, started in 2012, has three constituent institutes – GITAM School of Technology, GITAM School of Business and GITAM School of Science.

Recording steady growth, the University has evolved into one of the premier universities in the country. It is spread over three picturesque campuses at Visakhapatnam, Hyderabad and Bengaluru, with 20 Institutes, 12 Faculties, 58 Academic Departments and 16 Research Centres. With a multidisciplinary approach, the University has been offering 245 programmes at UG, PG and Doctoral levels in diverse disciplines – Engineering and Technology, Science, Pharmacy, Management, International Business, Architecture, Humanities and Social Sciences, Law, Medicine, Nursing, Gandhian Studies, Distance Learning, and Public Policy.

The University has today over 23,000 regular full-time students, about 1200 research scholars and over 90,852 students in distance mode hailing from almost all parts of the country. GITAM has produced more than 55000 graduates. Around 600 scholars received Ph.D. from the portals of GITAM. In addition to these regular programs over one lakh students received their degrees through GITAM Centre for Distance Learning.

The University has well qualified and committed team of over 1470 full-time faculty members. A good number of faculty have research and industrial experience and more than 60% of them are Ph.D. holders. To encourage meritocracy, GITAM introduced Best Teacher, Best Researcher and Best Sup- porting Staff Awards.

Since the inception of GITAM, every possible care has been taken to create the best infrastructure and recruit competent and qualified faculty. Across the three campuses of GITAM, one finds well designed structures for academics, administration and also student amenities. While the focus is academics, the quality of student life always receives the required attention.

The campus is always vibrant with activities –academic as well as co-curricular.

Many eminent persons from different fields graced GITAM on various occasions. Notable among the dignitaries who visited GITAM on its Foundation Day and Convocation include Dr. Michael W. Young, recipient of Nobel Prize in Physiology or Medicine in 2017 along with Jeffrey C.Hall and Michael Rosbash; Dr. Takaaki Kajita, recipient of Nobel Prize in Physics in 2015; Bharat Ratna Awardee Shri Pranab Mukherjee, 13th President of India; Sri M. Venkaiah Naidu, Vice-President of India; Bharat Ratna awardee Prof. C.N.R. Rao, a world renowned scientist in Solid State Chemistry and Materials Science; Padma Vibhushan awardee Dr. Karan Singh, Former Union Minister, Member of Parliament (RS) and President, Indian Council for Cultural Relations; Padma Vibhushan awardee Dr. C. Rangarajan, Former Governor of RBI, Governor of Andhra Pradesh and Chairman

of the Economic Advisory Council to the Former Prime Minister of India; Padma Bhushan and Padma Vibhushan awardee Dr. M. S. Swaminathan, Father of Green Revolution in India; Padma Shri awardee Dr. A. Sivathanu Pillai, a distinguished missile technologist of world repute and pride of India; Dr. Krishnaswamy Kasturirangan, noted Space Scientist and Member, Planning Commission; Dr. Avinash Chander, Scientific Advisor to Defence Minister and Secretary, Defence and Director General of DRDO; Dr. A.S. Kiran Kumar, Chairman of Indian Space Research Organisation; Dr. Madhavan Nair Rajeevan, Secretary of Earth Sciences, Govt. of India; Dr. S. Christopher, Secretary, Department of Defence R & D and Director General, DRDO; Prof. Balram Bhargava, Director General of Indian Council of Medical Research (ICMR); Dr.K.Sivan, Chairman, Indian Space Research Organization (ISRO); Dr. S.C. Sharma, Director, NAAC; Prof. Anil D Sahasrabudhe, Chairman, AICTE; Prof. Ashutosh Sharma, Secretary, Department of Science and Technology (DST), GoI; Dr. T. Ramasami, Secretary, Department of Science and Technology; Dr.V.K. Saraswat, Director General, DRDO; Dr. K. Radhakrishnan, Chairman, ISRO and many more of comparable eminence.

Accreditations & Recognitions

Recognizing the holistic education that the University is imparting, the Ministry of Human Resource Development, Govt. of India, ranked GITAM as Category 'I' University among the universities of its kind. NAAC accredited the University with an 'A+' grade (3.53 out of 4). University Grants Commission recognized GITAM as a Research University and accorded 12-B status to the University enabling teachers and students to receive UGC grants under various schemes.

GITAM always enjoyed an enviable position on the higher education map of the country. Some of the significant recognitions received by GITAM during the year 2019-20 include: NIRF Ranking 2020 – MHRD: GITAM stood at 71st Rank in the University category. Times Higher Education Ranking 2020: GITAM achieved 1001+ Rank in Times Higher Education World University Rankings-2020. GITAM received ISO 9001:2018 TUV SUD Certification in March 2020, valid up to 15 February 2023, subject to annual surveillance audit every year.

Research Project on "Adoption of Circular Economy in SME in UK and India.", in association with Aston University, UK and Jadavpur University,

Kolkata, funded by Royal Academy of Engineering for Rs. 48 Lakhs; Research Project for Rs. 9.8 Lakhs on "Mental Health, Social Wellbeing of Employees in SMEs in Emerging Economy," funded by Global Challenges Research Fund (GCRF), to work in association with Aston University and other partners in India, Thailand and Bangladesh.

Authorization of GITAM Institute of Medical sciences and Research as Comprehensive Resuscitation Training Centre for two years w.e.f. 09 September, 2019 by Indian Resuscitation Council.

The Week Hansa Research Best B-Schools Survey 2019 ranked Hyderabad Business School as 5th in B Schools in Hyderabad; 20th in B Schools in Southern Zone; 64th in Private B Schools in India and 80th in B Schools in India; Outlook-ICARE MBA

Ranking 2019 ranked HBS as 30th in Top Institutes in South Zone; 71st in Private MBA institutions in India. Jagaran Josh Ranking 2019 ranked HBS as the Best Business School in Telangana. Career 360 India's Best B School Survey 2019 ranked HBS 8th in Top B Schools in Hyderabad.

Directorate of Research and Consultancy

Directorate of Research and Consultancy is committed to providing excellence in fundamental and applied research as well as the development of innovative technologies for the future, besides consultancy projects from prestigious national &and international firms.

The Directorate serves as the 'coordinating center' for external and sponsored research projects and maintains a close liaison with various apex bodies, especially the UGC and various funding agencies, in the direction and at par with the vision & mission of GITAM, to achieve excellence in Research.

The total research activity of the University is organized into three categories: Academic Research, Sponsored Research and Extramural Research. Objectives of the Directorate are to:

- design the research policy framework;
- build sustainable research and innovation ecosystem in the University;
- support faculty, students and research fellows to achieve excellence in research;
- enhance current research strengths and develop new areas of research;

- promote impactful interdisciplinary re- search that is useful for the society and the nation;

- encourage to publish high quality research in journals of repute; and

- establish research partnerships with Government, Industry and other Universities.

Sponsored Research Projects

There are currently 51 on-going Research projects with a grant of Rs.1127.16 lakhs. Four research projects, with a grant of Rs.48.85 lakhs, were sanctioned during 2020-21 A total number of 83 research project proposals were submitted by our faculty to various funding agencies, with a total budget of Rs.2976.97 lakhs during 2020.

Consultancy

The Directorate is putting in their best efforts for identifying the high profiled clients for award of consultancy projects to GITAM. 13 Consultancy projects with a revenue of Rs.15.14 lakhs were sanctioned during 2019-20.

Research Publications

Researgence (Centralized Research Repository Software) is procured, customized and rolled out to all the faculty members in the University. The aim is to consolidate and bring all the research related data of the University at one place.

Research Incentive Structure

To foster the research ecosystem at GITAM and to ensure that the research output of the University enhances effectively, a research incentive structure has been de- vised. The incentive structure for publications is being implemented, duly taking the quantity/ quality of publications of the faculty, as a part of the Research Promotion Policy which aims to incentivize the researchers (academicians and scholars) on publishing research articles in Scopus or Web of Science database indexed journals.

The Directorate analyses the status of publications/projects/patents in respect of each faculty/department/institute periodically from time to time and prepare strategies for its promotion to the next level/stage/phase. DR&C closely monitors & pursues the faculty on this.

Research Project Incentives

A novel scheme to promote research has been evolved, wherein 2% of the utilized project grant is allocated and kept separately for utilization by the respective PIs for their academic & research activities.

GITAM Research Project Grant (GITAM Seed Grant)

In order to encourage the enthusiastic and young faculty and to inculcate the ambition on research in their academic career, a new concept has been designed under the name GITAM Research Project Grant (GRPG), under which a seed grant is sanctioned to the best research proposals of the faculty, throughout the year for each campus/ institute/ department.

Research Champions

A group of faculty, drawn from each institute/ department/campus, is working as "Research Champions", whose prime responsibility is to guide and mould the other junior faculty towards taking up research projects.

Collaborations

DRC is working on various national and international collaborations, both academic and industry, for research scholars exchange, setting up of the centre of excellence, research outsourcing and joint funding opportunities.

G-Scholar

A new SIS for research scholars, as developed by CATS, is being maintained to track, monitor and store the data of research scholars. It will be integrated with Researgence to monitor the research activity of the scholars.

G-Research Portal

DRC is publishing the advertisements of the funding agencies through G-Research portal (developed by CATS) to all the HoIs/faculty/ researchers. Further, pursuing is also being made with the enthusiastic faculty for the process of submission of proposals.

New Research Centres

DRC is also working on the following newly proposed Centres for research: Centre for Health and Wellness Innovation (CHWI), Centre for Biomedical Devices (CBD), Centre for Autonomous Systems (CAS), Centre for Biological Banking & Cancer Research (CBBC), Centre for Drug Design and Development (CDDD), Centre for Artificial Intelligence & Machine Learning (CIML), Centre for Business Productivity, Performance and Sustainability

(CBPPS), Centre for Optical Research (COR), and Centre for Extended Reality.

MoUs Entered

GITAM entered into MoU with different institutions/organizations in India and abroad. Some of the prestigious ones with which MoU has been signed during 2019-20 are: Ural Federal University, Russia; Northeastern University, Boston, USA; Universiti Teknologi MARA, Malaysia; EGADE Business School, Techologico de Monterrey, Mexico; Administrative Staff College of India, Hyderabad; National Law School of India University, Bengaluru; JNTU, Anantapuram; Tata Consultancy Services, Mumbai; DDB Mudra Pvt. Ltd, Mumbai; Logistics Sector Skill Council, Chennai; NASSCOM; Divis Laboratories, Visakhapatnam; CLAT-2020 Consortium and LSAT School Admissions Council; AIESEC, Hyderabad; Simandhar Education Review, Hyderabad; National Entrepreneurship Network; Berkadia Services India Private Limited, Hyderabad; Centre for Human Security Studies, Think tank on Internal Security and External Affairs of India, Hyderabad.

During the year, GITAM collaborated with (i) Courser a (online learning platform) by procuring twenty thousand licenses, (ii) ZOOM (online video hosting platform) for blended learning and (iii) Grammarly (online grammar and plagiarism checking software).

Knowledge Resource Centre (KRC)

A fully air-conditioned Central Library, known as Knowledge Resource Centre, is located in Visakhapatnam campus with all facilities like internet, digital library, e-learning centre and reprographic facilities. The centre has a collection of over 33,63,909 volumes which includes 30,00,091+e-books, 752 print periodicals-both national and international, 8578 e-journals, CDs/DVDs, latest editions of Handbooks, Directories, Dictionaries, Encyclopedias, ISI & IRC codes covering disciplines of Engineering, Science, Management, International Business, Dental Sciences, Pharmacy, Architecture, Law, Medical Sciences, Nursing and Gandhian Philosophy. The library is equipped with reading rooms and reference sections. The INFONET services facilitate online access to e-books and e-journals, which is connected to all the three campuses.

The e-resources can be accessed through intranet and internet. The campus is wi-fi enabled. This facilitates the users to access the resources from anywhere in the campus.

E-Resources

E-Books

South Asian Archives, World e-book library, Pearson. E-journals: IEL, ASME, ASCE, ACM, EBSCO, Springer; UGC Infonet: American Institute of Physics, Taylor & Francis, JCCC, Economic and Political Weekly, Oxford; Data Bases: Scopus, Indian Citation Index, Institute for Studies in Industrial Development (ISID).

Video Courses

SONET; NPTEL (National Programme on Technology Enhanced Learning); Course material prepared by the faculty of GITAM.

KRC has Resource Sharing with the Following Reputed Institutions

University of Hyderabad, Hyderabad; Andhra University, Visakhapatnam; Indian School of Business (ISB), Hyderabad; DELNET, New Delhi; IISc, Bangalore; British Library.

KRC signed MoU with INFLIBNET (Information & Library Network Centre) for Shodganga for thesis uploading and anti-plagiarism.

Centre for Advanced Technology Solutions (CATS)

The Centre for Advanced Technology Solutions (CATS) manages the IT infrastructure and offers a variety of IT-related services to assist members of staff and students at GITAM. CATS provides campus-wide computing, networking, storage, communications and instructional technology across all the campuses of GITAM. CATS provides an online teaching environment to faculty for conducting online classes and conducting online examinations using the software developed in-house. Online counseling software provides complete online support for admissions to programs offered by GITAM.

Directorate of Digital Learning

The Directorate organizes faculty training and supports them in content production, instructional design and delivery. In the present context, it is imperative to transform pedagogy to make it less teacher-centered

to more learner-centered; less a monolithic broadcast model to one that is customized to each individual student's specific needs and unique learning style. A thoughtful integration of the online and in-classroom pedagogies is expected to improve a teacher's ability to bring an enriched learning experience for the student, who is able to exercise better control over the time, place, path or pace of learning. The Directorate helps design a suitable blended learning model that can help GITAM transcend course, department and even institutional boundaries when designing programs, facilitating a truly interdisciplinary approach.

Centre for Learning & Sustainability (CLS)

The Centre for Learning & Sustainability conducts faculty development programmes to train the faculty members and skill development programmes for the supporting staff and various research work shops for the newly joined faculty and research scholars.

The Centre imparts innovative teaching skills and pedagogy for the newly inducted faculty apart from the micro teaching under the supervision of the senior most faculty of the university. The programs organized by CLS include : Work- shops on Effective Teaching-Learning Skills, Sensitization programme on Scopus Database and Knimbus Remote Access Platform, Workshop on R for Data Analytics, MSN in Clinical Research, Workshops on Research Methodology, Practical Approach to Effective Teaching and Productive Research in Applied Research, Workshop on Data Visualization Using Tableau, IT Skills for the supporting staff of DoE, FDPs on Productivity Tools, FDP on Recent Advances in Mathematics & Statistics, FDP on Recent Trends in Information Technology.

Venture Development Centre (VDC)

VDC aims to become the vibrant microcosm that builds and nurtures a larger culture of entrepreneurial ecosystem. Given the fact that more students in India are graduating each year outnumbering the number of jobs being created, it would be wise to nurture the students and develop their skills to be- come job creators than job seekers. This is the ethos behind the focused initiative of VDC. As part of this commitment, GITAM partnered with Northeastern University, Boston to harness their globally renowned expertise in venture development and bring it the students. VDC has so far rolled out Principles of Entrepreneurship (PoE) to almost

750 students and alumni from December 2019 and initiated the Ready-Set-Go program as an internship for students.

The VDC had more than 279 cohorts, with 79 venture startup ideas. Venture Discovery is the course that is being offered from the academic year 2020-21 to all freshers across all programs and campuses, either in Semester-I or II, which lays the foundations and provides enough exposure to students on what it takes to build a venture.

VDC has started Entrepreneurship Club (E-Club) that is driven by students. E-Club organises various activities through initiatives such as Speaker Series, Workshops & Bootcamps, Chai Chats, Smart IDEA contests, WISE (Women Initiated Social Entrepreneurship), My SOIL (Social Outreach for Individual Learning) and FUEL (Future Entrepreneurs and Leaders).

Domain expertise always lies in the individual departments and their faculties, this trove of knowledge is tapped to help startups build a website, get some legal advice, design a market strategy or finalize the price point to introduce the product, through Departmental Clubs or D-Club. This is again student driven from within the department, with a faculty mentor guiding them.

GITAM Career Guidance Center (GCGC)

GCGC is a strategic initiative that focuses on guiding, training and assisting students to find careers of their choice. GCGC augments classroom education with training in career-specific skills and in human values. GCGC helps in the holistic development of a student and prepares them to be ready for their careers as they graduate.

GCGC mentors, guides and prepares every student of GITAM into becoming a well-rounded professional and an empathetic human being, ready to step into her or his chosen career, equipped with competence, confidence and character.

GCGC caters for all the career paths which a student would wish to explore. The options catered are: Higher Studies: Abroad/ India, Research and Innovation, Entrepreneurship, Competitive Exams including Armed Forces, UPSC & GATE and Campus Placements.

More than 2500 of GITAM graduates got lucratively placed during the academic year 2019-20,

the highest annual package offered being Rs.16,75,000/-GITAM has always been the natural choice of industry majors, be it service or manufacturing sector.

Directorate of Student Life

Directorate of Student Life integrates all student life & introduces student governance on all the GITAM campuses.

The student engagement plan encompasses all clubs, student run activities, events, transport & residence life on campus. The driving force for student engagement of current students at GITAM is the Student Organizations (SOs). Student organizations include the following types:

1. National organizations – NSS, NCC
2. Student bodies of professional organizations – IEEE, ACM, CSI, etc.
3. International organizations – Rotary, Lions, AIESEC, Toastmasters, etc.
4. Student clubs – GUSAC, Kalakrithi, Automotive, GLUG, etc.
5. Student Event teams (independent or associated with clubs)
6. Special Interest Groups (SIG) – Astronomy, Aero modeling, quizzing, etc.

The Directorate of Student Life has additionally established Standard Operating Procedures (SOPs) for Residence life on campus. Residence managers have been appointed for each student residence. This team will design exclusive student experiences in residences and will look at providing world class service to GITAM resident students. This will include extracurricular activities, sports & counseling services which will be available to resident students after class hours.

Directorate of Foreign Student Affairs

With 132 students representing 17 nationalities, GITAM is steadily improving the diversity among students for enhancing creativity and learning among students. For the academic year 2020-21, GITAM is one among the top six institutions in the country in the number of admission applications under Study-in-India Program.

Orientation Program EMBRACE was organized to welcome new students and to provide information on various services in the campus. The fully Airconditioned International Hostel Shanti Sadan was opened in Visakhapatnam Campus for international students. Facilities like gymnasium, study rooms, in-door sports & games, common kitchen for self-cooking were provided for students to get the best experience for students. Several international students have secured high academic scores in the university exams.

Directorate of Physical Education & Yoga

The Directorate enhances the student experience on campus by establishing a vibrant sporting culture. The guiding principle for the Directorate is:

Achieve excellence in Athletics while staying committed to excellence in academics by which we strive to maintain the high academic standards of the University while pushing the envelope when it comes to developing sport within the University, the surrounding communities and the nation on the whole. The key objectives of the directorate are:

Holistic Development

We provide an all-en compassing healthy environment where students can thrive athletically and academically. Physical Education is being established as a powerful tool for holistic development of students during their tenure at GITAM.

Shaping the Future

Preparing students to meet ethical, social, intellectual, and professional challenges in life through sport and activity.

Instilling Culture

We are working on setting up a successful sports ecosystem which drives a life-long loyal student fan-base and builds a positive sports culture which will be cherished by all the stakeholders of GITAM forever.

Campus Hostels

GITAM campus hostels are well structured to ensure that students feel absolutely at home on the campus. The eco-friendly environment, availability of the doctors on campus and all other state-of-the-art amenities help create the right ambience for healthy student life. The campus hostels can accommodate 5000 students at Visakhapatnam campus, 3000 students at Hyderabad campus and 2400 students at Bengaluru campus. ❑

Financing of Higher Education in the Context of Implementing National Education Policy–2020

K Siva Rama Krishna* and Pulapa Subba Rao**

The belief that economies compete on the basis of low cost of labour proved to be void as strong economies under the globalisation era realised that 'high value addition' generates business growth and distinctive competency. As such, the advanced economies have stopped arguing about the issue of low wages in the third world countries at the World Trade Organization's ministerial meetings. However, certain developed countries like USA are losing their share in the world's exports due to their inability in producing high-value-added products and services necessary to compete in a global marketplace. This is attributed to their failure to develop their human resource to meet the ever-changing skill requirements of the transnational companies. This situation is the effect of the unequal access to educational opportunities to all deserved and needy people. This in turn is both the cause and effect for economic disparities and associated social problems like crime, drug abuse, gangs, reliance on transfer payments, and family break-ups.[1]

Some of the recently emerging economies like South Korea, India and Malaysia adapted a proactive approach to these problems by committing themselves to the nation's human resource development by providing enormous educational facilities accessible to the common man on free-basis for meritorious students and on payment basis for other people with ability to pay. This process enabled them to equip their people with skills and attitudes required by the global businesses in an increasingly knowledge-based economy. But governments have been reducing education funding in the recent years, at a time when the knowledge-based economy demands an increasingly higher set of skills. In fact, USA is currently experiencing fiscal crises leading them to cut the funding streams on education.

Education increases workers' abilities, skills and modifies attitudes, and prepares them for the enhancing manpower needs of the business. Further it provides an opportunity to boost average earnings and productivity, and it also reduces the incidence of social problems such as drug abuse, crime, welfare dependency, and lack of access to medical care, all of which can weigh heavily on the economy. [2]

Research in USA confirms the value of investing in educational programs, curricula, technologies, skills, and infrastructure, particularly in the areas of preschool and primary and secondary education. Remedial education contributed to the reduction in crimes, and dependency on welfare. Many states in USA are moving toward offering subsidized preschool, particularly for at-risk children. It is evident from the findings of studies that the level of earnings of individuals largely depends on quality of education. In fact, recent studies indicated that high volumes of education expenditure resulted in positive business climate and improved success of at-risk students.

It is needless to emphasize that community college graduates in USA earn significantly higher salaries compared to high school graduates. Community colleges in USA provide an opportunity to many disadvantaged to secure gainful employment and thus help bridge the educational, wage, race, and class divides in USA.[3]

In view of the contributions of education in solving social problems via economic gain, it is felt that it would be worthwhile to spend the money allotted for business incentives and crime control on education. It is also felt that prevention is almost always cheaper, less painful and less time consuming than treatment. Therefore, it would be better to invest on education rather than investing on economic adjustment programs.

Heavy and wise investment on education produce highly qualified human resources that would attract foreign investment, in addition to boosting productivity and the level of value addition in the existing business. In contrast, absence of skills required by businesses for high value addition in any country results in motivating businesses to spread their activities in other countries where developed pool of human skills are available.

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In fact from the individual employee point of view, continuous and quality education is a key factor in upholding the continuation of employment. Thus education plays a central and critical role in acquiring employment, protecting the employment and improving the living standards of societies.

In view of the significant role played by education, most countries like Japan, South Korea, Malaysia, India and Sri Lanka concentrated on providing educational opportunities as a strategy to build the nation's competitiveness. Countries with poor natural resource base undoubtedly concentrate on education. The best example is Japan.

Education sector was heavily reliant on the State before privatization, liberalization and globalisation during late 1980s and early 1990s in most of the countries in general and in India in particular. Education sector was functioning efficiently in varied degrees in different countries. Most of the cost of education was borne by the State and the dismal share was borne by the parents of the students before privatization, liberalization and globalisation. Government met the higher cost through subsidizing the tuition fee, providing scholarships, book grant to libraries, subsidized food and various utilities to the educational institutions. European countries like the UK, Mexico, Italy, Argentina and Netherland significantly developed higher education in the public sector. In fact, Sweden ranks the first in the Europe in terms of percentage of public expenditure on education as a proportion to GDP. It was felt in the past that quality institutions in higher education were developed through public expenditure in this sector. Chile spent low public money on higher education. Public investment was crucial in developing higher education before privatisation, liberalisations and globalisation. Private investment through the contribution of temples/ churches and philanthropists was initially allowed in higher education for cost sharing as well as to supplement the public funding. USA attracted funding from various sources and stakeholders for the development of higher education.[4]

Government was unable to expand the education sector due to heavy dependence of the sector on the exchequer as well as fast expansion of this sector after globalization in order to meet the human resource requirements of privatization and globalisation. Added to this, the economic crisis in various countries led to speed-up of privatization, liberalizations and globalization.

Globalisation along with information technology and manufacturing technology strides brought paradigm shifts in all sectors including education in almost all countries in the World. In fact most of the countries implemented strategies to globalize their education sector. Some of the important strategies include shift towards private sector including inviting corporate sector to establish higher educational institutions, reduction of funding by the Government to the public sector educational institutions, attraction of foreign students, flexible programmes with multiple entry and exit points, encouraging life-long learning and executive education, multidisciplinary approach, designing job oriented programmes, shift towards research from pure teaching in higher educational institutions, joint programmes based on collaborations with mostly foreign universities, community engagement, easy mobility of students among institutions through National Education Qualifications Framework, improvement and maintenance of quality through academic audits, internal and external quality assurance, establishment of national regulatory bodies, accreditation bodies and international rankings.

Educational Institutions—Business/Community Partnership in Japan

Japanese schools, colleges and universities involve businesses and the community in their policy formulation and development of the programmes. This is to draw inputs on the businesses and community's human resource needs with a view to enhance their competitive abilities. Most institutions invite the community and corporates to participate in their "partnership programmes". This programme involves students visiting local businesses and businesses personnel visiting classrooms. Japanese schools focus on creativity and provide hands on experience to students through partnership programs.

Financial Contributions to Education in South Korea

Total expenditures for education increased from 146 billion won in 1968 (or 8.8 per cent of GNP) to 18,126 billion won in 1990 (or 10.8 percent of GNP). Government expenditure on

education as a percentage of GNP has been around 3 percent during 1968 and 1990. Therefore the substantial part of this education spending was financed by private sources. Students alone met 63 per cent of total expenditure during the period 1968 to 1990, owing to the ability of the parents to pay and private foundations met 34 per cent of the expenditure during the same period.[5]

Thus education enabled economic growth of South Korea and the economic development along with intensified competition owing to globalisation, that in turn necessitated further involvement of government and business to invest heavily on education and develop human capital on a continuous basis. Outcomes similar to the South Korea are evident in recent times in Malaysia, though the processes and intervening factors are different.

Education Development in Malaysia

The educational development in Malaysia was an offshoot of economic development and as such it met the human resource needs of the economic development of the nation. The growth of education was phenomenal during the last 50 years in Malaysia in terms of the number of institutions, student enrolment, infrastructure, programs and updating of curricula in order to meet the divergent and transforming needs of the country based on the shifts in the world economies.

The Government increased its allocations for education to the tune of 58 per cent of social service expenditure[6] and it resulted in increase in primary school enrolment from 1.68 million in 1970 to 2.39 million in 1989 (by more than 42 per cent). The rate of primary enrolment increased from 88 percent in 1970 to 99 percent in 1989, to 99.5 percent in 1992, and to 96 percent in 1996, even though primary education has not been made compulsory. The literacy rate among Malaysian citizens aged 10 - 64 years improved from 88.6 percent in 1991 to 93.5 percent in 2000, thus representing an increase of about 5 percentage points over the 1991-2000 period.[7]

The increased public demand for higher education over the years, led to the establishment of ten public universities, three private ones, a number of branches of foreign universities and over 600 private colleges. Number of students enrolled has increased to about 150,000 in the eleven public universities while student enrolment in the existing 600 private colleges and universities totaled more than 100,000.[8]

Role of Private Colleges in Malaysia

The Government of Malaysia enacted a Private Higher Educational Institutions Act (PHEIA) in 1996 in order to allow private colleges to offer education in technical/scientific fields locally.[9] This Act, aims at strengthening science, technical and business education by allowing the private sector to play a significant role, as the capacity of public universities has been inadequate compared to the nation's needs and also owing to the fact that building the capacities in providing technical education in public universities is quite expensive. Consequently a number of private colleges have been established and offering education in the vocational/technical/technological category such as business and commerce, engineering and information technology. As stated earlier, there were about 100,000 students in the private colleges offering courses at the certificate, diploma and degree levels. The role of private educational institutions in Malaysia has been laudable in producing technical human resources for the nation's industrial and economic development. Similar example is the recently emerging global economic giant i.e., India.

Universities and Affiliated Colleges in India

The national system of education is based on a national curricular framework, which contains a common core along with other flexible region specific components. The system stresses for widening of opportunities for masses and consolidation of the existing system of higher and technical education. The modern education system in India is 164 years old-when the first three universities-Calcutta, Bombay and Madras- were established way back in 1857 under the British rule. Currently India has more than 993 public, deemed to be a private universities and around 39,931 colleges affiliated to the universities. All these affiliated colleges along with the universities offer undergraduate degree programmes and above. The universities formulate the policies, curricula, prescribe the norms for conduct of affiliated colleges, conduct examinations and award degrees while the colleges mostly concentrate on teaching, implementing the university policies and assist the universities in conducting the examinations and other activities. Affiliated colleges follow the norms prescribed by the respective university and also pay affiliation fee to the universities. The Government

finance all the public universities and all India-level public sector institutions. The Government also used to finance affiliated colleges up to 1990 and later encouraged the establishment of self-financing private colleges. The private societies, and religious organization established most of the affiliated colleges. Thus the private sector plays a vital role in providing higher education in India on a massive scale. However, private colleges collect fees from students to meet their working expenses as well as original investment. Some of the educational institutions in India conduct the classes on shift basis in order to meet the increased demand for education by avoiding additional investment on buildings and physical facilities.

Role of Business in Education

Private business firms as a part of their social responsibility establish not only affiliated colleges, but also deemed universities and institutions like Tata Institute of Social Sciences, Tata Institute of Fundamental Research, Kirloskar Institute of Management and T A Pai Institute of Management. Various business firms established high schools for providing education to the children of the community around the company location. Business firms also donate huge funds to the universities and colleges for constructing physical facilities and instituting chairs.

Higher Education system in India has been varied as there are public universities, deemed-to-be universities, private universities, institutes and affiliated colleges offering both bachelor and master degree programmes. In addition, these institutions are established by Government, societies, private sector. In addition there a number of accreditation institutions and regulatory bodies. Government of India, in order to have a comprehensive system, announced New Education Policy in 2020.

Salient Features of NEP–2020

Government of India in line with the global trends announced new education policy in the year 2020. Important features of the New Education Policy-2020 relating to higher education include: (i) set-up of National Higher Education Regulatory Authority in order to regulate financial integrity, good governance, disclosure of all finances, procedures, staff, programmes/ courses and outcomes, and giving freedom to the higher educational institutions in other areas including autonomy, (ii) set-up of

National Accreditation Authority with a view to grant accreditation to higher educational institutions, (iii) set-up of General Education Council to frame expected outcomes and to frame National Higher Educational Qualifications Framework, (iv) set-up of Higher Education Grants Commission in order to provide funding and financial support to the higher educational institutions, (v) set-up of National Research Foundation to promote high quality research culture of research in Indian education system by playing a variety of roles, (vi) introduction of undergraduate programmes / courses with multiple entry and exit points with award of appropriate qualification certificates, (vii) introduction of multidisciplinary approach in programmes/ courses, (viii) introduction of Academic Bank of Credit to digitally store the credits earned from various institutions in order to allow the students to transfer/ migrate among various higher educational institutions nationally and internationally providing flexibility to the student to study the degree programmes initially from any country and migrate to Indian universities at a later stage, (ix) top 100 global universities will be allowed to establish their campuses in India, (x) institutional restructuring and consolidation to end the fragmenting approach to higher education institutions that would bring large multidisciplinary universities and colleges at least one large multidisciplinary higher educational institution in every district, (xi) increase the gross enrollment ratio from 26.3% in 2018 to 50% in 2035, (xii) bring holistic and multidisciplinary education to address the issues from the holistic approach, (xiii) to provide optimal learning and student support facilities, (xiv) fight and stop the commercialization of higher education, (xv) ensure effective governance and leadership for higher educational institutions, (xvi) convert all standalone teacher development institutions into multidisciplinary institutions by 2030 to offer multidisciplinary teacher preparation programmes.

The National Education Policy 2020 envisages a large scale shifts in the education systems and sector in the country at par with international standards and policies, systems, and practices in advanced countries and provides flexibility to students to migrate within the country and to migrate from foreign countries to India.

In addition, it provides a concrete base for improvements in structures, systems and quality.

Private sector is expected to play an integrated and constructive role rather than a mislay role. Total and integrated quality will occupy a pivotal place in addition to multidisciplinary approach as the higher educational institutions will have to compete internationally to secure better ranks and to attract international students. Further, pure teaching higher educational institutions will be converted into at least teaching-cum-research institutions. These shifts invariably require huge financial resources that may not earn financial profitability but will earn academic improvement and advancement.

NEP–2020 and Paradigm Shifts in Finance

NEP–2020 will have vital impact on the funds requirements and financial management of both public sector and private sector higher educational institutions.

Public Higher Educational Institutions

Government higher educational institutions are expected to change the public sector culture and shift towards international culture in their systems, procedures, human resources and management as the competition in collaboration and collaboration in competition will drive towards academic excellence, financial efficiency, secure international ranks, attract foreign students and integrated quality with sustainability. The challenge will be attraction of financial resources as the Government both at the centre and the states have signaled limited funding rather than need based funding. In addition the Government encouraged the public sector higher educational institutions to compete with private sector and international higher educational institutions. Furthermore the Government asked the public sector higher educational institutions to explore their own sources of funding to meet the additional funding requirements. Student tuition fee is low in public sector higher educational institution. In addition, Governments mostly capped the funding to public institutions. Consequently, the institutions have been found their own mechanisms to raise funds from the student fee through self-financing programmes/courses etc. This situation also resulted in decline in the quality of teaching-learning process mostly owing to shortage of infrastructure and/or shortage of teachers.[10]

Most of the public sector higher educational institutions except national level institutions like Indian Institutes of Technology, Indian Institutes of Management have been suffering from paucity of financial resources. This problem has been more acute in case of state level universities and colleges. Some of the state level universities and colleges don't have adequate human resources to man even crucial academic positions due to decline in funding. Some of the universities and colleges started self-financing or self supporting programmes without the financial assistance from the Government like private universities and colleges. Now, the disputable question is to what extent public higher educational institutions will be successful in mobilizing additional funding requirements for strategy implementation of NEP-2020?

Private Sector Higher Educational Institutions

Private sector higher educational institutions who think any business is the same in terms of profitability or wealth maximization of owners should amend its goals to academic advancement, teaching and research quality and earning international ranks. Therefore, private sector should work on no-profit basis. The crucial question here is why should private sector provide finance to education sector when there is no return? Can philanthropic organizations meet the enhanced requirements of financing the strategies of NEP–2020? These questions can't provide a clear answer as the private higher education sector in India is not truly working on no-profit basis though they are established by trusts in principle.

Dichotomy and Way Forward

There has been enough indication that public sector cannot meet the growing requirements of higher education[11] due to paradigm shift in the Government policy towards higher education after globalization. In addition, enhanced quality and other aspects and new approaches of NEP–2020 will require increased funding. There has been sub-optimal level of fees in most government institutions.

Private sector can't conduct its operations for free as 'nothing is for free' is the business principle. In fact any business is just business for private sector except sparing certain portion of their profit for corporate social responsibilities. Therefore, private sector will charge higher fee to provide quality education as well as to follow various aspects or approaches of NEP–2020. Philanthropists can provide only to a certain extent, but they can't meet the expanding needs of higher education including the approaches of NEP–2020. Under these situations

of dichotomy, the possible options would be public sector and 'private sector run by philanthropists' will play their limited respective roles in meeting educational requirements of meritorious but poor students whereas 'private sector run by business people' will meet the expanded needs of rich students by charging relatively high fee compared to that of public sector and 'private sector run by philanthropists'. Expansion and commercialization burden of full cost as well as the profit of the private sector will fall on parents. This would cause heavy burden on the middle income parents and unbearable burden on the low income parents.

Under such circumstances, Government may consider (i) subsiding the fee to a larger extent charged by private sector in case of poor but meritorious students and to a moderate extent in case of middle income but meritorious students, in order to encourage the merit as well as to contribute to the development of relevant human resources for the economic development, (ii) encourage the corporate sector to provide student loans to meritorious students and provide them jobs after they compete the programmes/ courses and recover the loan amount, (iii) regulate pure commercialization of private sector by encouraging it to improve quality and relevance of education, (iv) attract, invite and involve corporate sector on a large scale to establish World class universities either solely or in partnership with national and/or international higher educational institutions as the corporate sector mostly utilize the graduates and benefit from the education process, and (v) Government may attract, invite and inspire philanthropists and corporate sector to establish World class research-led universities in partnership with Government.

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National Education Policy–2020: Introspections on Innovative Implementation Strategies

M R Saseendranath*

The National Education Policy–2020 (NEP, 2020) has been prepared after exhaustive consideration of major documents on this subject such as the Recommendations of the Education Commission (1964-66), the National Education Policy, 1986 and its subsequent modified version in 1992 and important acts that have been promulgated in India such as the Right of Child to Free and Compulsory Education Act, 2009 and the Rights of Persons with Disabilities Act, 2016. Reforms in the educational scenario of the nation proposed as part of NEP–2020 are primarily centred around four crucial areas that include changes in the curriculum with a view to foster strong foundational skills in the learner, concerted attempts to improve the quality of education at all tiers of the educational system, reorientation of assessment modalities and to cap it all, a total push for the dynamic systemic transformation of this sector. Throughout the NEP, 2020, the main resonating theme is the renewed and consistent call for a qualitative improvement in the learning outcomes of the learner along with a renewed focus on increased system flexibility and greater learner employability.

The higher education sector in India is highly fragmented; we have around 40,000 institutions of higher education spread over around 845 universities. Of these 40,000 odd institutions, an estimated forty per cent continue to offer a single programme, contrary to the suggested reform of multidisciplinary envisaged for the twenty first century[1]. Around one fifth of these institutions cater to less than a hundred students, making it difficult for them to generate the extra finances that are needed to improve the quality of education that they deliver. Quite a number of reasons have been attributed to explain this fragmentation, prominent among which are the unequal distribution of institutions especially in areas that have traditionally been left out of the mainstream development process of the nation, the early streaming of students into disciplines, the lack of an enabling institutional climate favouring autonomy and creativity and the general paucity of opportunity for innovative research.

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All these factors have the singular potential to slow down the growth and development of the educational sector of the nation in the years to come with detrimental consequences for the Indian economy which is poised to otherwise be launched as the third largest economy of the world in the near future. It is against this background that these changes proposed in an attempt to rejuvenate the educational sector of India assume significance. What is notable is that this attempt is the third in our 73 years of independence; the first national education policy made its appearance in 1968, the second came after another eighteen years in 1986 and the present NEP–2020 has come 34 long years later. This gap of over three decades is indeed a very long period of wait for active interventions in a crucial area such as education. The world has undergone remarkable transformation over the last thirty years especially in the realms of information technology, pedagogy, research and innovation. And it is without doubt that this policy is indeed long overdue because India needs changes in tune with the changes in the world; then only can she compete effectively in this environment of today. However, a lot of coordination and restructuring is required to implement the NEP–2020 in its true spirit. This article takes a quick glimpse of various innovative strategies that would prove crucial in the implementation of the NEP in its true spirit.

The Consolidation of the Fragmented

A major area of intervention envisaged by the NEP–2020 is the large scale consolidation of universities and the increased emphasis on quality. The implementation of this policy will witness the quantitative scaling down of the number of institutions of higher education in the country by nearly one third of its present size today. The advantage of such a move would be a more aggregated system with just 15,000 institutions when compared to the present 40,000. The question here is whether such a system could then effectively cater to the needs of the ever growing stream of students; here the NEP–2020 takes care of this issue by stipulating individual institutional enrolments of 3000 students which is much higher than the present average individual institutional enrolment of 693[3]. Such a move would however require a lot of homework

and the design and implementation of strategies that encompass the drafting of blue prints on how to ensure that the interests of all sectors are taken care of when consolidating individual institutions. These blue prints could be significant in avoiding major problems in this regard. Strategies should be designed in such a manner that they make provision for the rules and regulations that would govern the process of consolidation besides providing for an understanding of the obligations of all parties affected during this process of consolidation. Appropriate strategic intervention to ensure the smooth implementation of this process would also involve participatory consultations with the stakeholders involved, so as to address their apprehensions and take them into confidence.

Accessibility to All and Gender Concerns Addressed

The National Education Policy–2020 envisages that every school going child should be in school by 2030. At present, it is estimated that nearly thirty per cent of students in India drop out of the educational network after the tenth standard[2]. Of these, the percentage of girls and children from socially and economically disadvantaged groups (SEDGs) -which include gender, socio-cultural and geographical identities and disabilities-falling out is higher. The inbuild mechanism of the NEP–2020 to set up Special Education Zones to cater to the SEDGs should be strengthened and implemented effectively after taking into account the geographical data on the population distribution of these communities. The move to setup a Gender Inclusion Fund to address gender disparities in education should receive a wider publicity especially in areas where drop outs among girl students is higher. A special area-wise scheme for promoting education of the girl child in such areas along with concurrent attitude building exercises for the community would be an added deterrent to ensure that gender equity envisaged under the NEP–2020 is implemented in its true spirit. Adequate budgetary allocation to meet financial demands for such initiatives would be crucial in ensuring the success of the NEP–2020. Enhanced opportunity for Open Distance Learning envisaged as part of the NEP–2020 will also be an added advantage for accommodating students who have strong reasons to drop out of the formal system but will be retained in the educational system *per se*

Learning –Making it a Holistic Competency Driven Affair

One of the most significant changes that the NEP–2020 seeks to achieve is a drastic change in the way children learn. This policy seeks to enable students to '*learnto learn*', thus gradually weaning them away from hitherto conventional models of learning that tend to emphasise rote learning, and introduce them to a more active form of learning based on the actual experience of the situation while simultaneously providing for accommodating student interests as she moves through to the secondary level in the educational hierarchy. In order to ensure that this objective of the NEP materialises there will have to be active efforts to ensure modifications both to the curriculum as well as the pedagogy employed to accommodate active learning into the educational system. Concerted efforts prior to the implementation of the NEP–2020 will have to be taken to decide on recommendations to the curriculum, develop the curriculum and train teachers as well, on how to use appropriate pedagogical tools to achieve the desired learning outcomes that the NEP–2020 envisages.

Revitalisation of the Teaching Community and Creation of A Professionally Qualified Work Force

Teacher training at all levels spanning the entire hierarchy of the educational system is one of the significant actionable points of the NEP–2020. The aim of such an objective is to professionally train and certify teachers to meet both state and national accredited professional qualifications. Appropriate steps to set up regulatory bodies and to train and empower the teaching community as well, would prove to be decisive in ensuring the success of this objective of the NEP–2020.

Opening Up the Educational System: Moving Towards Resource Efficiency and Accountability

At the school level, the NEP–2020 envisages rationalising of schools into school complexes so that there is optimal use of school infrastructure and increased collaboration between schools, while at the same time school autonomy is kept intact. Ensuring the smooth execution of this vision of the NEP–2020 will involve a huge exercise on the part of the present educational system to define the jurisdictional limits of such complexes and the *modus operandi* in cases of sharing of assets and infrastructural resources without compromising on the interests of all involved. A blueprint on this with active involvement of various stakeholders will have to be prepared prior to the actual rolling out of the NEP–2020.

Specific Considerations for the Higher Education Sector

The New Focus: Consolidation and Interdisciplinarity

Coming to the higher education sector, the NEP–2020 has quite ambitious targets on important indices such as the gross enrolment ratio (GER) that it seeks to double from the present 26.3 per cent (2018) to 50 per cent by 2035. The NEP–2020 also proposes the creation of four year undergraduate programmes with multiple entry and exit points embedded within an interdisciplinary approach and based on a flexible curriculum. The most significant changes that the NEP–2020 proposes is however the establishment of a single regulatory mechanism with additional functions of accreditation, standard setting for academics and streamlining funding all of which are set to be executed through independent verticals that will see the replacement of the University Grants Commission fully and the regulatory functions of various bodies such as the AICTE, the Veterinary Council of India and the Medical Council of India - to mention a few- curtailed. Major changes that are to follow consequent to the implementation of the NEP–2020 include the enhancement of the quality of education being offered by Universities through the large scale consolidation of universities. The major job before the government prior to such institutional restructuring and consolidation would be to arrive at a blueprint for the *modus operandi* to consolidate institutions and evolve a plan for restructuring of departments and faculty consequent to this. This would result in a drastic decline in the number of institutions of higher education in the country from the present 40,000 to 15,000 without compromising on the accessibility of the institutions to the learner as the average institutional enrolment proposed is 3000 in contrast to the present average institutional enrolment of 693[1]. A gradual shift from the present single discipline islands of excellence to Multidisciplinary Educational and Research Universities (MERUs) on par with those seen in the West is also another major area of intervention proposed by the NEP 2020. A strong framework on the ways to move towards such consolidation, while at the same time accommodating and giving the required priority to all the players in related fields of study will be required to implement the NEP–2020 in the right spirit.

Facilitating Equity and Inclusion in Higher Education

Students from socially and economically disadvantaged groups (SEDGs) continue to occupy a very marginalised position in institutions of higher learning as indicated by the Gross Enrolment Ratios of 22 per cent and 15.9 per cent respectively for scheduled caste and scheduled tribe communities respectively. Despite inbuilt constitutional mechanisms that guarantee a financial support system for SEDGs, less than ten per cent of them actually have access to this system. The NEP, 2020 has set upon itself the noble task of making the criteria of social inclusion and accessibility an intrinsic part of the higher education system of the nation thus opening it up on a wider range than before to all citizens of the country irrespective of social and gender factors. Effective implementation of this crucial objective in the implementation strategy of the NEP, 2020 would require the calculated establishment of Special Education Zones in areas of the nation where the population of SEDGs are higher. An inbuilt mechanism in the NEP that facilitates higher enrolment of students from SEDGs especially those of financial nature are to be stream lined and monitored to ensure that all such students get the benefit that the state guarantees them. The NEP–2020 also envisages opening up the educational institutions to a wider audience through the strengthening of the Open Distance Learning mission which would see an estimated 1.5 crore learners being catered to[3]. Major strategic interventions along these lines would be the strengthening of infrastructure for online programmes, adequate faculty training for ensuring preparedness on the online platform, all of which have to be worked out prior to the implementation of the NEP–2020 *per se*. Financial considerations with regard to increased stress on the development of content for the online mode and adequate training of faculty in this area would also be an area requiring strategic intervention.

Quality and Quantity Considerations for Faculty

The transformation of the higher education sector of the country envisaged by the NEP, 2020 is mainly rooted in the quantitative and qualitative improvement of both faculty availability and quality in India. An overarching strategy that would cater to this aspect would be a major area of intervention influencing the successful implementation of the NEP –2020. It is estimated that five lakh faculty members would have to be recruited into the higher education system of the country so that the Faculty – Student Ratios (FSRs) are improved from the present 1:29 to a more optimal ratio of 1:20. Significant financial commitment would have to be forth coming for this to materialise. Development and implementation of

a mandatory, modular, graded, credit linkedskilling framework designed to promote continuous learning and skill up-gradation of faculty in tune with international standards of education will also have to be charted out. With regard to research funding through the proposed National Research Fund, equitable distribution across all sectors of the higher education arena through a simplified but efficient assessment process without compromising on quality would also have to be streamlined.

Vocational Education: Increased Emphasis and Integration

The NEP–2020 proposes an increased emphasis on integrating vocational education into the educational system from the middle school onwards and into the secondary school so that 50 per cent of school learners as well as those in higher education are exposed to vocational skills by 2025. Detailed skill gap analyses at the local state and the national level to map opportunities at various levels would be crucial in deciding on focus areas for vocational education. Higher education institutions would be required to develop detailed programmes, curricula and plans of work suited to various potential stakeholders. Further, measures to link with industry and to develop vocational courses with greater market orientation/industry orientation would have to be forthcoming.

Embracing the Digital Era

A resonating theme throughout the NEP–2020 – and fully in line with the developments that have overshadowed our lives this year with the COVID–19 outbreak- is the digital factor. These developments along with the changes in the way learning is done world over, necessitates the adoption of information technology across all facets of education from online learning, e-delivery of learning material and e-assessments. However, all this has to be undertaken under a canvas of a conscious effort to use the digital factor judiciously keeping in mind the consequences of the effects of the digital medium on both the social as well as the psychomotor aspects of the students in the learning process. Both the development and enhancement of digital platforms, digital learning resources, digital question banks and innovative virtual learning laboratories *per se* along with financial commitments in this area will be crucial in the implementation of this phase of the NEP–2020.

On A Concluding Note

The successful implementation of the NEP, 2020 will revolve around the performance of key roles by the major stakeholders in this policy, the central government, the state governments, the National Council for Teacher Education, the National Skill Development Corporation, the industry and other players such as local schools, content developers, education technology providers, ICT and infrastructure providers and of course our faculty and students. Quick action by the central government focused on governance issues that ensure the smooth functioning of various high level committees as well as the effective liaising of these committees with various state governments, the constitution of the newly proposed bodies such as the Higher Education Commission of India, the Higher Education Grants Council and others are crucial to the successful implementation the NEP–2020. State governments will have a crucial role in defining the operational standards of the NEP–2020 and in ensuring the convergence of various actors on this scene. Strategic interventions in the first part of setting the operational standards would revolve around defining appropriate regulation for both private as well as public education providers from schools to institutions of higher learning. Detailed deliberations by the state government machinery to prepare a state contextualised matrix of initiatives that will provide for the most critical decisions and actions to be taken first will also have to be drawn up. State machinery will also have to rope in experts to prepare a rationalised framework- keeping in mind the local and contextual situations – for institutional restructuring and consolidation, clearly specifying the targets to be met over different periods, say five years, ten years and fifteen years. As the nation treads carefully, the future of our nation lies in the successful implementation of NEP–2020. This new initiative, and the innovative changes that are envisaged in the NEP–2020 will hopefully usher in a new dawn in the history of the nation catapulting her further to new greater heights.

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Pragmatic National Education Policy–2020: Strategies for Implementing Research and Technology Recommendations

Y S Siddegowda*

It's predicted that India will be the largest economy in the world by 2030-2032 with an estimated GDP of 10 trillion dollars. It is evident that the ten trillion economy will be driven by knowledge resources and not by the natural resources of the country. In this regard, the present dispensation has introduced a comprehensive NEP–2020. This is in lieu with the PMs recent call on leveraging the Fourth Industrial Revolution to take India to new heights This policy is a watershed moment for the Indian Education System, which is bold, comprehensive and envisages large scale transformational well-reasoned reforms.

A competently written compendium, the policy overhauls the existing education system by bringing about a pragmatic shift in its content. In the arena of Higher Education NEP–2020 has outlined an ambitions task of making education more holistic, flexible, multidisciplinary, creating multi exit points in a five year degree programme, catalyzing research, improving faculty support and encouraging Internationalization. It seeks to bring about a paradigm shift thorough its transformational reforms in education on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, and is aligned with the 2030 Agenda for Sustainable Development, and aims to transform India into a vibrant knowledge society and global knowledge super power, given the fact our higher education system is the world's third largest in terms of students, next to China and the united States. This huge human resource potential to be realized and tapped needs the effective implementation of this dynamic policy. It is heartening that the policy states education as a public good and public education system is the foundation of a vibrant democratic society. It is public education that contributes to the building of nations, culturally, and technologically and the building of a humane society

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The underlining aim of the Higher Education is to develop good, thoughtful, well-rounded, and creative individuals. The HEIs will offer holistic and multidisciplinary quality education that will enable students 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.

Significance of Research and its Implementation

In today's world research and innovation constitute the neo-quantum of the academic strength of a nation. India intends to impact the global academia by remarkable contributions in research by expanding the frontiers of human intellect. Hence, it is pivotal to develop a robust system that fosters research and innovation. In this direction, NEP–2020 has established National Research Foundation to facilitate research. This will give us impetus for path breaking research activities vibrant research and innovation culture across higher education institutions, research labs and other research organizations is the backbone for innovations in a technology driven competitive world NRF would play a very crucial role in creating a culture of high quality research and build capacity in disciplines that are critical these is an urgent need for a significant expansion of research capabilities and output across disciplines. A string of suggestions for implementation is imperative.

NRF should be legislated as the key central funding agency to govern and regulate all research activities. NRF needs to be competitively funded for all disciplines to successfully carry out research through close linkages with government agencies as well as industry and private/ Philanthropic organizations in India. NRF should strive to play a major role in funds by bringing about all funding agencies onto a single platform. It should collaborate partnerships to harness the collective intelligence of

networks and communities to solve shared problems. Focus should be on utilizing the campus and its urban surroundings as a test bed for innovation and knowledge generation through research. An audit and ranking of research at the University level acts as an impetus to higher educational institutes to bring about quality research. Encouragement to collaborations both national and international through research conferences, exchange programmes to enhance productive research is essential.

It is of paramount importance that both the central and state governments allot a fixed fund for research in the budget as a regular budgetary commitment. The total investment on research and innovation in India declined from 0.84% of GDP in 2008 to 0.7% in 2019 and there are currently around 253 researchers in R & D per million population. NRF should act as a liason between researches and industry, which further aids in policy making. It should provide a competitive access to government research grants through a merit based system to incentivize and support R & D activity. It should also be necessary to note that there should be role clarity between NRF and other funding agencies such as DST, DAE, ICAR, ICMR, ICHR, UGC in the allocation of funds and monitoring of research.

It would be pertinent to mention that, the projects funded by NRF should strictly adhere to create a national research credit bank for all these it funds to monitor the output of their research. Integrated national digital library membership should be made compulsory in all HEI's by converting their libraries into digital libraries and should across to books, periodicals, journals, patents. This will aid in multiple subscriptions of library resources to be eliminated and thereby decrease government expenditure on library resources.

In order to maintain sustainable quality the college faculty should be encouraged to publish open access scholarly research papers with copyright certificates from government of India and more significantly patent submissions. As there is a dearth of research guides, the services of retired professors in this direction would be beneficial and highly qualified and proven researches should head various research agencies. Students should be expected to conduct research based on industry internship and publish scholarly papers and own patents during their degree education. It would be edifying to note that all Universities should start their own digital publication units in order to bring out high quality research at par with global indexing agencies.

Implementation Pathways for Research Intensive Universities

Form regional academic alliances to build enough strength in select fields to promote participation in global science. Linkage to global academic system of science and scholarship so to understand advanced scientific developments and participate selectively in them. Creation of a differentiated academic system for research Universities with diverse missions, structures and patterns of funding. At least 80% of competitive research funds. Establishment of a Flagship Research University for leadership in higher education. Funding of research Universities and merger of research universities to provide better economies of scale. Funding of research Universities must be available on a sustained basis. Social Sciences and humanities to be excluded alongside hard sciences. An approximate mix of funding sources and regulated allocation mechanism encourage innovative research ideas. Research universities need autonomy to shape their own programs, manage their budgets and the academic community. Faculty should be highly, trained committed to research and scholarship. Local research universities to focus on local needs by bringing international scientific trends to bear on local problems and contribute to the development of domestic industry, agriculture and society. Research universities to have a responsibility to disseminate research and analysis in local languages. Research Universities provide the skills needed by 21st century economies and societies and reflect the best academic values.

Internationalization of Education–Measures for Implementation

Envisioning India as a global destination for providing premium education at affordable costs is a right step for internationalization of education. The encouragement to high performing India Universities to set up campuses abroad and permitting selected Universities among top 100 Universities in the world, to operate in India is laudable.

To start with the government should ensure only not for profit institutions offering multiple programs to set up campuses in the country. Measures should be taken to establish overall policy reforms that encompasses the specific courses to be offered,

National Education Policy–2020: Transforming Governance in Higher Education and its Institutions

Chetan Singai*

The Landscape of Higher Education in India

Higher Education in India (HEI), in the last six-and-a-half decades, has undergone substantial expansion both at the macro and micro level. During this period after the post-Independence, i.e., from 1950-51 to 2018-19, the number of colleges increased from 695 to 39931. For the same period, the number of universities increased from 30 to 993 (UGC, 2019). Currently, 37.4 million students are currently enrolled in HEIs with a Gross Enrolment Ratio (GER) of 26.3 per cent. With an unprecedented expansion in terms of number and myriad types of higher education institutions (HEIs), Indian higher education is the third largest in the world, followed by the US and China, respectively (Sharma & Sharma, 2015).

The expansion in higher education is impressive, but the system is exposed to unique challenges and opportunities. The complex typology of universities with a diverse set of objectives and prioritization of their functions has enabled a system which is characterized with 'significant islands of excellence – amidst a sea of mediocrity' (Altbach, 2014). To this end, the Indian government has made a series of proclamations to make higher education a national priority in the globalized world. However, there has been a limited impact in terms of implementation. The erstwhile policies on higher education are set on three core ideas: expansion, equity, and excellence (Agarwal, 2012). The NEP-2020 brings together these reforms by examining the past and present to envisage an effective roadmap for higher education in India.

Further, the NEP-2020 identifies eleven challenges having adverse influence in enabling a robust higher education ecosystem (MHRD, 2020). Among these challenges, limited teacher and institutional autonomy, suboptimal governance, and leadership in most of the HEIs and ineffective governance and leadership. Toensure the desired outcome in transforming higher education in India, there is a need to examine the efficacy of reforms in governance at the systemic and institutional level.

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Unfortunately, governance and leadership in most universities and colleges have been severely compromised. Institutions have been plagued by external interference at both these levels. Such external influence has diluted the independence and effectiveness of the institution and has often been wielded not for the good of the institution but for serving vested interests. There is a need to ensure a sound scientific framework for the governance of Universities, which will make them efficient, result-oriented and averse to politicization.

Deciphering Governance in Higher Education and HEIs

Governance is a central issue in higher education because it determines the way universities function or dysfunction and defines the relationship with the government. Governance at the higher education system is a complex interplay of the internal and external environment. The governance of higher education may be viewed from a complex interplay of macro and micro perspectives in the larger context in which it thrives.

The macro analysis involves issues having a bearing on the governance of universities and the roles played by the government and regulatory and statutory authorities (UGC, AICTE, BCI and similar bodies). National policy frameworks/reforms in response to challenges lay the broad framework within which macro changes could be studied. The micro-level signifies processes that deal with institutional planning; decision-making; administrative management; academic administration; institutional politics, leadership and institutional culture. The microanalysis concerns itself with more specific aspects that are internal to the university.

Governance in the university encompasses the internal and the external environments and the intersection between the inner world of the university and the larger milieu in which it exists. The internal environment is the cultural, social and organizational foundation and processes of the university and the socio-cultural profile of the agents (students, faculty, administrators and so on) and their negotiations that persists within the university set up. The external

environment is the influence of the local, regional/state, market, national and international domain.

Concerns at the macro and micro level are not mutually exclusive. Any change in the larger system of higher education affects the universities. For instance, changes in the relationship between higher education and the state could have direct implications on university governance; such implications provide the main arena for the struggle over what these universities are or should be. The NEP-2020 envisages such a system by linking reforms at the macro level to indented outcomes and reforms at the HEIs level.

Encountering Governance: Insights from Erstwhile Policies

Reforms in governance at the systemic and institution level have been part of the erstwhile policies. The Kothari Commission/National Policy on Education (1968) provided a roadmap for financial & curriculum autonomy for HEIs while defining the structure of the university in terms of aims, objectives and functions (MHRD, 1968). Further, the report of the Committee on Governance of Universities and Colleges (1969) envisaged reforms in the structure of universities and composition of and representation on various university bodies, i.e., senate/court, syndicate/executive council, academic council etc. and the regarding the relationship of universities with affiliated colleges including conditions of affiliation, the constitution of the governing bodies, university representation.

The Gajendragadkar Committee on Governance of Universities and Colleges (1971) highlighted the fact that most of the colleges and universities are suffering from ineffective governance systems. The committee believed in a flexible pattern of organization which is responsible for the changing needs of society as well as knowledge, can be a powerful factor in accelerating progress (Singh, 2004). The committee makes cohesive recommendations on autonomy in the university and the role of the University Grants Commission (UGC). According to the committee, "the concept of university autonomy is often misunderstood. It is not a 'legal concept', not even a 'constitutional concept'. It is an ethical concept and an academic concept. This concept does not question that, in a democratic society like ours, legislatures are ultimately sovereign and have a right to discuss and determine the question of policy relating to education, including higher education…the concept of university autonomy, however, means that it would be appropriate on the part of the democratic

legislatures not to interfere with the administration of university life, both academic and non-academic. The universities make a claim for autonomy not as a matter of privilege, but because such autonomy is a condition precedent if the universities are to discharge their duties and obligations effectively and efficiently" (Deasi, 1995: 673).

The National Policy on Education (1986) underscored the importance of operational autonomy of colleges and departments, and the need for better infrastructure, more rationalized funding for research, integration of teaching (MHRD, 1986). Further, the NPE-1986 highlighted the importance of decentralization of educational administration in ensuring autonomy for educational institutions with the greater role assigned to the institutional heads. According to NPE-1986, institutional autonomy is an important aspect ofthe development of professionalism among teachers/faculty members.

At the onset of the liberalization era, a report titled Towards New Educational Management (1990) - the Gnanam Committee set out the general principles guiding the aims and objectives of the universities and, by implication, the quality of education it imparts. It said that 'Universities are the centres of excellence as also of regional/national development', and the students, teachers, administrators, and the society's representatives must be involved in setting the new goals and objectives of the Universities' so that universities become centre stage for excellence and national development. The management pattern of universities should be based on the principle of participation, decentralization, autonomy, and accountability, unlike what is in vogue in the governmental or in the corporate system (University Grants Commission (UGC), 1990).

National Education Policy–2020 (NEP-2020): Key Reforms in Higher Education Governance

The core objective of the NEP–2020 is to *"revamp the higher education system and create world-class multidisciplinary higher education institutions across the country"* (MHRD, 2020). To revamp the higher education system and ensure a world-class higher education system, we need to address the following issues – limited teacher and institutional autonomy, suboptimal governance and leadership and an ineffective and disempowering regulatory system. High-quality education and research require intellectual ferment in a nurturing culture - the governance of higher education institutions determines this culture. Our current

regulatory governance mechanisms are input-centric. Because of this, all HEIs, irrespective of their type, location and objectives, are seen with the same lens.

The NEP–2020 recommends a gradual but effective shift from input-centric approach to outcome-based approach aligned to the 'light but tight' approach. The 'light but tight' governance mechanism will be based on ensuring 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. To overcome challenges in streamlining governance in higher education and HEIs, the NEP–2020 makes the following recommendations (MHRD, 2020) at the Systemic level:

- **Institutional Restructuring and Consolidation to Address the Issues due to Complex Typology.**

  - ❖ **Research-intensive universities** to focus equally on research and teaching.

  - ❖ **Teaching-intensive Universities** to focus primarily on high-quality teaching across disciplines and programmes.

  - ❖ **Autonomous degree-granting College (AC)** refers to a large multidisciplinary institution of higher learning that grants undergraduate degrees and is primarily focused on undergraduate teaching.

- **Setting-up the Higher Education Commission of India (HECI), with following Autonomous Verticals:**

  - ❖ National Higher Education Regulatory Council (NHERC) - asingle point regulatory (Excluding Medical and Law) – a single point regulatory body.

  - ❖ National Accreditation Council (NAC)– ensuring an emphasis on graded accreditation.

  - ❖ Higher Education Grants Council (HEGC) – ensuring mechanisms for financing and scholarships.

  - ❖ General Education Council (GEC) – frame expected learning outcomes for higher education programmes.

Following are some of the key reforms envisaged by the NEP-2020 at the HEIs level:

- **Redefining the Idea of a University**
  - ❖ A university will mean a multidisciplinary institution of higher learning that offers undergraduate and graduate programmes with high-quality teaching, research, and community engagement.

- **Institutional Governance and Leadership**

  - ❖ All HEIs, public and private, shall be governed by an independent Board of Governor's (BoG), which shall be the apex body for the institution, with complete autonomy.

- **Institutional Development Plans (IDPs)**

  - ❖ HEIs will be governed based on their IDPs. Each HEI will integrate its academic plans ranging from curricular improvement to quality of classroom transaction - into its larger IDPs. The IDPs will become an important benchmark to seek grants and accreditation from respective bodies.

Recommendations towards transforming higher education and HEIs governance in the NEP-2020 is an integrated concept. The issues related to curricular, administrative, professionalism, and financial are brought together as a single entity with the necessary autonomy to create an independent and efficient governance mechanism. The impact of such an integrated approach is determined by the an equally integrated implementation roadmap which shall provide substantive autonomy to HEIs based on the principle of 'light but tight', rather than providing piecemeal autonomy.

The Way Forward

At the turn of the 21st century, given the impetus towards implementing the NEP–2020, the HEIs are exposed to new avenues and opportunities to transform their governance. Autonomy with accountability in HEs is the new mantra that is emanating from the NEP–2020. There is also a shift towards 'minimum government, maximum governance' as enunciated by the Hon'ble Prime Minister. To this end, the NEP–2020 has enabled an institutional centric governance system. Governance which is 'of the institution, for the institution and by the institution'. The new model redefines the relationship between the state and higher education institutions, from state control to a state supervision model.

As a result of this, the role of the current regulatory bodies will be minimal/limited, the affiliation system will gradually phase-out, institutional and academic silos will be addressed, thrust towards institutional and teacher autonomy will be the order of the day,

HEIs will be provided autonomy to innovate and internationalize and overall an era of reassuring faith on HEIs will be established. As a result of this, HEIs are compelled to enhance the quality of service and delivery while striving for cost-effectiveness and global competitiveness. The internal and the external environments, and the intersection between the inner world of the university and the larger milieu in which it exists. However, to enable and sustain such a transformation due to changes in the external environment, there is a need to optimize and streamline the current governance and leadership in the higher education system and its institutions.

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exchange programmes, affiliation, international scholarships, international collaboration, funding and networking activities that are to be taken up. Steps should be taken to synchronize India credit system with international credit systems and enable credit transfer between Indian and international credit systems.

Adoption of Technology

The policy lays emphasis on leveraging the benefits of technology in making the youth future ready. This noble initiative will be successful only if the government works on improving the basic infrastructure that will support the digital infrastructures as majority of the rural institutions lack digital class-rooms, remote expertise driven teaching models, AR/VR tools that are essential to bridge the gap between physical teaching and laboratory.

The strategic expansion of the higher education system to increase access to education for all social groups and geographies through virtual class rooms becomes a reality only when, especially in rural areas, internet connectivity is easily accessible, given the fact that it nearly non-existent, making digital learning a major challenge even after the tremendous growth of ICT. Internet penetration in India still stands at 40% (xii). According to the 2017-18 national sample survey on education (xiii) only 8% of all Indian households with members between 5 and 24 years of age have across to both the computer and the internet. As NEP–2020 stresses upon inclusiveness the digital gender divide suggests that only 35% internet users are women and 44% of women own a mobile phone.

The policy needs to be very loud and clear on the guidelines to increase digital literacy.

In the 21st century, knowledge of internet usage is a fundamental human right considered at par with reading and writing. The policy is vocal about digitalization in education, but the challenges of disparity in between regions. population, classes, delayed infrastructure development, bandwidth availability should be addressed.

Conclusion

In conclusion, NEP–2020 is truly visionary and comprehensive, bringing about a paradigm shift in all spheres of education we look forward earnestly with a sense of pride and hope for it successful implementation. ❑

National Education Policy–2020: A Word Document Awaiting Transformation to Power

Hema Raghavan*

Abraham Lincoln said "Give me six hours to chop down a tree, and I will spend the first four sharpening the axe." This simple and practical wisdom is needed to transform National Education Policy-2020 (NEP-2020) into Power. Power is not to be misconstrued as power to control. It is positive power to uplift human emotions and mind. Power here relates to Human Power and Intellectual Power.

The two earlier policies failed to generate Power of the mind and of the Human spirit, the two cardinal principles that define a citizen. Education at the tertiary levels hold focus on engendering this Power in our younger generation. The reason for failure was because the attempts to raise higher education were done without strengthening the basic infrastructure. This article intends to follow Lincoln's determination to sharpen the axe first before chopping the tree.

Two National Education Policies (NEP) have earlier been formulated–one in 1968 and the other in 1986. NEP–2020 is the third in this list (though 1986 NEP was fine tuned by P.V. Narasimha Rao during his tenure as PM from 1991-96). The 1968 policy, coming 21 years after independence focussed on compulsory education up to the age of 14. The next one in 1986, the year which saw the establishment of Indira Gandhi National Open University (IGNOU) focussed on enabling access to Higher Education across social groups, At that time India was struggling to become a developing nation. It was therefore difficult for Higher education to scale high levels to be counted one among the top global educational institutions. The Liberalization of Indian economy ushered in by Dr. Manmohan Singh and Narasimha Rao in the 1990s to lift India economically served as catalysis to make Indian higher education compete for recognition in the global arena. Dheeraj Sharma, Director IIM Rohtak writes: "NEP–2020 is an attempt to balance local and global human resource needs of growing India economy... the NPE 1986 created a pool of education and trained human resources who

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contributed to the value chain but NEP–2020 dreams of creating human resources who will create value propositions."[1].

The progressive scaling up of education is common to these three successive policies. But the desired outcome is yet to happen. On the contrary there has been- despite all efforts to be sanguine about progress-a steady and perceptible decline in the quality of higher education. The only plus factor is the quantitative dimension. India has today 3.75 crores of students in the higher education institutions. But there is a yawning gap between actual result and desired results. We need to sharpen our strategies to implement the policies that no doubt sound magnificent on paper. This is where we have to recall Abraham Lincoln's words. We have to cultivate patience to spend time on the drawing board and sketch the strategies before attempting the implementation of NEP. We have to acknowledge that successive policies over the last five decades have failed because we did not have any strategy to improve quality of education.

I joined University of Delhi in the late 1960s and at that time when universities could boast of academic doyens of exceptional calibre, my colleagues and I sensed a slow decline both in teaching and learning processes. We were afraid to acknowledge the truth and carried on like lame ducks, comforting ourselves that there is not much we can do. The halcyon days post independence when we were graduate students were fast fading and the first NEP of 1968 and the second of 1986 came up with primary focus on school education and with suggestions for "radical restructuring to provide equal educational opportunities in order to achieve national integration and greater cultural and economic development".[2]The revision in 1992 introduced entrance examinations for technical and engineering colleges both in Central and state institutions. These two NEPs had opened up higher education to accommodate all sections of society and brought some degree of social integration through higher education.

However the decline in standards was not addressed and it has now been left to NEP–2020 to

attempt the Sisyphean task of arresting the rolling decline and hefting up the standards to come near global benchmark. It is not our students lacked academic potential or our teachers were in the fault line but it was lack of planning and want of strategy that had caused the roadblock. But NEP–2020 also remains silent on how to stem the decline and how to energize education to achieve the magnificent goals articulated in the word document, NEP.

Let us start with some of the recommendations, that need o be more closely analyzed and if necessary changed to make NEP a practical and an implementable document.

National Testing Agency

A welcome move to conduct entrance examinations in Sciences, Humanities, Language, Arts and Vocational subjects at least twice a year. The first question is why twice a year when admissions take place only once. Entrance examinations such as JEE and CAT have been in practice for the IIT and IIM admissions. Now NEET has been added for admission to both engineering and medical colleges. Thus the extension of entrance examinations to colleges and universities seems to be a right step forward.

As of 2020, India has 39931 colleges and over 1000 universities. To have a single entrance examination for such a humongous number of Universities and colleges seems unwieldy. This also implies a wrong perception that all colleges and universities are of uniform standard with no specific individual criteria for admissions.

The second question is who shall be the paper setters and examiners? Who will do the duty of invigilators? At present the teachers have more than their full load of teaching and evaluation. Contrary to the prevailing perception that teachers have an enviable two months holiday in Summer, the reality is they are fully engaged in evaluating answer scripts, preparing for next semester teaching, admission work, attending refresher courses and writing academic papers without which they cannot get a promotion. So where is the extra time for them to examine this humongous numbers of entrance exam answer sheets without compromising on their assigned duties? So will the NTA seek members outside the academic committee to set the question papers and evaluate the large number of examinees from all over the country who take the examinations? On what basis admissions will be decided and who decides them? Today admissions are open to all eligible students irrespective of where they come from, provided they meet the set criteria set by individual colleges . How will the NTA allot students on the basis of the marks they obtain in entrance examinations?

This will entail further anxiety with regard to CBSE/ISC boards. Students will henceforth focus on EE and not on the Boards exams as the CBSE marks are not to be counted. The NEP has already reduced the CBSE syllabus and thus the focus in schools will be not on learning but passing. And it will be a field day for Tutorial centres to train students to pass the EE. More importantly how will individual colleges /institutions decide on cut off after the student clears the EE? The logistics are mind boggling and they have to be worked out in detail before implementation.

If quality improvement is sought for the best and the average institutions ,we have to give up the one size fits all approach and opt for greater decentralization than the present attempt to have one centralized testing agency. On peril of being accused of bringing an autobiographical inset, I wish to point out that in the college I served as Principal we introduced entrance examinations for different disciplines and admitted students in order of merit. The result was a remarkable improvement in quality and within a couple of years, the college got the UGC recognition as a College with Potential for Excellence and later upgraded as Star college. Let the new policy make it mandatory for all institutions to hold entrance examinations and admit students in a fair and transparent manner. Let not the autonomy of individual institution taken over by a single testing agency.

Multiple Entry and Exit for Incomplete Courses

It is a very laudable scheme as flexibility gives students the encouragement to complete the degree course if they had to halt midway for various reasons. This is on the lines of Open University. But in the regular mode, it creates problems for the colleges. It is not clear if the student who opts out and later decides to continue should join the same college or seek admission in another college? What about vacancies in colleges? Will it not be once again a reversion to the present problem of students running

in search of college where they meet its eligibility requirement?

The proposal to offer diploma/Advanced diploma for incomplete courses has to be rethought. A Certificate or a Diploma is always given towards acquiring technical or professional skill. This is not appropriate for academic courses. The problem with higher education is the confusion between academic and skill based courses. Diplomas and certificates are more appropriate for technical and polytechnic institutes and not for universities and colleges. It may be worthwhile retaining the provision of flexibility to continue later without giving a certificate or diploma at the time of exit.

M. Phil Degree to be Scrapped

M.Phil is a useful course on two counts.. Introduction of M.Phil prior to Ph.D work is to provide the bridge to shift from text based study at the Masters level to research focussed training in M.Phil, leading to a pursuit of advanced research in Ph.D. M.Phil, the two-year advanced postgraduate programme consists of a year of a taught component (the coursework) and another year of research to write the dissertation. Our current Masters degree is examination based and does not emphasise on research. It has no component of research that comprises review of literature, identifying possible research topics and framing questions around those. Except for writing the examination, there is no training given in academic writing skills. The MPhil programme provides valuable training in these areas. The Ph.D programme today has made course work compulsory for a year. This need not be there if M.phil programme is attended by the student. Let us not do away with M.Phil for reasons of value for time. Indian PhD students theses will garner more citations if adequate training is given during M.Phil.

Establishing Indian Universities Abroad and Permitting Foreign Universities to Set Base in India

It is strange and paradoxical that we want the best Indian Universities to set up abroad and get the best universities from outside to set up in India. It is baffling to see the import export concept. It is not like bartering one set of goods for another. The foreign universities have their own admission policies, fee structure and infrastructure that will make them stand apart from our best universities who are subject to many restrictions. With the government's reservation policy in respect of faculty positions and student admissions, it is not possible to restrict students and faculty members in accordance of merit. Affordable fee structure as behoving an egalitarian society, pushes colleges and University departments to look to government for assistance to improve even the basic amenities. The well to do, and the meritorious students will join foreign universities. Even the middle class families will shore up their resources to meet the fees of foreign universities as sending their wards abroad for better qualification will be a lot more expensive. This will leave Indian universities to settle for the second best. Let the policy makers rethink on allowing foreign universities on our soil lest we add one more class discrimination between the haves and the have-nots.

Quantity and quality are always in inverse proportion. This is true of education and more so of Higher education. To give quality education to 370 million students is an unenviable task especially as this requires well trained quality teachers in large numbers to impart quality education. Tertiary teaching cannot be an extension of school teaching where the focus is on facts and figures and not on detailed analysis. In this age of Wikipedia, that has usurped the place of "kunji" (notes for full syllabus), college teachers have to change their ways of teaching and stimulate and arouse interest in students to do library work and self study.

The library keeps foot fall of those who visit it, only for the purpose of presenting to the visiting NAAC committee. There is no record of how long the students sit, read and take notes. Cubicles with internet access should be set up to enable students to work for long hours. If the colleges lack funds, students can be charged for making use of the net facility and cubicles.

The lecture classes should be reduced, which inter alia, means packing 6 days' lectures, each of an hour's duration to two days, each of an hour and a half duration. This is halving the number of lectures. These lectures should be of minimum duration and maximum content. They must provide a capsule summary of the topics to be covered that should trigger the student's interest sufficiently and act as a stimulus to boost further study on his/her own. At

the conclusion of each lecture, teachers shall give a comprehensive reading list that is multi- disciplinary in its reach. There should be at least one term paper per course at the UG level and two at the PG level. This should count for 50% of marks while the other 50 is for written examination. This is the best way of taking the horse to the water trough and also making it drink. Quality improvement of education starts with quality input and ends with quality output.

This suggestion of 3 hours of lecture per week will flag the question if teachers are underworked. 3 hours of lectures will need 6hours of mentoring in seminars and tutorials. The current prescription of 18 hours of class work (lectures+tutorials) leaves very little time for the teachers to do their own study and research. On the one hand, for every promotion to the next grade, teachers have to show the number of papers they had written for UGC recognized journals. Writing articles is not like plucking fruits from the trees. It needs time to read and write quality articles for acceptance in both International and Indian academic journals of repute. Moreover it is a long wait to know the fate of an article till a letter of acceptance comes from the publisher. But the teacher's promotion is linked to quantity as though articles are like manufacturing products on an assembly line. Teachers in colleges and universities are always under scrutiny as the common perception is they are defaulters who idle away their time and having a sinecure job. This faulty perception has given rise to more and more stringent measures of appraisal for moving to the next grade. The Assured Career promotion forms have very many columns to be filled and mostly related to non academic and administrative work expected of a teacher. UGC may have to revisit their guidelines for academic promotion. The earlier concept of interviewing teacher for promotion was to ascertain his/herdegree of advanced studies and research in their chosen discipline. This in addition to students' feedback on the teacher's lectures and the Principal's report was adequate to measure the teacher's potential. This has been replaced by asking the teachers to fill up reams and reams of forms to showcase their academic and administrative selfie. Every step up the ladder is through quantification and not through an assessment of academic merit. How can we expect teachers to work and increase their academic knowledge if their time is spent on tasks unrelated to their academic pursuits? Academic ranking and rating cannot be raised through puerile data but through face to face interaction between teachers and Professors of eminence.

The promotion also hinges upon the number of refresher courses the teacher has attended. All refresher courses are not qualitatively good and many of them are intended to give skills for online/ blended teaching. The exaggerated zeal for the online mode is a 2020-21phenomenon, specifically for the COVID year. While it has served the interest of students and faculty for the current academic year, it is important to make the refresher courses focus on broader and deeper academic knowledge They have to be designed in such a way that teachers get to know the web of learning across cross disciplines.

Multidisciplinary Courses

While the NEP recommends setting up multi disciplinary institutions,- a very welcome suggestion- the big question is are our teachers sufficiently trained to teach these courses? It is fine to recommend inter disciplinary courses- (an attempt made in IITs to introduce Humanities) saying a Science major student should undertake courses in Humanities and vice versa. This prima facie needs teachers trained to offer cross pollination among courses to make students capable of adapting to new and changed environments and bring forth civic conscious and cultured students.

The humanities prepare the students to fulfil their civic and cl responsibilities to promote altruism, compassion, generosiulturaty and civility. The liberal arts introduce aesthetic values in addition. Study of humanities opens the window to great minds outside of science. A study of Darwin's Origin of Species alongside Malthus' Theory of Population is important for students of natural science, when he learnses that populations increase geometrically while food supplies grow arithmetically. Robert Young, who carefully traced this link in his 1969 publication, Malthus and the Evolutionists: the Common Context of Biological and Social Theory, proves how Humanities study strengthens one's ability to know the interlinking of disciplines. One learns foreign languages and cultures and this makes it easy to move across disciplines easily. Humanities study helps one understand the impact that science,

technology, and medicine have on society and understand the future scientific needs of society. In the STEM world, we need both Humanities and Science which helps one to understand how far technology, science and medicine have grown and how important they are in people's lives. The Humanities and Social Sciences are the study of human behaviour and interaction in social, cultural, environmental, economic and political contexts with a historical and contemporary focus, from personal to global contexts. It helps students to understand the future challenges in a holistic way.

But then these courses that sound attractive on paper need erudite professors who can impart the wisdom of holistic learning. Teachers have to be given refresher courses on connectivity among disciplines that cuts asunder stand alone disciplines and weaves them together as the web of learning and help in the free flow of ideas essential for the future of mankind.

National Council of Higher Education and Research

The proposal is to bring Higher education under a single nodal agency whereby all the universities and colleges, all the academic Dons and Vice Chancellors are to be monitored by the newly established regulator, NCHER-(National Council for Higher Education and Research). With due respect to the framers of NEP, I find this regulatory body is behemothian in its conception. Even by its colossal stature, it is a daunting proposition to regulate Universities, colleges, AICTE, NCTE, UGC... taking on the responsibilities of funding and regulating all post- secondary institutions. The universities till now, though monitored by UGC(and remotely by the Ministry) did enjoy a certain degree of autonomy in respect of framing the curriculum, introducing new courses, prescribing relevant texts and encouraging institutions to be platforms to be engaged in healthy academic discourses. The IITs, IIMs, Indian Institute of Science, JNU, DU and some premier universities had in the past shown spectacular academic achievements and made them sustain [n academic ethos and rigour. The first fifty years of independent India contributed scholars, researchers, economists, political thinkers and social activists of global reputation who worked for social,

economic, technological and financial changes towards nation building process. The decline had started when the autonomy of the universities was taken away through bureaucratic control and centralization. What was earlier done by academics through discussion and serious deliberations has been slowly replaced by government authority. Academic and administrative decisions were imposed by the Ministry and academic bodies such as Academic Council, Executive Council, Committee of Courses, Board of Studies were slowly reduced to irrelevancy. It is this decline that had to be stemmed. But the NEP enlarges on the powers of the Centre and has tightened the reins through this unified regulator. Right from Admission through a single National Testing agency to revising and regulating issues concerning teachers' load of work, their promotions, curricula, prescription(and proscription) of texts through the newly proposed NCHER, such stifling and undervaluing of academics do not augur well for higher education. No university in the past had done anything that was not in the interests of the nation. Academic autonomy should not be tinkled any further. It has to be restored. Wherever there is a breach of academic propriety, the Government can intervene to set it right.

NEP is good as a document with a honest attempt to set the goals of higher education in India. The words and phrases employed in announcing a new policy statement resonate across the nation. But words that look good on paper do not suffice unless they are supplemented by goal oriented action. Shakespeare's Hamlet says despairingly "Words, words, words". They remain hollow unless we breathe life into them and make them come alive. This article is an attempt to give direction to the words in the NEP document. Richard Bach's wisdom in his Seagull is worth keeping in mind:

"Don't believe what your eyes are telling you. All they show is limitation. Look with your understanding. Find out what you already know and you will see the way to fly."

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New Education Policy–2020: Actionable Points for Higher Education Institutions

Satinder Bhatia*

The New Education Policy of 2019 has increased possibilities for innovation in programmes and the deliverable models in the Higher Education Sector in India. Certain key actionable points for Higher Education Institutions are discussed here.

Determining and Adopting the Right Governance Model

The New Education Policy (NEP) requires a New Education Strategy to ensure that education truly becomes inclusive. While 'Education for All' is a desirable goal of all governments, the modus operandi for the same differs widely across all countries. This is where governance of education comes to the forefront. Countries that today excel in the provision of education are ones where meticulous attention has been paid to the governance of educational institutions. In whose hands should the decision-making power rest? Speaking of the higher education sector, should the Vice Chancellor of the university be the ultimate authority? Or, should the Vice Chancellor of any university learn to walk the tight rope in association with experts from other areas who may all be constituent members of the governing council of the university? Should students be members of the governing council? After all, they are the key stakeholders of the education service being provided. Certainly, these are key questions that all universities will need to now answer for themselves. A fair amount of deliberation and research is needed in all institutions to find answers to such questions. And even when the answers may be found, the all-important question of whether universities will be willing and able to change processes of imparting and administering education remains. All of us know how difficult it is to change age-old processes in order to focus on quality and competitiveness at all levels. That is why, there is a new urgency facing all Vice Chancellors — to review all processes followed and deliberate on the kind of changes needed to maintain the robustness of our institutions. Further, apart from the composition of governing boards,

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should all decisions be passed by a simple majority or will there be some key decisions which may require minimum 75% or even 100% approval from members? Will each member have one vote or is voting power divided between external and internal members in some ratio? The moment universities acquire a corporate character, these issues need to be addressed or they may boomerang upon us at the most crucial and unpredictable times.

Digitization as a Tool for Better Governance

Under the NEP, autonomy will be granted to Higher Education (HE) Institutions. Will there be grades of autonomy like academic autonomy, financial autonomy and administrative autonomy? Will there be different combinations of these autonomies for different institutions? What will be the parameters that will be used and do all institutions need to go for full autonomy? If HE institutions have to aim to become fully autonomous by 2035, then some degree of capacity-building may be essential to make that journey easy. That includes not just leadership capacity at the Vice Chancellor and faculty levels, but also data warehousing and management at the administrative level. As students also gain autonomy in the choice and combination of courses, there will be voluminous growth in student data which needs to be carefully managed and analyzed. Then there will be other kinds of data such as financial data. As sources of finances grow, so will monitoring committees and utilization reports. The compliance issues for autonomous organizations will also simultaneously grow as there will be more indirect watch on these universities/ HE institutes through changing composition of governing boards and accreditation and ranking bodies. This would again mean data collection and management will have to come to the fore. This also means that the investment in digital technology and capacity-building to leverage this technology must be preponed. The investment in digital technology can no longer be a vision for tomorrow; it is the crying need of today. The finances needed for such priority investment need to come from somewhere – internal resources of the institutions or government budgets or philanthropic organizations or some

combination of some or all of them. Governing boards may have to jump in immediately through mandating submission of year-wise digital plans in hardware and capacity-building and governments may incentivize institutions through provision of partial subsidy.

Building All-Inclusive Partnerships

Then, there is the issue of augmentation of physical capacity for every HE institution and not just for 'excellent' institutions. As institutions increase the number and nature of training and research programs, their need for learning and residential space will grow exponentially. In urban areas where most HE institutions are located, that can be a challenge both financially and physically. Hence, HE institutions need to craft collaborations not just with foreign institutions but with local institutions too for sharing space, faculty and students. A lot of innovation is required here: architects must create more energy-efficient flexible spaces and institutions must share these spaces with each other. These sharing agreements can acquire a whole host of innovative features and through such agreements alone, the institutions may develop a precious competitive advantage. Similarly, all institutions will also have to focus on full utilization of their own infrastructure which currently is mostly under-utilized in the evenings and nights. Institutions will have to offer flexible timings in their programs to fully utilize the infrastructure and offer convenient facilities to students of evening/night programs. Similarly, students can be shared across programs with modules of programs getting completed in two or more institutions. Our cities will simultaneously have to become safer. Local governments may be required to initiate plans for safety of commuters which may require not just more police on the roads but more roads, lighting and public transport at all times. In addition, special arrangements may be drawn up with local municipal and traffic authorities to ensure fully safe and healthy environments. All this requires deft management, a flexible approach and a good ability to enter into collaborations with academic and non-academic institutions alike. The HE institutions must not just teach team-building but build diverse teams themselves to steer forward in the changing environment. Even more importantly, it is vital that all institutions seek partnerships not just for self-benefit but also use these partnerships for mentoring each other on different aspects.

The Goal of Quality for All By All

The Government has already announced the list of 'Institutes of Eminence' (IoEs) in the public and the private sector. Some of our best institutes are in this list; yet a nagging question remains – why is it that some of our best institutes do not appear in this list? After all, the government has invested a lot of money in each of these institutions. Do we not owe it to the honest tax-payers of this country that each of our institutions should show that the money is, indeed, well spent? Each IoE is likely to receive at least Rs 1,000 cr from the government – surely accountability cannot just be achieved through a jump in student-intake or number of programs rolled out. There will have to be evidence of high-quality work on a regular basis and parameters of quality will have to be clearly specified. As they say, quality needs to be looked at from the customer's point of view – hence the students' interests should have paramount significance in quality parameters. We must at the same time remember that the customers are becoming more and more demanding and so are the students. There should be a clear focus on achieving the quality of the future. The NEP raises an important issue - are the students' interests best served if these institutions have a good proportion of foreign-qualified faculty? The government has mandated IoEs to have a good proportion of faculty who are foreign qualified –now we need to ensure that a good proportion of faculty is necessarily from the world's top ranked universities. By that, we would at least be fair to our own institutions. All foreign institutions cannot be put at the same pedestal. Surely, quality will have to be re-emphasized and a combination of input parameters and outcome-oriented parameters will have to be adopted by HE institutions. Such a shift is crucial if we aim to see our nation as a highly competitive nation.

Strategic Focus towards Alternative Sources of University Funding

The public-private partnership models in higher education may also need to be re-visited. While the mechanism of allotting free land to certain 'excellent' higher institutions seems a well-accepted norm, it may still be good to explore other ways of collaboration. In other infrastructure projects like roads, railways, ports, etc., various forms of public-private partnerships are in vogue but different

The Making of Future Academic Leaders

Akshita Bahuguna* and Pawan K Dhar**

Education fundamentally means expanding the intellectual, technical and emotional horizons while being absolutely inclusive. With the massive rise in the population, diffusion of technology, faster communication and so on, the level of competition and complexity in an academic ecosystem has surged significantly in the recent years.

Given the pace of change, the next generation of academic leaders will have to demonstrate exceptional skills of leadership in volatile, uncertain, complex and ambiguous (VUCA) environment that would demand deep knowledge, tireless pursuit and a perpetually pleasant mind.

To meet these challenges, higher education systems have been recently redesigned (NEP–2020) to deliver the content and competence required for a disruptive phase ahead. It is clear that the traditional 'command and control' format will become obsolete. In future, one would need more of relationship building and finding right principal component interactions that meet the crucial needs of an institution. Some of the open ended questions that may be relevant in the context of emerging leadership in the academic space are:

i.   Should one start a degree / certification program in Academic Leadership? What would be the components and outcomes customized for future needs?

ii. Is there a need to find potential academic leaders who can spend more time on the leadership role and are really passionate about future leadership roles.

iii. Is it about time to slowly explore the possibility of lateral entry for top academic jobs, along the lines of academic hiring in the West? Will it work in our country? What will be the best case scenarios and boundary conditions?

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Global trends indicate that future academic leaders may not be in academic leadership positions purely based on their academic experience but people with the right management skills and experience outside the system may also be considered for the top job.

Universities have traditionally been categorized as: Teaching based and Research based. Soon we may see the emergence of a new species i.e., Business Universities that are multidisciplinary with a clear focus on fostering entrepreneurial culture.

To match the emerging needs of a rapidly changing academic ecosystem, our leadership vision may need a revision. To ensure that academic leader's message is heard, digested and absorbed, one would need a strong focus on communication and relationship building

Unfortunately, for the last few years perspectives have taken precedence over facts. There is very little appreciation of the kind of grinding that academic leaders have to go through every day. The community needs to recognize that administrative work requires deep and quick thinking, multidimensional approach involves enormous work, patience and also requires perceptions of obvious and non-obvious aspects. Some of the others requirements are discussed here.

Listening

One of the most pressing needs of the new generation of Academic Leaders is to revive the lost art of listening. People frequently hear to respond, even before the sentence is complete. This must change. Fast and authoritative communication may not always solve the problem. It may generate a new problem. The key is to ensure that communication turns out into a dialogue not a monologue.

Styles

The future academic leaders need to adapt formal/informal communication styles based on the situation. For example, speaking in Executive Council meetings would be much different than speaking with a group of young school kids. Convey the message with clarity, brevity and avoid verbose

nature of communication. Speaking a lot does not mean getting a lot of attention. Perfection can come only by practice. When representing an organization, it would be professional to speak in third person than first person.

Distractions

There is a strong need to eliminate distractions during meetings e.g., phone calls, text messages, side talk and so on. Multi thinking than multi-tasking is needed in serious brainstorming discussions. When urgent calls or exigencies arrive during meeting, it would be appropriate to move out of the meeting room to take the call or solve the problem.

Reinforcement

A number of aspiring academic leaders may be focusing on work than network. However network is most important for academic leaders who need to constantly work beyond their groups or labs. The need is to constantly keep the information updated and know what's going on in an organization. Academic leaders must engage people e.g., town hall meetings to discuss goals, milestones and roadmap.

Diversity

An academic leader may need to work towards perfecting the art of communication in a classroom, group discussions, academic events, publications, media and so on. At times, handling the media can be most challenging, as the flow of conversation, cross examination, interpretations and distractions can be unpredictable and leading to unexpected issues the run-time. In particular the live events demand nerves of steel, indepth knowledge and absolute clarity.

Choke Points

Sometimes, in the public meetings, there may be issues or queries that an academic leader has no clue about. Such situations often choke the communication and generate an adverse image. Academic leaders need to be professionally trained to handle all kinds of situations, from positive to negative. If the answer is not immediately available, one may use expressions like: "*Thank you. It's a very interesting point, We need to discuss it in detail'*. If somebody criticizes or uses a rude language, one needs to calmly handle the situation without

showing signs of emotional turbulence. It is fine to say "*Thank you for raising this important issue. I think it is a new perspective that demands future deliberations*".

Body language

It is said that a major impact of communication comes from nonverbal clues. An aggressive posture, arched eye brows and a raised temper do not make a great communication. Going for a discussion is not equal to going for a war ! A pleasant face, a gentle smile and a soft tone may send the right message. Irrespective of the situation, it is important not to lose control over communication, continue to express a genuine smile that conveys warmth, trust and responsibility.

At the end of the day, communication is about getting an idea effectively across and importing best ideas into one's system. The future generation of academic leaders would need to tone down the decibels, stay humble, confident and gracious, irrespective of the situation. Keep asking and acting on the feedback, continue to build the trust among colleagues and ensure that people feel inspired by mere presence of the academic leader.

The future Academic leaders may need to pay a close attention to the following novel areas of academic leadership.

The Academic Space

The group of faculty, academic administrators, non-teaching staff, students, parents and alumni. It is not about managing people. It is about managing and pushing the envelope of mind that soaks up influences every moment. The key is to listen to their requirements, brainstorm, make actionable plans and keep communication open and active. Though expectations, challenges and constrains may be unique at various levels, the underlying connective tissue is a deep concern that makes leadership a position of responsibility more than power i.e., the power of leadership is in empowering the people.

The Funding Space

Starting a University may be easy. However, reaching a steady state of financial stability is challenging. One has to look beyond foundation funding, generate internal receipts and create more funding channels. It is a common observation that

one source of funding (e.g., government / endowment / charity) generally tends to dominate the revenue source for a long time. Organisations age and burn out sets in, if new sources do not replenish the lost funds. In future, the models of running academic institutions are changing. In this context one needs be always on the move to look for new ideas, funding avenues and people who can sustain the momentum. Fundraising for education through incubation, commercialization and events may be become a norm in future.

A much less discussed space in an organization is the world beyond the organization itself e.g.,how people perceive the institution? How to enhance the image of the organization beyond the known nodes of interaction. In this context, it is important to engage media, publish accomplishments and future plans. It is important to part of policy making bodies who review the space across the nation. It is also important to build a team of 'behind the scene influencers' who transmit the right message and troubleshoot at the times of need.

Despite a lot of planning and care, sometimes things may still spiral out of control. Our future academic leaders must be trained to expect and enjoy uncertainty like Heisenberg! Uncertainty is one of the most well-known drivers of stress. With the right team, the right environment and the right commitment in place, one can easily ride over uncertain situations, achieve incredible progress and build a vibrant academic ecosystem.

Given their high energy levels, speed, connectivity and the age factor, India is at a unique advantage to prepare the next generation of academic leaders who are comfortable both locally and globally. They need to have a clear vision, balance their short-term and long-term lenses, demonstrate resilience to implement the vision despite hurdles, acquire the right breadth and depth with a strong strategic compass. Our nation needs to groom academic leaders who can handle the world that looks increasingly volatile, uncertain, complex and ambiguous.

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innovative models have not been experimented with in the higher education sector. Philanthropic institutions/education endowments/crowd funds have generally been the alternative sources that are usually approached for funding library or specific capital equipment/laboratories that may be required from time to time. If we accept that income inequalities are rising steadily in many nations, then it may be necessary to approach the philanthropic institutions with a longer-term strategic focus. Of late, we have seen growing interest of private equity funds in the education sector. The ESG or the Environment, Social and Governance funds that focus on these aspects would find the higher education sector suitable and fit-for-purpose. Wherever public interest is seen to be served well and opportunities for easy entry and exit are present, funds are likely to flow in seamlessly. Hence, HE institutions would have to have strong finance departments which could strategically approach these investors. Collaborations with top-ranked foreign universities could aid this process. This might appear like a distant goal but at least the readiness needed for such a cultural change will

need to be initiated and cultivated gradually over a period of time.

Concluding Observations - Creating Agile Institutions

The internal culture of every HE institution will have to consciously promote more risk-taking in all spheres – financing, courses and students. Accreditations already require that HE institutions increase the proportion of international students across all programs. That will happen when these institutions offer newer courses that address the needs of international students. This requires stepping forward and meeting prospective students through a variety of means and designing new curriculum or re-designing existing ones to cater to their requirements. There is lot of investment that will be needed to make our institutions agile along the entire value chain. This cultural change in institutions that includes administration will, in a large measure, determine the success of the New Education Policy.

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National Education Policy–2020: A Magna Carta for 21st Century Higher Education

Harshit Mishra*

Education has been seen as a core necessity of individuals, social groups, nations and human society. The modern world views it as a basic human right. Since the formation of the Indian Republic, most landmark committees or commissions on education have unequivocally underscored the idea of education for all but in a vast, populous and diverse country like India having staggering socio-economic differentials, the execution of policy has always been a challenge.

The last National Policy on Education was created in 1986. During these 34 years, the world has changed in unprecedented ways. Revolutionary alterations in the world's political economy, fuelled by technological developments, have significantly contributed to the dismantling of the barriers of gender, class, caste, culture, geographical distance, and so forth. All this has created a strong sense of aspiration and hope among the people. Rapid economic developments after 1991, the year when India opened economically, have triggered a high demand for knowledge and specialised skills. The National Education Policy (NEP) -2020, released on 29 July 2020, is an ambitious document. With an eye on the future, it speaks to all aspects of education during our times. A distinctive feature of higher education is that it produces knowledge resources through which all education takes place, resources used by society to chart out its progress over time. Recognising this, the policy envisions a 'complete overhaul' of the higher education system.

Some of the major problems highlighted by the NEP pertains to 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 teacher and institutional autonomy;
- Lesser emphasis on research at most universities

and colleges, and lack of competitive peer-reviewed research funding across disciplines;
- An ineffective regulatory system; and
- Large affiliating universities resulting in low standards of undergraduate education.

NEP also envisions a complete overhaul and re-energising of the higher education system to overcome these challenges and thereby deliver high-quality higher education, with equity and inclusion. Some of them are as under:

- Moving towards a higher educational system consisting of large, multidisciplinary universities and colleges, with at least one in or near every district, and with more HEIs across India that offer medium of instruction or programmes in local/Indian languages;
- Moving towards a more multidisciplinary undergraduate education;
- Establishment of a National Research Foundation to fund outstanding peer-reviewed research and to actively seed research in universities and colleges;
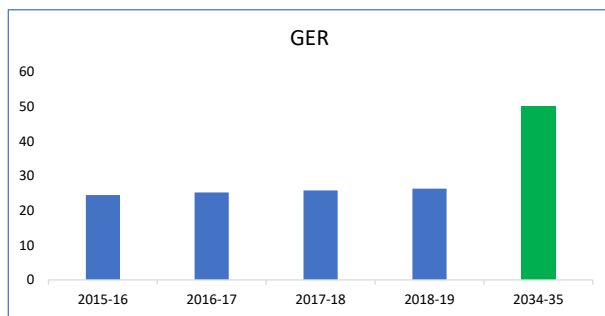- "Light but tight" regulation by a single regulator for higher education.

Big is Vital

The main thrust of the policy is to end the fragmentation of higher education by transforming higher education institutions into large multidisciplinary universities, colleges, and HEI clusters/Knowledge Hubs, each of which will aim to have 3,000 or more students. This would help build vibrant communities of scholars and peers, break down harmful silos, enable students to become well-rounded across disciplines. By 2030, at least one large multidisciplinary HEI will be established in or near every district. The aim will be to increase the Gross Enrolment Ratio (GER) in higher education including vocational education from 26.3 per cent (2018) to 50 per cent by 2035.

Why Consolidation

By the way of consolidation, usability of the all types resources (financial, human, land, physical etc.) will be enhanced. The ancient Indian universities Takshashila, Nalanda, Vallabhi, and Vikramshila, which had thousands of students from India and the world

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(Source: AISHE)

studying in vibrant multidisciplinary environments, amply demonstrated the type of great success that large multidisciplinary research and teaching universities could bring. India urgently needs to bring back this great Indian tradition to create well-rounded and innovative individuals.

Many factors favour the consolidation of universities. The most significant among them is quality education. National Assessment & Accreditation Council (NAAC) could so far accredit only 539 universities (54%) out of total 993 universities and 11,343 colleges (28%) out of total 39,931 colleges (as on 31st March 2018). The only way to control quality is rigorous assessment & assured progress accordingly on the weaknesses highlighted by the assessing agency in a time bound manner otherwise must be provisioned for mandatory & transparent punitive action.

NEP therefore, categorizes universities into three categories: the universities those place greater emphasis on research i.e., Research-intensive Universities (RUs), those place greater emphasis on teaching but still conduct significant research i.e. Teaching-intensive Universities (TUs) and an Autonomous degree-granting College (AC) will refer to a large multidisciplinary institution of higher learning that grants undergraduate degrees and is primarily focused on undergraduate teaching. HEIs will have the autonomy and freedom to move gradually from one category to another, based on their plans, actions, and effectiveness. These consolidated colleges will have at least three thousand or more students.

Multidisciplinary Education: A Much Awaited Reform

India has a long tradition of multidisciplinary learning from universities such as Takshashila and Nalanda. The very idea that all branches of creative human endeavour, including mathematics, science, vocational subjects, professional subjects, and soft skills should be considered 'Art', has distinctly Indian origins. This notion of a 'knowledge of many arts' or what in modern times is often called the 'liberal arts' (i.e., a liberal notion of the arts) must be brought back to Indian education, as it is exactly the kind of education that will be required for the 21st century.

Multidisciplinarity is the key. The decision to do away with the adamantine walls between different disciplines and the provision of freedom to exit and enter courses, as these will be credit based, will truly liberate learners. The policy grants them freedom to choose what to learn, how to learn and when to learn. Now, one can opt to study Sanskrit along with Mathematics or Music with Physics. The earlier segregation of streams, rather regimented, did not allow for any formal or institutional interface between the sciences, the social sciences and the humanities. This did not allow for a wholesome development of individuals. The NEP recommends to integrate engineering courses, at institutions such as Indian Institute of Technology (IIT) with the arts and the humanities in order to move towards holistic and multidisciplinary education.

There have been repeated calls for multidisciplinary research universities by leading scientists, including the committee led by Professor Yash Pal. Some are already doing this. For instance, at Azim Premji University (APU), undergraduates can major in, physics or biology or economics or humanities and opt for minors from other discipline or across many other fields. Subjects for minors include education studies, data sciences and development studies. At Shiv Nadar University (SNU), all undergraduate students have the flexibility to choose multiple university-wide electives.

The University Grants Commission (UGC) had also earlier directed universities to adopt the Choice Based Credit System (CBCS) aimed at promoting interdisciplinary study and allowing students to choose their own subject combinations. The four-year undergraduate programme (FYUP) introduced at DU was also a major reform that aimed to encourage interdisciplinary education but had to be rolled back.
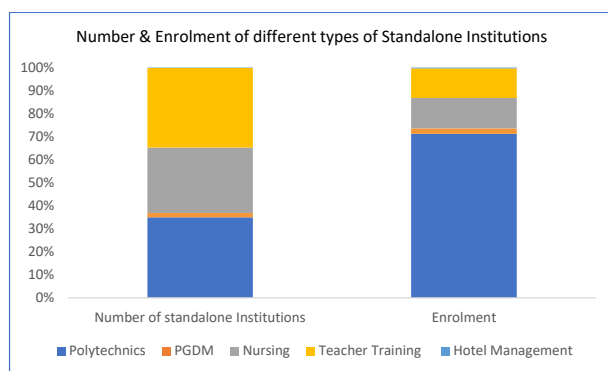
Now NEP recommends that large multidisci-plinary universities and colleges will facilitate the move towards high-quality holistic and multidisciplinary education. This will create tremendous emphasis on communication, discussion, debate, research, and opportunities for cross-

disciplinary and interdisciplinary thinking. For example, a civil engineer from IIT can have the knowledge regarding the technicalities about a big dam project only, he would be unaware about the social & environmental issues pertaining to the dam but if the same engineer is having the knowledge of environment social sciences he then, must be aware about the environmental and displacement related issues. That is how multidisciplinary works.

NEP also recommends that all stand-alone Teacher Education Institutions will be required to convert to multidisciplinary institutions by 2030, since they will have to offer the 4-year integrated teacher preparation programme (Figure-2). The 4-year integrated B.Ed. offered by such multidisciplinary HEIs will, by 2030, become the minimal degree qualification for school teachers.

Figure-2 Number and Types of Standalone Institutions

Number & Enrolment of different types of Standalone Institutions

■ Polytechnics ■ PGDM ■ Nursing ■ Teacher Training ■ Hotel Management

(Source: AISHE)

This may be termed as a master-stroke of the NEP and has a widespread range of effect as presently, Teacher Education is in complete chaos. Standalone self-financed B.Ed. colleges have become the B.Ed. degree granting shops. The Teacher-Education regulator National Council of Teacher Education (NCTE) which is supposed to cure the disease, has itself become the central cancerous chronic ailment, spreading infections to everywhere. By repealing the NCTE Act, 1993 and by proposing Higher Education Commission of India (HECI), an overarching regulator, by subsuming all regulators in to it including UGC, AICTE and NCTE, the policy has tried its best to establish a ray of hope in the otherwise dark tunnel of regulators in the country.
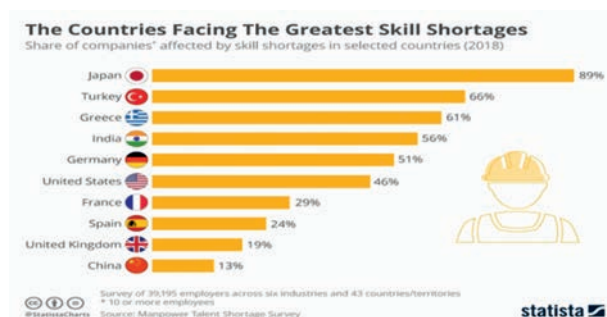
Employment Vs Employability: India's Dual Challenges

Most of the young Indians worry about the employment opportunities in the country in the Covid and post-Covid era. According to the World Bank, over 30% of Indians between the ages of 15-29 are NEETs (not in education, employment or training). In 2016, National Skill Development Corporation (NSDC) trained more than 5.5 lakhs workers, only 12% of these trainees found jobs. The government has two big challenges ahead: India needs to create some 10-12 million jobs a year. The models of job creation that have worked in the past, will not work in future. Until the turn of the century, jobs were created in capital-intensive sectors. Investment in manufacturing, mining, power plants etc has created jobs before. The public sector banks have been large employers. Automation is making that opportunity disappear. Many of the jobs that have disappeared have been blue collared jobs. A good case in point is the Hyundai plant in Chennai that churned out a car every 72 seconds last year. 500 robots are deployed along with the 8,500 workers. The robots do not take days off and the employers do not need to worry about robot unions. The fact to be kept in mind is that the top five companies of the world (Apple, Alphabet, Microsoft, Amazon, Facebook) are tech companies. Their combined market value stands at $3.5 trillion. The entire stock market in India stands at $2.3 trillion. Means, the majority of jobs in future will be Tech-jobs.

As per India Skills Report 2019-20, only 46.21 % students were found employable or ready to take up jobs in 2019, compared with 33 per cent in 2014, and 47.38 per cent in 2018. As per Centre for Monitoring Indian Economy (CMIE) unemployment data, unemployment rate was as high as 22.89% (May, 2020) due to Covid crisis to now somewhat stabilize at 7.65 % (Aug, 2020). So, on one hand, the country has 7.65% unemployed youths, on the other hand only 46.21% of the youths are employable. Also, 56% of companies have been affected by skill shortage in the country (figure-3).

Figure 3 Countries Facing Skill Shortage

The Countries Facing The Greatest Skill Shortages
Share of companies' affected by skill shortages in selected countries (2018)

Country	%
Japan	89%
Turkey	66%
Greece	61%
India	56%
Germany	51%
United States	46%
France	29%
Spain	24%
United Kingdom	19%
China	13%

Survey of 39,195 employers across six industries and 43 countries/territories
* 10 or more employees
@StatistaCharts Source: Manpower Talent Shortage Survey

statista

According to the Manpower Talent Shortage Survey-2018, rapid globalization and technological change have shaped the world's job market and

skill shortages have become a growing problem for employers(Figure-2). The scale of the problem varies hugely between countries and it is most pronounced in Asia. Japan was the country most severely affected, with 89 percent of companies affected with the problem. China improved their supply of skilled workers significantly since 2014, with its rate dropping from 24 percent to 13 percent. India also improved its performance as rate is dropping from 64% (2014) to 56% (2018). Figure-4 is showing 2015 Skill Gap analysis, expected shortfall in industry in 2022. Though the conditions has improved since 2015 as per India Skills Report 2019-20, but the projection may provide an approximation regarding the probable skill gap in 2022 (Figure-4).

Figure 4 : Skill Gap Analysis

Bottlenecks in Employability

Major bottlenecks in Employability are discussed here.

- *Low Coverage*

  One of the major reasons for India`s Employment Vs. Employability, a double edge sword syndrome, has been a very small percentage of the Indian workforce in the age group of 19–24 (less than 5%) received formal Vocational Education whereas in countries such as the USA the number is 52%, in Germany 75%, and South Korea it is as high as 96%. These numbers only underline the urgency of the need to hasten the spread of vocational education in India.

- *The Demand-Supply Mismatch*

  The current Vocational programs are largely supply-driven and still lack of relevant training for available jobs. There is a need to improve links between schools and the industry to minimize this mismatch. A divergence between the skills that the population possesses and skills required by industry is a major cause of low employability among Indian youth.

- *Poor Perception And Public Mindset*

  Many Indian parents want their children to pursue a clerical job or be an office assistant, not realizing that a technician can earn more than these jobs. In countries like India Vocational Education (VE) has always been considered by the public and parents as the career choice for the less academically-qualified with the impression that VE is for school drop-outs, rather than as an important strategy to train skilled workers. Too much attention and resources are given to 'academic' rather than vocational education. Vocational education has focused largely on Grades 11–12 and on dropouts in Grade 8 and upwards. Students passing out from Grades 11–12 with vocational subjects often did not have well-defined pathways to continue with their chosen vocations in higher education. The admission criteria for general higher education were also not designed to provide openings to students who had vocational education qualifications, leaving them at a disadvantage relative to their compatriots from 'mainstream' or 'academic' education. This led to a complete lack of vertical mobility for students from the vocational education stream. It is perceived to be inferior to mainstream education and meant largely for students who are unable to cope with the latter.

- *Inadequate Academia-Industry Linkage*

  This results in low rates of employment due to the reason that what job providers are seeking for, are not communicated with the training sector. Besides it also affects the placement.

- *Lack of Updated Curriculum*

  An updated curriculum which is relevant to present day need of the industry is a major requirement. The curriculum should be relevant to be need of the industry.

- *Shortage of Qualified Teachers*

  Availability of good quality trained and qualified teachers and trainers is an important problem. Poor recruitment process of Governments is responsible for this.

Probable Solutions for Employment Problems as Recommended by NEP

NEP aims to overcome the social status hierarchy associated with vocational education and envisions

integration of vocational education programmes into mainstream education in all education institutions in a phased manner. Beginning with vocational exposure at early ages in middle and secondary school, quality vocational education will be integrated smoothly into higher education. It will ensure that every child learns at least one vocation and is exposed to several more.

By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education. The development of vocational capacities will go hand-in-hand with the development of 'academic' or other capacities. 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. Skill labs will also be set up and created in the schools in a hub and spoke model which will allow other schools to use the facility. 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.

Light but Tight Regulation

The mushrooming of regulatory agencies in India is one of the prime reasons for India's problems in maintaining the quality of its higher education institutions. In the National Policy on Education of 1986 and Programme of Action of 1992, it was recommended that a National Higher Education Council should be established. Unfortunately, the recommendation was ignored. The National Knowledge Commission(2006-09) again raised the issue of having an autonomous regulatory body for higher education and it recommended the establishment of the Independent Regulatory Authority for Higher Education. In 2009, the Professor Yash Pal Committee Report on Renovation and Rejuvenation of Higher Education also recommended the constitution of a National Commission by merging the then more than a dozen higher education regulatory agencies.

Regulation of higher education has been too heavy-handed for decades; too much has been attempted to be regulated with too little effect. Heavy concentrations of power within a few bodies, conflicts of interest among these bodies, and a resulting lack of accountability are the major issues Regulatory system is suffering from. To address these issues, NEP envisions the distinct functions of Regulation, Accreditation, Funding, and Academic standard setting will be performed by distinct, independent, and empowered bodies.

To ensure that the four institutional structures carrying out these four essential functions work independently yet at the same time and work in synergy towards common goals, an overarching umbrella institution, the Higher Education Commission of India (HECI) will be established. Regulation, Accreditation, Funding and Academic standard, these four structures will be set up as four independent verticals under HECI.

HECI will be a new *avatar* of UGC with a different vision, focus and powers. HECI will also have penalization powers against the institutions on violation of rules. Substandard institutions can also be closed. Governments across political hues have advocated a single higher education regulator as this can help clean up the regulatory mess in higher education, do away with overlaps and create an ecosystem conducive to nurturing institutes of excellence.

- 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, thus eliminating the duplication and disjunction of regulatory efforts by the multiple regulatory agencies that exist at the current time. NHERC will be set up to regulate in a 'light but tight' and facilitative manner, meaning that a few important matters particularly financial probity, good governance, and the full online and offline public self-disclosure of all finances, audits, procedures, infrastructure, faculty/staff, courses, and educational outcomes will be very effectively regulated.

- 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. A National Higher Education Qualification Framework (NHEQF) will be formulated by the GEC and it shall be in sync with the National Skills Qualifications Framework (NSQF) to ease the integration of vocational education into higher education.

- 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). They will play a key role in the higher education system and will be invited to be members of the GEC. These bodies, after restructuring as PSSBs, will continue to draw the curricula, lay down academic standards and coordinate between teaching, research and extension of their domain/discipline, as members of the GEC.

Flexible Entry-Exit System

The undergraduate degree will be of either 3 or 4-year duration, with multiple exit options with appropriate certifications. A certificate after completing 1 year, 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 optionsince 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.

Accordingly, there will be different designs of Master's programmes.A2year programme with the second year devoted entirely to research for those who have completed the 3-year Bachelor's degree, a 1 year Master's programme for students completing a 4-year Bachelor 's degree and also integrated 5-year UG-PG programme. Undertaking a Ph.D. shall require either a Master's degree or a 4-year Bachelor's degree with Research. The M.Phil. programme shall be discontinued.

Research & Innovation

India's research and innovation investment in terms of percentage of GDP vis-à-vis other countries of the world shows steady decline over the last decade, dropping from 0.84% in 2008 to around 0.69% of GDP in 2018 (Figure-5). In comparison, it is 2.8% in US, 2.1% in China, 4.3% in Israel, and 4.2% in South Korea. The number of researchers per lakh of the population is only 15 in India, compared to 111 in China, 423 in the United States, and 825 in Israel.

Figure 5. GDP of Different Countries on Research Innovation
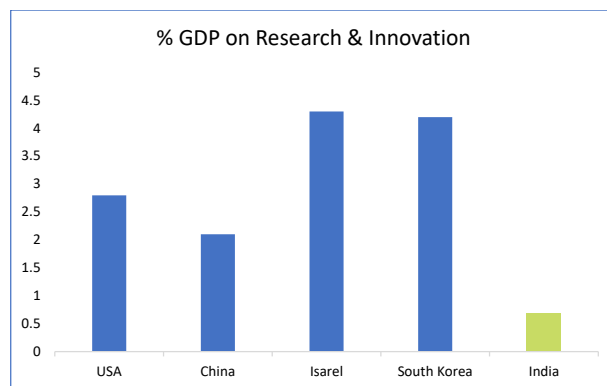
India lags in number of patents and publications produced. According to World Intellectual Property Organization (WIPO) 2017 report, 13.82 lakhs patent applications were made by China, 6.07 lakhs by USA and a mere 0.47 lakhs by India, of which approximately 68% were made by non-resident Indians.

A report by US National Science Foundation showed that the share of scientific publication of USA is 17.8%, China is 18.6% and India is 4.8% in 2016. The quality of these publications in India has been lower than the global standard. Though in terms of total publication India stands at 5th position in the world, in terms of citation impact, we are at much lower at 11th position.

None of India's Institution is amongst the top 100 research and innovation institutions in the world. Key sectors of Indian economy such as defense, healthcare, transportation, aviation, manufacturing of electronic and communication devices are critically dependent upon import of primary and secondary goods from various parts of the world to cater to indigenous demand. In the defence sector, India has been the world's second largest importer of major arms in 2015-19 and accounted for 9.2% of the global total import, according to the Stockholm International Peace Research Institute (SIPRI) year book-2020. 70% of the India's defence hardware is imported causing great outflow of India's hard-earned foreign exchange. China, on the other hand has emerged as a major arms exporter.

Major Impediments to Research and Innovation are:

The absence of an integrated and comprehensive approach towards funding R&I initiatives and monitoring of the outcomes.

Lack of cognitive or critical thinking in large sections of our students.

Lack of research culture and mindset, limited funding, and lack of research infrastructure in most educational institutions further compounds the problem.

Duplication of effort and funding by multiple Ministries and Department of the Government of India with dedicated R&D institutions or funds for research in their respective domain.

NEP therefore, envisions comprehensive approach to transforming the quality and quantity of research in India. This includes definitive shifts in school education to a more play and discovery- based style of learning with emphasis on the scientific method and critical thinking. To build in a synergistic manner and to thereby truly grow and catalyse quality research in the nation, NEP envisions the establishment of a National Research Foundation (NRF).

The NRF will provide a reliable base of merit-based but equitable peer-reviewed research funding, helping to develop a culture of research in the country. The NRF will competitively fund research in all disciplines. NRF will operate with a unique Hub and Spoke model, with the National Mission Projects (NMPs) as Hubs and a network of interconnected Institution's Innovation and Research councils (IIRCs) located across identified Higher Educational Institutions (HEIs) as Spokes. The NMPs will be 25 and each NMP will be attached to 80 IIRCs within its proximity. Thus, a total of 2000 IIRCs will be established within 25 NMPs.

Public Expenditure

India's public education spending has not been enough to either attract foreign talent to the country or develop indigenous top brains, a recent World Talent ranking report 2019 by IMD showed. India spends less on education per student, and the quality of education also remains dismal in the country according to the IMD report. This has resulted in a massive dip in India's world talent ranking and the country is just ahead of four other nations in attracting and retaining top talent. India was ranked 59th among 63 countries in the 2019

IMD World Talent Ranking released by International Institute for Management Development, a Switzerland based business school. In 2019, India slipped by 6 places as compared to 53rd rank in 2018 edition of this global annual list. Switzerland topped the list. India is also lagging behind fellow BRICS countries – China ranked 42nd, Russia (47th) and South Africa (50th). This is where country stands globally when as per Economic survey 2019-20, combined (Centre & States) expenditure on education has been continuously increasing as given in Figure 6.

Figure 6: Expenditure on Education
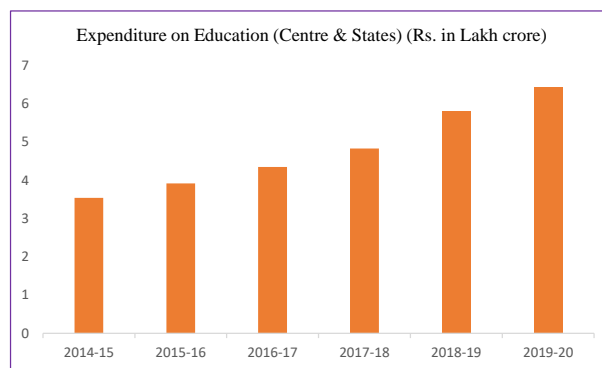
(Source: Economic survey 2019-20)

NEP also highlights that public expenditure on education in India has not come close to the recommended level of 6% of GDP, as envisaged by the 1968 Policy, reiterated in the NEP-1986 and further reaffirmed in the Plan of action (PoA)-1992. The current public (Union& States Governments) expenditure on education in India has been around 4.43% of GDP and only around 10% of the total Government spending is towards education. These numbers are far smaller than most developed and developing countries. The policy recommends to increase the public investment in Education sector to reach 6% of GDP at the earliest.

Way Forward

Padma Vibhushan Prof. Krishnaswamy Kasturirangan led National Education Policy drafting panel has accomplished its job and handed over a well drafted National Education Policy document to the Country. The Cabinet has accorded approval to the Policy and implementation has actually started with the rechristening of MHRD as Ministry of Education (MoE). The Policy contains rigorously thoughtful interventions like consolidation, multidisciplinary, flexibility, autonomy and enhanced focus on research & innovation, all of them have been widely recognized as the principles of highest quality across the higher

education fraternity globally. The policy provides a time frame of 20 years subject to the various recommendations. The real outcome of this entire process will definitely depend upon the implementation of the policy in letter and sprit by Union and States Government in best collaborative manner. Now, Governments (Centre & States) would come forward with the roadmaps of implementation, since education being a subject of concurrent list, the Centre-States team-India & cooperative federalism spirit will a play prominent role in the policy-implementation, that trulyought to be the final destination of all the recommendations, for a lot of them, the Country has been waiting since long.

Note

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any agency of Government of India.

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Role of National Education Policy–2020 in Human Resource Development: Gap between Recommendations and Implementation

Annapoorna* and Geetanjali Diwani**

The New Education policy emphasis on the global education development agenda reflected in the Goal 4 (SDG 4) of the 2030 Agenda for Sustainable Development-adopted by India in 2015. Human being is a very exquisite resource to be taken with utmost care coupled with vitality. In the pursuit of converting human resource into human capital, most important is dissemination of right knowledge to right person. Each individual's growth presents a different range of problems and requirements, therefore the catalytic action of Education in this multifaceted and vibrant growth process needs to be planned methodically and implemented with great compassion.

The first National Policy of Education was announced in 1968 based on reports and recommendations of Education Commission (Kothari Commission, 1964-1966) with the emphasis on radical restructuring and equal opportunity to access education. Next National Policy on Education was announced in May, 1986 with the aim of removing disparities, child-centric approach, open university, rural university to name a few. It was further revised in 1992 with modifications based on recommendations of Ramamurthy Committee set up in 1990. In 2009, Yashpal Committee has presented a report to advice on the renovation and rejuvenation of higher education. Report of the Committee for Evolution of the New Education Policy–2016 suggested revamp of education sector to reap the advantage of huge demographic dividend.

The present New Education Policy–2020 is the first education policy of the 21st century and aims to address the many growing developmental imperatives of our country. This policy proposes the revision and revamping of all aspects of education structure, including its regulations and governance, including SDG 4, while building upon India's Traditions and value systems.

All the earlier policies have stressed on equity, quality and access and fulfilment of these objectives require huge public funding. But it was observed that there was always a gap between recommendations and implementations especially in case of public expenditure on education which has serious implications on human resource development of the country.

As per the Report of the Committee for Evolution of the New Education Policy, 2016 the earlier National Education Policies of 1968, and 1986 as modified in 1992, had recommended a norm of 6% of GDP as the minimum expenditure on education. The expenditure by Education Departments of the Centre and States has never ascended above 4.3% of the GDP, and is currently around 3.5%. The basic objective of this study is to understand the extent of gap between the recommendations and implementation in case of public expenditure on education and make suitable recommendations keeping the New Education Policy–2020 implementation.

Literature Review

Lucas (1988) in his Endogenous Growth Theory regarded Human Capital as a factor of Production and Knowledge which is the centrifugal force to accelerate economic growth. Sustaining an economic and social progress in a nation requires Human Capital. Blundell, Dearden, Meghir and Sianesi (1990) gave more direct evidence on the importance of human capital for national productivity growth by growth regressions, where the education measures have been found to be significant explanatory variables, with higher education being the most relevant education variable for more developed countries. Becker, Murphy and Tamura (1990) discussed that education expenditure since 1960 has been an important determinant of the subsequent growth in per capita incomes for around hundred countries

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since 1960. Douglass (2010) found that educational achievement of a nation's population is an important factor for greater national productivity and global competitiveness. Dukkipati (2010) quoted that for India to maintain its economic growth in a global marketplace fuelled by the knowledge economy, it needs to nearly double its number of students in higher education by 2012. Without proper access to education the country's demographic dividend could turn into a demographic disaster. He proposed that the Government of India expenditure on education and more specifically higher education does not correspond with the country's economic growth. The author points out that in 1950, higher education expenditure as a proportion of GNP was 0.19 per cent and rose to 1% in 1980; however by the mid-1990s it fell to 0.4%. Musai et al. (2011) revealed that the elasticity of the production of human capital, physical capital and labor force are 0.28, 0.696 and 0.044, respectively while studied the relationship between education and economic growth of 79 countries. According to their study, increase in education spending, physical capital and labor force will increase the economic growth of a country.

Financing higher education has appealed serious responsiveness of policy makers and educational scholars as higher education system is facing financial crux (Varghese 2009, Rani 2014) in recent years. It is important to underline the fact here, that from the Second to the Sixth Five-Year Plan period, higher education grew reasonably well with increasing attention coupled with rising allocations of public resources. But from the Seventh Five-Year Plan onwards, higher education did not receive the attention it deserved. Gupta & Gupta (2012) uphold Dukkipati's contention about the Government's desertion of research. The authors recorded that the Government expenditure on research and development in science and technology as percentage of GDP was 0.8% during 2005-06 in India. By way of comparison, the equivalent figure for other countries like Israel, Sweden, Japan, US and China were 5%, 4%, 3%, 2.77% and 1.5% respectively. Bhatia and Dash (2013) observed that Human Development Index of India used to be the lowest among all the countries. India spent the lowest on education in the year 2005 (3.7% of GDP). They suggested that Government can also work towards provision of free education to all till graduation which indicates a huge public expenditure on education.

Shi Mei-ling (2014) showed through the empirical regression equation that the income elasticity of personal education investment is 1.074, the income elasticity of health investment is 1.539, are more than 1 which means that educating people of the country can greatly promote the economic growth.

Aziz, Khan and Aziz (2008) indicated that education expenditures do affect growth positively. But inequalities in access to higher education by gender, caste and religion increased and inter-institutional variations in quality of higher education became strikingly visible (Tilak 2007).

Ranis et al. (2000) estimated the effects of economic growth as the result of human capital development and the effects of human capital development as the result of economic growth. Outcomes showed that economic growth had constructive and strong bearing on human capital development. Results also showed that substantial and robust GDP per capita income growth leads to higher human capital development.

Here, it is observed that national education policies were framed and revised from time to time but there is always a shortfall in implementation especially with regards to expenditure. Various studies in this field have shown a positive relationship between education expenditure and human resource development which in turn affects economic growth. Thus, in this background, it is important to understand the trends in policy recommendation and implementation of education expenditure and analyse the relationship between education expenditure and human resource development.

Purpose of the Study

Education policies provide a comprehensive framework to ensure the development of education in the country by setting a broad direction with the expectation from the governments to follow it. Successive governments have pledged to increase spending on education to 6 per cent of GDP as it was recommended by National Education Policies, but actual spending has hung around 4 per cent only. Shortage of fund could be a potential reason

for failure of the governments to bring out a proper programme of action and implementation.

If we seriously increase spending on education and bring in structural reforms, we can move up from the present HDI rankings of 131 among 188 countries in terms of human development according to the Human Resource Development Report (2020) released by United Nations Development Programme. The purpose of the study is to analyse the relationship between the present New Education Policy the expenditure on education and human resource development in India.

Data and Methodology

The descriptive research method is used research method in education. It helps to explain educational phenomena in terms of the conditions or relationships that exists, opinion that are held by the students, teachers, parents and expert, processes that are going on, effects that are evident or trends that are developing. We have used descriptive method study, to analyze the trends in the education expenditure in the public budget and the relationship that exists the New Education Policy, education expenditure and human resource development.

Data Description

Secondary data provided by the authentic and reliable sources of Government agencies like MHRD, NSS, CSO, Union Budgets and various issues of Economic survey, Human development reports released by UNDP are used to analyse the current situation. Time series data of education expenditure as percentage of GDP from 1950-2018 is used to analyse the gap between recommended expenditure on education by National education policies and expenditure actually incurred on education by successive governments. The time series data of GDP growth rate is used to examine the causal relationship between education expenditure as percentage of GDP and GDP growth rate.

Objectives

1. To analyze the gap in education expenditure recommended by National Education Policies and implemented through public budget.

2. To analyze the causal relationship between education expenditure as percentage of GDP and GDP growth rate of India.

3. To examine the impact of education expenditure on the implementation of the Education policy 2020.

Hypothesis

- H_1: There is bi-directional relationship between education expenditure as percentage of GDP and GDP growth rate of India.

- H_2: There is positive relationship between education expenditure and human resource development.

Empirical Methodology

Granger Causality test is used to analyze the causal relationship between education expenditure and GDP of India and multiple regressions is used to examine the relationship between education expenditure and human resource development.

Gap Analysis of Recommended and Actual Education Expenditure

The real wealth of a nation lies in "human resources" and the importance of education in development of human resource. Education expenditure should be regarded as a necessity everywhere, and especially in developing countries, since it is a vital investment for the future. Education as a sector which comes in concurrent list has been given due importance in various plan documents. The Government of India has formulated National Policy on Education in 1968 and 1986. The Kothari Commission (1966) suggested initially and the National Policy on Education (1986) and Ramamurthy Committee (1991) stressed sub sequently that 6 per cent of GDP should be spent on this sector. The Delors Commission (1996) has clearly argued for increasing public spending on education. As a rule of thumb, not less than 6 per cent of GNP should be devoted to education". UNESCO and UNDP also favoured it, as a desirable level for the developing countries.

The previous education commission has suggested 6 per cent target based on the requirement of the system for next 20 years. The level of spending by the economically advanced countries like Japan, the US and the USSR as a proportion of their GNP on education and the likely trends in future was also considered in recommending 6% of GDP for education expenditure. Of the several recommendations made by the Kothari commission, 6 per cent of the GDP was accepted by the government of India. Both the

education policies resolved to increase the investment in education so as to reach a level of expenditure of 6 per cent of the national income as early as possible. But what has been the performance over the years can be understood by analysing the trends in education expenditure over the period of time.

Empirical Results and Analysis

The data for education expenditure as % of GDP is available for the time period of 1950-2013. The data is divided into 3 sets of years – First is 1950-68, the time period before the first National Policy on Education. Second is 1968-86, the time period between first and second National Policy on Education. Third is 1986-2013, the time period after the second National Policy on Education. After Independence, the key challenges were improving access and quality at all levels of education and improving literacy rates. Along with these

challenges, another major challenge was funding which was required at large scale at the early stage of development. If 6% of GDP is considered as a benchmark for ideal education expenditure for a developing nation as suggested by various commissions, it is observed that Government expenditure on education was never being sufficient enough to improve the performance of the education sector.

Before the first National Policy of Education (1968), as shown in Figure-1, expenditure incurred on education by the Government was just the 10% of the required expenditure in the year 1950, gradually increased to 20% in the year 1960 and remained around it for the next 8 years.
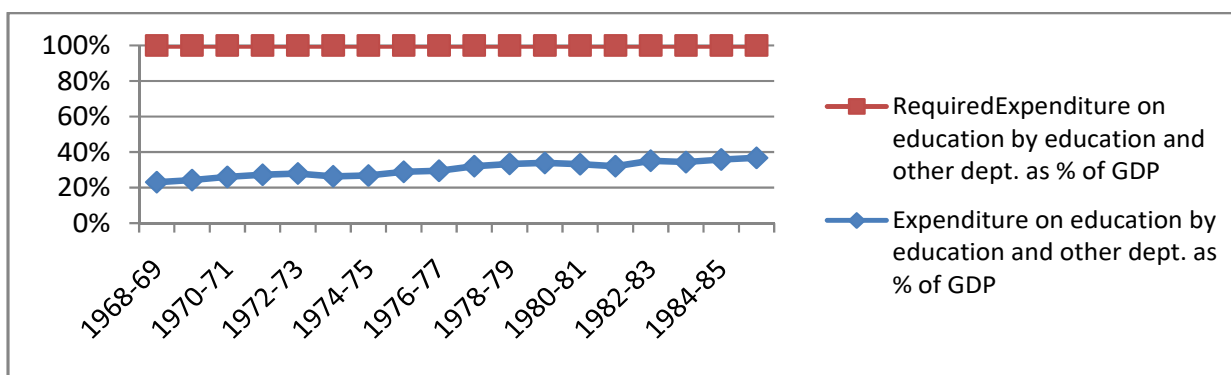
Figure-2 clearly shows that after inception of National Policy of Education in 1968, education expenditure increased gradually from 20% to almost

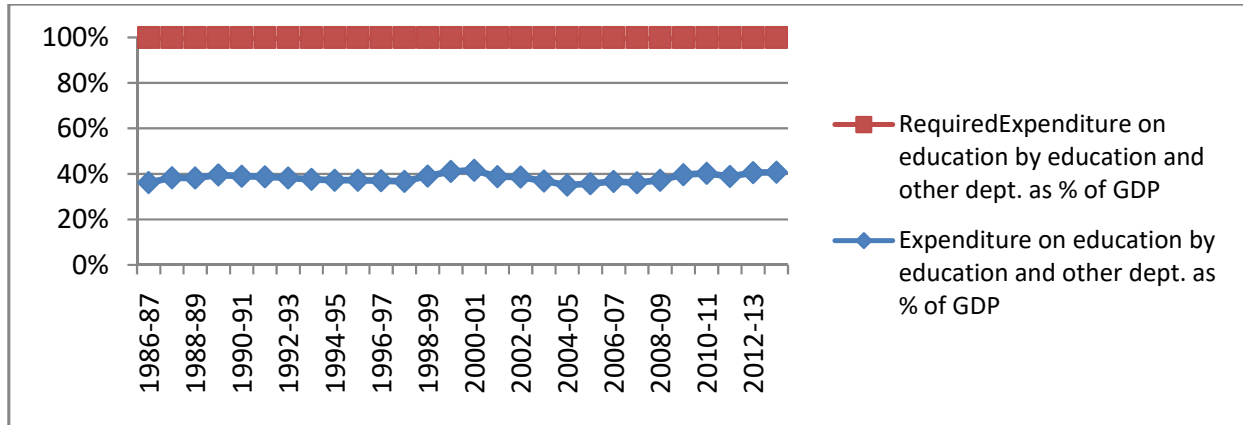**Figure-1: Education Expenditure as % of GDP in the Period of 1950-68**
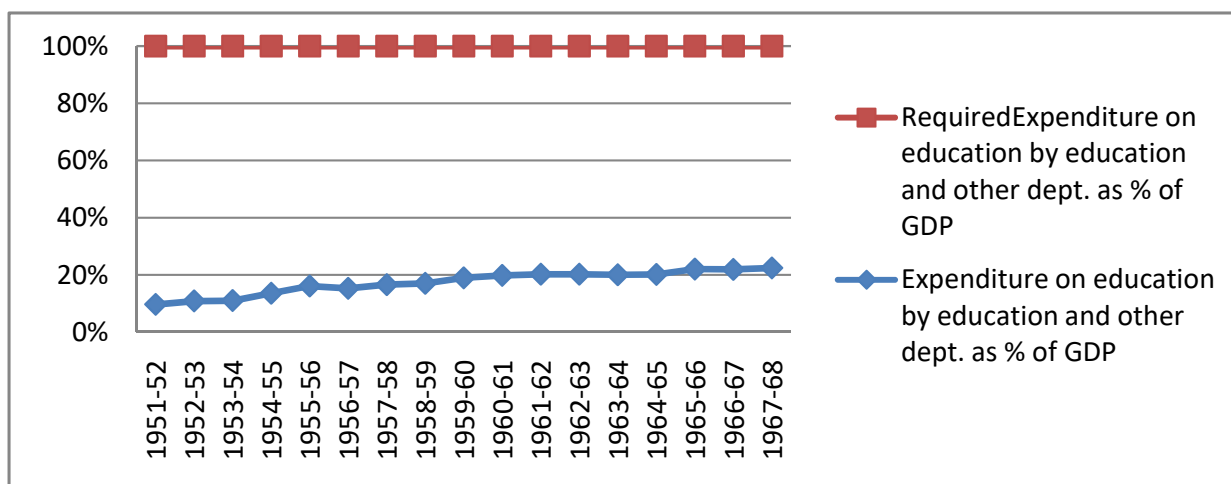
Source: MHRD

Figure-2: Education Expenditure as % of GDP in the Period of 1968-86

Source: MHRD

Figure-3. Education Expenditure as % of GDP in the Period of 1986-2013

Source: MHRD

40% of the total expenditure required at 6% of GDP in almost one and half decade until the second National Policy of Education was framed in 1986. But this increase in expenditure was not sufficient as it was still 60% less than what resolved by the National Policy of Education 1968.

Even after the revision in National Policy of Education in 1986, in which again it was resolved that education expenditure should be increased to 6% of GDP, actual expenditure incurred remained around 40% of the required expenditure till date. With the help of descriptive statistics, we can understand the data with more clarity.

Table 1 explains the basic features of data set. On an average, the education expenditure was 2.75% of GDP and the GDP growth rate was almost 5%. GDP growth rate widely ranged between-5.2 to 10.16 whereas education expenditure ranged from 0.64 to 4.28.

Standard deviation of both education expenditure and GDP growth rate are 1.08 and 3.12 respectively and clearly shows that most of the data is close to the mean. But, it is necessary to understand whether education expenditure and GDP growth rate are related to each other. In order to find whether and how strongly pairs of variables are related, technique of Correlation is used.

In Table 2, correlation coefficient for the time period of 1950-2018 shows low correlation between education expenditure and GDP growth rate. During the period of 1950-68, there is almost zero correlation between education expenditure and GDP growth rate. Even during the period after inception of first National Education policy and before the second National Education policy, correlation between the two variables is as low as 0.275. After the second National Education policy came into existence, education expenditure and GDP growth rate showed low correlation but this time it is negative. So, the overall picture is that education expenditure and GDP growth rate are hardly related with each other.

Table-2: Correlation between Education Expenditure as % of GDP & GDP Growth rate

Variables	Correlation coefficient
1950-2018	0.3065
1950-68	0.0584
1968-86	0.2751
1986-2018	-0.2393

Source: Author's Analysis

Causal Relationship between Education Expenditure as percentage of GDP and GDP growth rate of India

A **causal relation** between two events exists

Table-1: Descriptive Statistics 1950-2018

Variables	Mean	Median	Minimum	Maximum	Std. Dev.
Education Expenditure as % of GDP	2.75857	3.14000	0.640000	4.28000	1.08043
GDP Growth Rate	4.96000	5.36000	-5.20000	10.1600	3.12333

Source: Author's Analysis

if the occurrence of the first causes the other. A correlation between two variables does not imply causation. On the other hand, if there is a causal relationship between two variables, they must be correlated.

To test the causality between variables X and Y, Granger Causality Test is employed. Granger causality says if a signal X "Granger-causes" a signal Y, then preceding values of X should enclose information that helps predict Y. The test assumes that only past values of X can "cause" Y. If X fails to cause Y, X will be considered to be exogenous of Y. Similarly, if both X and Y fails to Granger cause each other, both the variables will be considered to be independent. Granger causality is thus a dominant tool which allows testing for things that was not considered important so far. Vector Auto regressions or VARS are often used to test Granger Causality. A VAR is the extension of the auto regressive (AR) model in case where there is more than one variable under study. VAR helps in finding that whether X causes Y or Y causes X. Before conducting the Granger Causality Test, it is necessary to validate the stationarity of selected variables. To check the stationarity of variables, one of the most popular unit root test, Augmented Dickey Fuller (ADF) test is employed on each variables.

Unit Root Test

To check the stationarity of the selected variables, Augmented Dickey Fuller Test is applied as it is considered as one of the most popular unit root test. Table 3 reveals the result of ADF test of selected variables in its level and first level of difference. Here, the variables are the education expenditure and GDP growth rate. But, both the variables are divided into the different time periods. At first place, we would like to examine the causal relation between two variables for the long period of 1950-2013. Then, there are other 3 periods i.e., pre policy period (1950-68), time period between first and second policy (1968-86) and post second policy period (1986-2018).The p-value is calculated with constant and without constant. The results of the table indicate that all the selected variables appeared to be non-stationary at level in both the situations when p-value is calculated with constant and also without constant. However, all the variables show stationarity at first level of differencing in both the cases.

A variable X Granger-causes Y if Y can be well projected using the histories of both X and Y than by using the history of Y alone. Conceptually, the causal relation is temporal if only past values of X can cause Y. X is considered to be exogenous of Y if X fails to Granger-cause Y. Variables X and Y are independent if both fail to Granger-cause the other. Granger causality is a dominant instrument, which permits us to check for things that one might otherwise take for granted.

As shown in Table 4, for the long period of 1950-2018, variables showed bidirectional causal relationship. But, when we examine the causal relation between the two variables, results depict the different pictures. In case of pre policy period, education expenditure does not Granger Cause GDP growth rate but GDP growth rate Granger Cause

Table-3: Unit Root Test of Stationary using ADF Test Results

Variables		1950-2013		1950-68		1968-1986		1986-2018	
		Expanded as % of GDP	GDP growth rate	Expanded as % of GDP	GDP growth rate	Expanded as % of GDP	GDP growth rate	Expanded as % of GDP	GDP growth rate
p-value without constant	Level of variable	0.9831	0.8632	0.9984	0.01984	0.4825	0.8523	0.765	0.4731
	First level of difference	1.419e-011	1.3e-008	0.008231	8.058e-009	0.0009653	0.0001	0.0001232	1.14e-008
p-value with constant	Level of variable	0.4935	6.412e-009	0.6796	0.0001239	0.5053	0.921	0.0006628	0.007752
	First level of difference	2.168e-008	2.582e-007	0.002484	6.47e-007	0.00107	1.733e-006	0.003455	1.14e-008

Source: Author's Analysis

education expenditure. Here, education expenditure is considered to be exogenous of GDP growth rate and the causal relation is unidirectional. In case of time period between first and second policy, both the variables are independent as both failed to Granger Cause the other. In case of post second policy period, causal relation is temporal as education expenditure Granger Cause GDP growth rate but GDP growth rate does not Granger Cause education expenditure.

New Education Policy–2020

The National Education Policy- 2020 envisions an Indian cantered education system by considering its tradition, culture, values and ethos to contribute directly to transform the country into an equitable, sustainable and vibrant knowledge society.

The objective of the currently announced NEP-2020 is to provide a multidisciplinary and interdisciplinary liberal education to every aspirant to raise the current Gross Enrolment Ratio (GER) to 50% by 2035.

Challenges in Implementation of the New Education Policy- 2020

The study is conducted with the purpose of understanding the Government's role in Human Resource Development.

According to Musgrave and Rostov's Development Model a considerable expenditure is required on education not only in early development stage, but also in the phase of high income societies because education becomes investment good due to increasing demand for skilled labour. "Skill India,

Build India" is the need of the hour which rightly hints that the dependence of nation's growth is on its human resource development. Investment in an individual to develop the skills and competency shall contribute to their employability, better remuneration and higher employment rate in the country. India being a labour abundant country has greater advantage of procuring comparative advantage in labour intensive industries. But without skilled and trained labour, advantage will just disappear.

Insufficient resource allocation from central government for education and training is making education a private good in India rather being a public good. Even education is also considered as merit good by various experts and ought to be subsidised or provided free at the point of use so that consumption does not depend primarily on the ability to pay. In India, many are still deprived of education due to inability to pay for it and that's why human development index is pretty low. Though, Indian education system is regarded as one of the largest in the world but just not sufficient as per the growing demand. Thus, education deserves public finance. The present paper concludes that there is considerably large gap between recommended and actually realised expenditure on education by the successive government and does not create impact on human resource development of India. Government role in developing human resource requires restructuring especially with regards to financing education.

The Union Budget 2021-22 the expectations for the Education sector are high. According to the NEP

Table-4: Granger Causality Results

Hypothesis	F Statistics	Probability	Observations	df
edex does not Granger Cause GDP growth (1950-2013)	4.041524	0.0061 ***	62	56
GDP growth does not Granger Cause edex (1950-2013)	1234.826	0.0739 *	62	56
edex does not Granger Cause GDP growth (1950-68)	1.434749	0.9838	18	12
GDP growth does not Granger Cause edex (1950-68)	195.0678	3.81e-012 ***	18	12
edex does not Granger Cause GDP growth (1968-86)	0.982443	0.8706	17	12
GDP growth does not Granger Cause edex (1968-86)	64.33198	0.2634	17	12
edex does not Granger Cause GDP growth (1986-2013)	2.714666	0.0858 *	27	20
GDP growth does not Granger Cause edex (1986-2013)	11.02203	0.6743	27	20

Source: Author's Analysis

Total-5: Allocation for Education Sector in the Budget from 2017 to 2021

Year	Budget Revised estimates (In Crore Rupees)	% of the total Budget Allocation
2017-18	34862.00	1.62 %
2018-19	35000.00	1.43 %
2019-20	85010.00	3.05 %
2020-21	94853.64	3.11%

2020 the implementation of the National Education Policy 2020 and the revival of the education sector require budgetary allocation in the upcoming budget 2021. To achieve the goals of the NEP 2020 the total budget allocation on the education sector should at least be minimum 5% of the total budget. But the major challenge is given the pandemic situation and the slow economic growth can the allocation of 5% be allocated to education sector.

The Education expenditure, which may develop human capital, is public good in LDCs and need Government involvement to function effectively. It can be easily observed that the total state expenditure on education in the country has hung around 3% of GDP, far below the 6% of GDP benchmark set by the Kothari Commission way back in 1968. The states and union territories have to make a sincere commitment to allocate minimum 5% of the total budget allocation to education sector. This will enhance and enrolment ratio and also improve the quality of Human Resource Development.

The National Education Policy (NEP–2020) has listed out a number of changes in the higher education system in the country. The thrust towards bringing changes is clear in the policy document. The speedy implementation of the new policy needs a very promising budget allocation in the next 5 years. Based on the our study we recommend that to achieve the changes stated in the New Education Policy the minimum allocation in every budget for the coming five years should be minimum 6% and above. But the major challenge for the present 2021 budget is the impact of pandemic on the budget and in turn the allocation to the education sector.

The trend analysis of education expenditure as % of GDP depicts that education expenditure has gradually increased. But it has not increased any time to achieve the goals and objectives as planned in the National Education Policies. The major challenge is for the NEP–2020 is, the budget allocation to achieve the goals. Based on our study we would like to state that the total budget allocation after revision, for education sector alone should be more than 6% from present 2021 budget. This should be followed by the state level budget allocation, it should also be ranging from 4 to 6% of the total revised for education sector alone only.

The present Government is already prioritising education sector in its budget allocation. As stated in the Economic Survey 201-20, the expenditure in education sector as percentage of GDP has increased from 208% in 2014-15 to 3.1% in 2019-20. This clearly shows Education is the given highest priority on the agenda of the present government is Education. To implement NEP -2020 the allocation needs to increase more that 6% of the total allocation and this should be increase for the next 5 to 10 years consecutively. Only then we will be able to achieve the goals of NEP–2020.

As rightly said, nation's development depends highly on its human development. Also, a nation's growth should be assessed not only based on its economic growth and development but also on its human resource development.

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The New National Education Policy–2020: Some Actionable Points

P B Mane* and S M Shaikh**

The New Education Policy (NEP)–2020 has been talked about a lot since its approval by the Union Cabinet of India on 29th July, 2020. The policy seems to change the complete education system scenario. The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper, and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution [1]. Reformation is always resisted and when it's the education sector it's even more severe. There are too many factors and domains involved in this field and encouraging them on a specific track is difficult. Therefore the onus of the success of NEP–2020 lies in its execution and implementation. However, the question of its successful implementation has long been debated. This article highlights the actionable points on the part of the Government, Higher Education Institute's (HEIs), and other stakeholders.

As per the NEP–2020 [1] some of the major problems faced by higher education system in India and the policy's vision to include key changes to the current system are given in the Table-1:

An attempt has been made to propose suggestions for the effective implementation of the NEP–2020. The suggestions are based on the experience of the authors in the field of engineering education.

It has been observed that the students taking admission for professional courses like engineering in particular lack critical thinking, soft skills, and problem-solving abilities. These students are good at rote learning and not clear with concepts that hinder and limit its applicability.

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- To develop holistic individuals, it is essential that an identified set of skills and values will be incorporated at each stage of learning, from pre-school to higher education (reference NEP–9.1.2); it is suggested to incorporate ethic based activities in teaching-learning at all levels right from pre-schools to universities to HEIs. The outcome of this would be the enhanced skills and values in students.

- Paragraph 11.7 of NEP–2020- in this context is suggested the mandatory inclusion of art and culture-based activities in the syllabus with appropriate credits. This would result in inculcating the Indian culture and values amongst students and also promoting Indian art forms at all levels.

- Paragraph 11.8 of NEP–2020 deals with credit-based courses and projects in the areas of community engagement and service, environmental education, and value-based education. For this, it is suggested to create awareness and conduct surveys for identifying the needs of the community and issues related to the environment. A pool of experts from industry, business, artists, crafts person, etc. in the local areas and to give project-based/case-study-based assignments/surveys for solving these issues with the help of NGOs should also be identified.

- As per point 11.12 of NEP–2020, HEIs will focus on research and innovation by setting up start-up incubation centers, technology development centers, centers in frontier areas of research, greater industry-academic linkages, and interdisciplinary research including humanities and social sciences research. It is hereby recommended to link or connect at least one local MSME industry with each educational institute. This may be accomplished with the help of organizations like CII, MCCIA, and DCC. Also, a Mentor-Mentee Scheme may be formed to guide and support the education institutes. This scheme is in place with many professional colleges but must be extended to include all HEIs.

- Paragraph 12.4 stresses the need for High-quality support centers and professional academic and career counseling to be made available to all

Table 1: Steps Proposed in NEP –2020 to Overcome the Major Problems Faced by Higher Education System

Major problems currently faced by the higher education system in India	Steps proposed in the NEP–2020 to overcome the major problems
(a) a severely fragmented higher educational ecosystem;	a) moving towards a higher educational system consisting of large, multidisciplinary universities and colleges, with at least one in or near every district, and with more HEIs across India that offer medium of instruction or programmes in local/ Indian languages;
(b) less emphasis on the development of cognitive skills and learning outcomes;	(b) Moving towards an innovative pedagogy that will have teaching learning methods such as experiential /collaborative/project based learning.
(c) a rigid separation of disciplines, with early specialization and streaming of students into narrow areas of study;	(c) moving towards faculty and institutional autonomy;
(d) limited access particularly in socio-economically disadvantaged areas, with few HEIs that teach in local languages	(d) revamping curriculum, pedagogy, assessment, and student support for enhanced student experiences;
(e) limited teacher and institutional autonomy; inadequate mechanisms for merit-based career management and progression of faculty and institutional leaders;	(e) reaffirming the integrity of faculty and institutional leadership positions through merit appointments and career progression based on contributions and achievements in teaching, research, and service;
(f) lesser emphasis on research at most universities and colleges, and lack of competitive peer reviewed research funding across disciplines	(f) establishment of a National Research Foundation to fund outstanding peer-reviewed research and to actively seed research in universities and colleges;
(g) suboptimal governance and leadership of HEIs;	(g) governance of HEIs by highly qualified independent boards having academic and administrative autonomy;
(h) an ineffective regulatory system;	(h) "light but tight" regulation by a single regulator for higher education;
(j) Large affiliating universities resulting in low standards of undergraduate education.	(i) increased access, equity, and inclusion through a range of measures, including greater opportunities for outstanding public education; scholarships by private/philanthropic universities for disadvantaged and underprivileged students; online education, and Open Distance Learning (ODL); and all infrastructure and learning materials accessible and available to learners with disabilities.

students, as well as counselors to ensure physical, psychological, and emotional wellbeing. To cater to this need, it is advised to establish counseling cells in all HEI and conducting a psychometric test for all new entrants in higher education to make them aware of their strengths and weaknesses. This shall be more effective if there is a mandatory appointment of a psychologist in all HEI. The psychologist shall take effective measures by gauging the students in the institute.

- As per point 12.7, India will be promoted as a global study destination providing premium education at affordable costs – to achieve this, one must first identify Premium Indian universities that can compete with global universities. Also, the Ministry of foreign affairs must provide the

list of countries with whom India has signed MoUs for education. No doubt then, the outcome of an increase in foreign revenue generation will be achieved as more foreign students will take admissions in Indian universities.

- The backbone of the education system is the teachers or faculty members, therefore as per point no.13.5 incentivizing the excellence of faculty is very much needed to keep the faculties motivated and give their best. Excellence should be further incentivized through appropriate rewards, promotions, recognitions, and movement into institutional leadership. One of the ways of recommended would be by making performance-based appraisals mandatory to all the private institutes and also defining policies for punitive action against teachers not performing their duties. Also at present, professional college teachers do not undergo any formal teacher training before joining in at the level of assistant professor. Although of late it has been declared by AICTE that professional college teachers having less than 5 years' experience need to mandatorily take up an 8-week teacher training module by NITTTR-Kolkata. However, while in the job this type of training becomes difficult and is not given enough time and attention as is desired. Thus, it is recommended that such training be made mandatory for all aspiring to work as teachers in professional colleges.

- This policy aims to overcome the social status hierarchy associated with vocational education as per paragraph number 16.4. It should be mandatory for all professional colleges to start vocational courses so that these schools get benefitted from the infrastructure made available by professional colleges.

- For transforming the Regulatory System of Higher Education (para 18.4) it is recommended to establish a single National Accreditation Council (NAC) so that Institutes can get them self-accredited from any agencies appointed by NAC [Either NAAC or NBA].

- One of the important points in the NEP–2020 is reviving agricultural education with allied disciplines (paragraph 20.3). It is advised to set up agriculture technology cells in all Professional HEI to boost agriculture and also agro-economy.

- This pandemic situation and technological innovations have taught us that integrating

technology with education is inevitable. Paragraph 23.3 highlights its importance. This should be incorporated by extensive use of educational software as an ERP system to monitor and analyze multiple aspects of academics.

Fig 1. New Format for HEI as per NEP– 2020 [1, 2]

Fig.1 clearly shows a student has the option of multiple entries and exit as per the NEP and at each level of his/her graduation he/she will be awarded a certificate as mentioned in the figure. But this has jeopardized the fate of all the Polytechnics or colleges offering diploma in engineering courses. Currently, as per recent data of NIRF, there are about 689 diploma colleges and 767 engineering colleges in Maharashtra alone. In this regard, it is suggested that these diploma colleges be either merged or upgraded to engineering colleges as this would increase the total number of degree institutes. Thus, helping in increasing the gross enrolment ratio (GER) as well.

If the above points are implemented and Government takes appropriate measures to ensure effective implementation of NEP–2020 then India shall definitely redeem its position as '*Vishwaguru*'. It won't be long when foreign nationals would be vying for admissions in India as the new education policy will improve the standard of Indian education with these incredible changes and assist in the holistic growth of an individual. It would certainly boost the economy and overall image and name of the country would be recognized far and wide.

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Higher Education Governance for Implementation of National Education Policy–2020: Removing Chaos and Creating Ethos

Chhaya Goel* and Devraj Goel**

Philosophies Governing Higher Education

Indian higher education is being governed by neo-liberalism, neo-capitalism, and neo-colonialism. The Private Sector is replacing Public Sector. Private Colleges and Universities are being opened. Foreign Universities are offering Programs in India and Indian Universities abroad. There is borderless reach for the students of various countries. Earlier the Society was governing the Society. Then the State started governing the Society. Now Economy is overarching both the Society and State. Our Society, Culture, Polity, Education all are being governed by capitalism. Foreign Degrees are being offered in India, whereas, Indian degrees abroad. But, the Higher Education is very High Price , because, there is commoditization of Higher Education. There is In-equation of Compensation and Performance. Return on investment is measured in terms of Money and Material rather than Human Development Index (HDI) and Universe Development Index (UDI). Those who have power to purchase higher education of any kind, from anywhere, at any time can purchase it. These producers and consumers have liberal, borderless, global markets. But, do we get what we want from higher education? We are used to food of our choice, our taste, our suitability, anywhere, anytime, any condition. Now, why are we trying to bring in fast food, fast information, cafes, expecting the consumers to change their tastes as per the tastes of the producers. Fast food, though, provides us more of choice and a variety of strange taste, but, it bewitches neither the body, nor the mind, forget about the spirit. Higher Education, which perceptually is the regime of these neo-isms is the regime of none of these. We need to revive our values and ethos. It is only inculcation of values and sensitivity to the basic culture, which can help us.

Education must be with the service motive than with mere profit motive. Authenticity of Education ought to be observed. There is a need to enhance

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the fidelity and testimony of Indian Research and Researchers, Indian Press and Publishers. There is a need to Appreciate and Respect the Indigenous. Heart and Brain Entrainment Ratio of the Neo-Governors needs to be properly observed. Higher Education Institutions should not be permitted to become political hubs. Higher Education demands peaceful and harmonious ambience.

Given the 21st century requirements, 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." (NEP, 2020: 9.1.1).

Increasing Demand and Dilution

The increase in the demand for Higher Education, be it liberal or technical has been unmanageably large, rapid and pressing. Particularly, Law, Commerce, Engineering and Education Faculties are over loaded. Higher Education is at the cost of the innocent public, which is investing with high hopes, but, little returns. There are problems of transition from +2 stage to higher education institutions. We have blind floods in higher education, neither knowing their origin nor destination. There are gaps between the academic attitude and academic aptitude of sizeable students enrolled in higher education. There are gaps between the teaching attitude and teaching aptitude of sizeable teachers employed for higher education. There are imbalances in student and teacher strength in various streams and programs. We have market oriented higher education be it admission, instruction or placement. There is tough competition. Gross Enrolment Ratio in

Higher Education in India is wanting. Less than 25% of the Pass-Outs are employed in the formal sector. Significantly greater number of Universities/ Higher Education Institution is required to attain higher gross enrollment. There is a shift from F2F mode to Distance and e-Mode.

Key Highlights on Higher Education in India

Some of the key highlights of Indian higher education system is based on All India Statistics on Higher Education (AISHE) Survey. The survey findings were based on responses of 795 universities, 34,193 colleges and 7,496 standalone institutions. There are total of 864 universities, 40,026 colleges and 11,669 standalone institutions in the country.

Gross Enrolment Ratio (GER)

GER is statistical measure for determining number of students enrolled in undergraduate, postgraduate and research-level studies within country and expressed as a percentage of population. India is aiming to attain GER of 50% by 2030, but it is still far behind countries like China with GER of 43.39% and US with 85.8%. The proportion of students pursuing higher education in India hasn't increased dramatically from 2015-16 to 2016-17. It was in range of 23% to 25% since 2013-14. Tamil Nadu has highest GER in India at 46.9%. Six states have registered GER higher than national average (25.2%), with their share of students entering higher education is growing twice as fast as overall rate. These states are Tamil Nadu (46.9%), Himachal Pradesh (36.7%), Kerala (34.2%), Andhra Pradesh (32.4%), Haryana (29%) and Punjab (28.6%). However, eight states UP (24.9%), Madhya Pradesh (20%), Odisha (21%), Bihar (14.4%), Gujarat (20.2%), Rajasthan (20.5%), Mizoram (24.5%) and West Bengal (18.5%) had GER ratio far less than the national average. Bihar has lowest GER with just 14.4% of its eligible population (in age group of 18 to 23 years) pursuing higher education.

Gender Parity Index (GPI)

India registered its best performance on the GPI in last seven years — 0.94 in 2016-17 from 0.86 in 2010-11. GPI is calculated as quotient of number of females by number of males enrolled. GPI equal to 1 indicates 1, value less than 1 indicated disparity in favour of males. In seven states — Goa, Himachal Pradesh, Meghalaya, JandK, Nagaland, Sikkim and Kerala — women in higher education have out-numbered men.

College Density

States in south India have higher college density. It is defined as number of colleges per lakh eligible population. The college density in top three states/UTs is Puducherry (49), Telangana (59) and Karnataka (53). Bihar (7 colleges/1lakh population), Jharkhand (8) and West Bengal (11) on the other hand, are at the bottom in terms college density.

Number of Foreign Students

There hasn't been much improvement in the internationalization of education in the country. There is marginal improvement in number of foreign students —47,575 in 2016-17 from 45,424 in 2015-16— with 31,779 men and 15,796 women. The highest share comes from the neighbours Nepal (23.6%), Afghanistan (9.3%) and Bhutan (4.8%).

Higher Education: Maintenance and Expansion

There is a void and vacuum in the State Universities. Persons have been serving as temporary lecturers, Temporary Teaching Assistants year after year in the State Universities. There is abrupt cut in the Teaching and Research positions. Even when the positions are sanctioned by the Centre there is no State concurrence. Bricks, stones, cement, computers, white boards and smart boards do support education. Buildings do facilitate education. But, Machines cannot replace humans. Money cannot replace men.

There is less creation, but more communication. Focus is more on marketing than production. The Higher Education youth is lost in customary designs. There is added focus on soft skills. Only Hard Skills will not do. Only Soft Skills will not do. Both hard and soft skills are crucial.

There is a problem of maintenance and expansion of higher education. A large number of institutes of higher education have constituted a variety of committees, such as, Admission Committee, Work Load Committee, Fee Committee, Selection Committee, Salary Committee. Despite all efforts by the institutes of higher education, there are numerous problems, such as:

- A large number of State Universities are under staffed.

- The teaching staff positions are sanctioned by the Central Government, but very often there is no State concurrence.

- There is abrupt cut on the teaching and non-teaching staff positions by the States.

- Staff salary on Paper is different and in actuality is different, more so, in case of a sizeable institutions run by a large number of private trusts.

- There is degeneration of a sizeable number of higher education institutions in terms of various parameters- input, process, throughput, and output.

- There are demand and supply in-equations.

There are problems of all levels of maintenance-preventive, corrective, adaptive and perfective. We have significantly lesser number of higher education institutions than what we need. Establish six more IIT. Open 'n' more IIM. Establish 1000 more universities. All excellent recommendations by the Committees and Commissions. But, how to? Professors cannot be produced over overnight. Merely pumping money, throwing grants and laying foundation stones do not ensure suitable infrastructure. Expansion of higher Education is beyond the limited data bases and faculties of Committees and Commissions, it demands a countrywide debate and discussion.

Higher Education: Public and Private

The public and private dichotomy is a continuous phenomenon in higher education. A large number of existing institutions have inadequate infrastructure and education competence to bear Higher Education. Neither we have been in a position to sustain liberal arts nor develop science and technology. The product which gets the license from the institutes of Higher Education is rarely their product. This is largely the product of off-campus sector which operates in many varied ways. Higher Education day by day is being governed by the private sector, which mostly has more of commercial motive than educational. Higher Education has been made commodity and commerce. How to realize excellence, equity and equality at the same time?

Higher Education: General and Honors

Honors' at Bachelor's level is an anti-thesis to multidisciplinary. Graduates without sound knowledge base at a tender age try to be micro-specialists having little understanding of the whole. As a result, they are neither fit for self nor field. It is high time that the nation does away with Honors at under-graduate level.

Even at Post-Graduate level, the specialization should emerge from the field. The Generalist and Micro-Specialist dichotomy ought to be resolved.

Choice Based Credit System

In syllabus, on paper, we offer a large number of optional areas, whereas, in practice, a few. It is a countrywide phenomenon. In fact, there is a little choice or no choice. Where is the option? What is wrong with our educational system? It is attributed to limited faculty, diverse courses, and scarcity of resources. But, more than the question of resources it is a question of resourcefulness. If the institutes of higher education do not modernize themselves, then there is every possibility of their going defunct. Choice Based Credit System at the face of it increases the work load of the teaching faculty significantly, particularly, classical F2F faculty. Wider the choice more are the demands on the education system. CBCS demands multiple modes of instruction through expert sources and systems, namely, modular mode, e-mode, synchronous, as well as, asynchronous modes, educational sourcing in addition to traditional formal instruction. Similarly, the evaluation is through electronic evaluation rubrics, continuous, internal, on line, on demand, in addition to paper-pen, activity based and practicum based.

Institutional Restructuring and Consolidation

NEP (2020: 10.1) reads that the main thrust of this policy regarding higher education is to end the fragmentation of higher education by transforming institutions into large multidisciplinary universities, colleges and HEI clusters/ Knowledge Hubs, each of which will aim to have 3000 0r more students. This would help build vibrant communities of scholars and peers, breakdown harmful silos, enable students to become well rounded across disciplines including artistic, creative and analytic subjects, as well as, sports, develop active research communities across disciplines including cross disciplinary research, and increase resource, efficiency, both, material and human across higher education.

Added focus on Multidisciplinary Universities/ Higher Education Institutions in NEP (2020)

NEP (2020) envisages to have Multidisciplinary Higher Education Institutions progressively. Though our ancient Universities, namely, Nalanda and Takshila were multidisciplinary, cross-disciplinary

and inter-disciplinary, but, is there a single Higher Education Institution or University in India or even globe over at present which is true representative of the universe? The answer evidently is "NO". Even if we have these as envisaged by 2040 A.D., then, how much flexible would be the CBCS? How much will be the sharing of credits across disciplines? How much infrastructure will be required to convert this idealism into realism? Why do we need twenty years to realize interdisciplinary Universities and Autonomous Higher Education Institutions? Why not in five years? For skill, scale and speed we need creative and critical, governors and leaders, thinkers and workers (two in one).

Staff and Student Attendance an Alarming Issue

Observation of process norms ensures quantum and quality yield. Surprisingly, though, the teaching faculty and students are present on campus, but, some of them do not class. What to label this phenomenon? Present Absent. On the contrary, in some of the faculties, there is very little presence. There are off campus classes by the private sector. The question is, when 80-85 % attendance is compulsory, then, without completion of attendance how these students are permitted to appear at end examination? How about their continuous, comprehensive internal evaluation? Still serious issue is professional ethics. More serious are the problems with distance education and open education programs.

Apex Agencies Lost in the Dual Roles

A large number of apex agencies, namely, UGC, AICTE, NCTE, NAAC, BCI, MCI, ICAR have come up during the past. Of all these agencies, the NCTE has been questioned most, to the extent, that at one point of time the nation thought of dissolving it. But, that too, perhaps was not found to be the resolve. UGC, being, both, the Grants Commission and Higher Education Monitoring Agency has been trying its level best. NAAC has taken up the task of observing quality and relevance of higher education. But, the higher education institutions try to show off what they are not. In between recognition and accreditation, the process of higher education is lost somewhere. In this context the efforts of the NAAC are appreciable in working out the Key Areas, Quality Aspects, and Quality Indicators, particularly, for Assessment and Accreditation of Teacher Education Programs. Engineering, Law, Medicine, almost, all the disciplines

need to be regulated. What should these agencies do, so that, the respective institutions and their products have professional feel and appeal? How to excel, exhilarate and enthuse higher educators and institutions?

NEP-2020–Transforming the Regulatory System of Higher Education

The regulatory system is in need of a complete overhaul in order to re-energize the higher education sector and enable it to thrive. The distinct functions of regulation, accreditation, funding, academic standard setting will be performed by distinct, independent and empowered bodies. This is considered essential to create checks and balances in the system, minimize conflicts of interest, and eliminate concentrations of power. To ensure that the four institutional structures carrying out these four essential functions work independently yet at the same time work in synergy towards common goals. These four structures will be set up as four independent verticals within one umbrella institution, the Higher Education Commission of India (HECI) as follows:

1. National Higher Education Regulatory Council (NHERC)
ii. National Accreditation Council (NAC)
iii. Higher Education Grants Commission (HEGC)
iv. General Education Council (GEC)

A National Higher Education Qualification Framework (NHEQF) will be formulated by the GEC and it will be in sync with the National Skills Qualifications Framework (NSQF).

Catalyzing Quality Academic Research in All Fields through a New National Research Foundation

Institutions that currently fund research at some level, such as, Department of Science and Technology (DST), Department of Atomic Energy (DAE), Department of Biotechnology (DBT), Indian Council of Agriculture Research (ICAR), Indian Council of Medical Research (ICMR), Indian Council of Historical Research (ICHR), and University Grants Commission (UGC), as well as, various private and philanthropic organizations, will continue to independently fund research according to their priorities and needs. However, NRF will carefully coordinate with other funding agencies and will work with science, engineering, and other academies to

ensure synergy of purpose and avoid duplication of efforts. 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 professional councils, such as, the ICAR, VCI, NCTE, COA, NCVET will act as Professional Standard Setting Bodies (PSSBs).PSSBs will continue to draw the curricula, lay down academic standards and coordinate between teaching, research and extension of their domain/discipline as members of the GEC.

Despite the 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. The NEP (2020) envisions the establishment of a National Research Foundation (NRF). The primary activities of the NRF will be:

1. Fund competitive , peer reviewed grant proposals of all types and across all disciplines;

2. Seed, grow and facilitate research in academic institutions, particularly at universities and colleges where research is currently in a nascent stage, through mentoring of such institutions.

3. Act as a liaison between researchers and relevant branches of government as well as industry, so that research scholars are made aware of the most urgent national research issues, and so that the policy makers are constantly made aware of the latest research breakthroughs; so as to allow breakthroughs to be optimally brought into policy and/or implementation;

4. Recognize outstanding research and progress.

Higher Education can develop and sustain its status as Higher, when there is an environ of germination, incubation, innovation, creation, construction and connection. We face problems right from infancy through old age. We identify, formulate and address the problems through research rigor. The NEP (2020) reads now, but, by virtue of our conditions we are multidisciplinary, interdisciplinary and cross disciplinary. We believe in harmonious coexistence. Harmonious coexistence demands caring and sharing. Caring and sharing demands research. Most of the pioneers, that is, topmost researchers were not materially rich. They did not stretch their arms and palms for funds. Despite the poor conditions

of life, they have been labeled as pioneers because of their research and innovation. The terms, such as, regulation, recognition, funding, assessment and accreditation are being used very frequently. But, we Indians, our springs, and off-springs are self regulatory, have our own identity, sound bases, self evaluation of our values and worth. Expansion in any area demands, decentralization that too at the level of devolution. We expect that our NEP (2020) observes it. India is a land of Seers, Researchers and Sages. We have Pioneers and Nobel Laureates. They work silently, peacefully, and fully. They are fully lost in Innovation and Research. It is a fact that quality research is realized when the scholars are fully lost, when they have full immersion.

Effective Governance and Leadership for Higher Education Institutions

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. Upon receiving the appropriate graded accreditations that deem the institution ready for such a move, a Board of Governors (BoG) shall be established consisting of a group of highly qualified, competent and dedicated individuals having proven capabilities and a strong sense of commitment to the institution. 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 Board of Governors (BoG) by 2035. The Bog shall be responsible and accountable to the stake holders through transparent self- disclosures all relevant records. It will be responsible for meeting all regulatory guidelines mandated by HECI through the National Higher Education Regulatory Council (NHERC).

Inbreeding in Higher Education

There is lot of inbreeding, that is, regionalism and provincialism in higher education. Some of the States insist on State domicile for admissions into the programs. In addition to this the services rendered by the teaching staff in the other States do not count towards the service benefits. As a result the higher education is administered by a mono- culture, largely, by mediocre.

Reservation not Remediation

We have sizeable reservation (>50%) in higher education. In this age of equity, equality and democracy, it is highly desirable. But, along with this, what is absent is, thorough remediation.

Inadequate Autonomy, Flexibility and Transparency

Higher Education institutions hardly have any autonomy, flexibility and transparency, which is too meek to nurture higher education. Higher Education is being governed by bureaucratic, conservative, hierarchical, traditional model rather than by human relations model.

Higher Education: Input, Process and Output

We have little control on the Inputs and Processes of higher education. So, the relevance and quality of the product of higher education cannot be forecasted and achieved deterministically. Process norms are grossly neglected. There is more focus on exposition and instruction, rather than creation and construction. Higher Education has become more theoretical than practical. There are wide gaps between vision and mission. There are wide gaps amongst educational objectives, curricula, modes of transaction, and evaluation. There is progressive dilution from objectives to evaluation.

Problems of Sharing of Resources, Inter-disciplines and Trans-Disciplines

There is a little networking amongst the agencies and institutions of higher education. Exchange and sharing of resources is very rare. A few consortiums here and there are more for demonstrations, than fully functional. There are rare repositories of learning resources. There are boundaries and seasoned gate keepers amongst disciplines. People from various disciplines rarely sit around the table.

There is a need to share credits intra-university and inter-university. Also, there should be provision for Credit Transfer, Student Mobility and Mutual Recognition. Most of the Higher Education Institutions are working more or less in isolation. There is a need of sharing resources and courses within institutions, between conventional and conventional universities, Open and open universities, and conventional and open universities.

Centralized Higher Education

Most of the Universities in India are affiliating universities. The affiliated colleges go by the curricula, modes of transaction and evaluation designed by the Universities. They have little autonomy, because a large majority of them are not properly equipped for offering Postgraduate Programs. Being economically affluent and politically powerful does not ensure the higher education credibility of a private trust. The Post-Graduate product of a large number of these trusts has little insight into the national problems and developmental challenges. Research has become a ritual. As a whole the quality of higher education suffers. Should the PG programs be delimited to Universities and autonomous institutions, only? Or else could each and every institute of higher education be resourceful, powerful, and autonomous?

Education, as on date, is on the concurrent list. But, most of the States have brutally abused Education. There are external shows to establish the face validity. But, the content and construct validity rarely exists, whatsoever was there has already faded or fading fast. It is high time that Education with all grace be on the central list.

In-innovative Higher Education

Despite the repeated focus on semester based credit system, still annual and marking system is prevalent in most of the institutions of higher education. Choice Based Credit System is offered rarely. Continuous internal evaluation is the feature of rare institutions. Still there is a primitive culture of flying Squads in Higher Education Examination. Even in this age of Technology in Education, Electronic Distribution of Examination Papers is done by only a few institutions. Very often the Innovative Programs proposed by the efforts of some Institutions are declared to be not under the purview of the apex agencies in the respective areas, because, the so called expert committees fail to appreciate these programs. The apex agencies need to be additionally careful while constituting the Expert Committees for the Innovative Programs.

Research at Higher Education: Mapping and Management

It is of utmost importance that the young minds be attracted to the doctoral research, as it holds a

promise for the development of the nation. There is evident upsurge in enrolment of Ph.D. Programs. Does it really hold a promise for the development? The reason for unproductive research in Education in India is the easy going tendency of the Researchers. Our only trend is to get the Ph.D. or book published at the earliest . Above all, the mindset of the researchers needs to be oriented towards research rigor. The essence of the degrees, such as, Doctor of Philosophy and Doctor of Letters ought to be rigorously observed. *Vidya Vachaspati* and *Vidya Varidhi* should be identified through their calibers. Their situational presence should justify their beings.

Invalid Evaluation in Higher Education

Evaluation in higher education is largely invalid right from input through process to output to placement. Our admission criteria in most of the faculties are faulty, because we do not have the research base with respect to the predictors of performance in various programs. Still, the classical Norm Reference Testing continues in most of the institutes of higher education, promoting competition. Rarely we go by Criterion Referenced Testing and Item Response Theory. In the interview boards, rather than trying to know what the candidates know, we try to make them feel stupid by making them conscious of what they do not know. A large number of interview boards fail to discriminate finely between candidates. The problem becomes, still severe, when we need to discriminate between 98th and 99th percentiles. Internal evaluation, revaluation, double valuation, centralized evaluation, all have question marks. A person with B+ passes the life situations, whereas, A+ fails. What do the degrees of a degree represent, if not the helplessness of the Higher Education System? Rather than grading our product on an n point scale could we have pass and not-pass in Higher Education realizing mastery learning?

Low Return on Investment in Higher Education

Only 5-6% of the persons who are conferred degrees are graduates in the real sense. Ritual convocations without real invocation are meaningless. How to observe the Higher Education wear the scarf with distinction, decency, decorum and discipline and glittering medals with resonating pride? For realizing that, we need to revive the culture of higher education. Rather than formally constituted knowledge commissions, each and every entity of higher education should realize and demonstrate its identity as a Knowledge and Action Commission.

Self Killing Complacency of Micro-Specialists

Self-killing complacency of micro-specialists of Higher Education is a matter of great concern. How much each Professor professes even his own discipline? Higher Education has made us more fragmented than holistic.

Placement, Promotion and Administration in Higher Education

Where are the alumnus of Higher Education? Most of the institutions of Higher Education do not have record of alumnus. What would be more shameful than the institutions of higher education refusing to recognize their own products? Academic administration of the institution must by thinking, speech and action portray their commitment to high ethical standards. A sizeable number of educational institutions do not observe healthy constellation and ethical climate. Many academic administrators are not in a position to observe the laid down acts, rules, resolutions and ordinances. The true test of administration is when the rules and acts are silent. At times the conditions demand administrators to be over and above the system at the same time not against the system.

State of Arts, Commerce, Science and Administration in Higher Education

Art without perspective, commerce without substance, science without ethics, and administration without sensibilities and sensitivies are meaningless. This seems to be the greatest problem of higher education. Who should be the top academic administrators of higher education? These have to be essentially inter-disciplinary experts having rich profiles and balanced personalities. An analysis of the top administration of higher education, nationwide, reveals, that civil servants, industrialists, pure academic professionals, and Statesmen all are misfits in the administration of higher education. There are rare personalities with integrated profiles. The Universities and Institutes of Higher Education have to bear with the best possible available. It is disgracing higher education to plant in-compatible administrators.

Stereotyped Higher Education

A large number of refresher courses which are meant for staff development and capacity building

are not serving the envisaged purpose. Rather than designing means for staff development we have more of staff rating scales. These tools are more for describing the field than constructing. Same age old practicals are repeated in the science laboratories. Same age old theories are practiced despite the changing conditions. Arbitrary criteria are superimposed on the reality promoting fundamentalism. Neither we have been in a position to sustain liberal sciences, nor, scientific realism.

Micro-Specialization, Narrow Breadth and Shallow Depth

Though the various disciplines are doing a lot of service to the society, yet there are many emerging issues and problems. How to stop deforestation? Can Botany contribute to the reduction of pollution? How to mass educate the development of the seasonal plants? How to save endangered species of plants? Can Zoology contribute to the regulation of population? How to correct the imbalances in male-female ratio? How to control diffusible diseases? How to save endangered species, for example, lion, tiger, black-buck? How to realize mass production of compatible medicine? How can Chemistry contribute to the control of pollution? How to produce degradable polymers? How can Physics realize the conservation of energy using conventional sources? There is a lot left to be discovered/ constructed in the areas of laser technology enhancement, transportation and space research. Rather than abstract and empty, mathematics needs to be more real and meaningful. Languages should be register specific and functional. Commerce should be more with service motive. Technology is sweeping the globe. But, there is more of media crowd than culture. Educational Instructional Software are rarely user compatible right from Kinder Garten to University and continuing education levels. Still there are gender discriminating stereotypes in science and technology and more so at the higher education level.

Though information in Science and Technology is multiplying at exponential rates but still there is a wide gap between the expected rate of evolution of scientific knowledge and what it actually obtains. There are easily perceptible Science and Technology divides in the society. Philosophy and Psychology which are the strongest foundations for society are

losing their identities? How top level administrators very often are found to have low level affect attributes? Our degrees of a Degree are representative of the extent of course completion than developed competencies.

Inclusive Education: A Mere Slogan

The expression inclusive education is recurring most frequently these days. What is its origin? What is its structure and function? We talk of multi-lingual models and go on superimposing mono-lingual model. We talk of multi-style teaching, but go on throwing mono-style. We talk of inclusive education but fail to provide differentiated differential inputs. Inclusive education demands highly resourceful dedicated systems.

Career Advancement Scheme (CAS) in Higher Education

CAS in higher education is highly desirable in this age of humanization and democratization, but, it has significantly lost its purpose. The Career Advancement rather than a function of merit is the discretion of whims and fancies of administration and it is losing credibility due to malpractices prevailing in the institutes of higher education, for example, referees not sending the reports in time, faculty having sound profile being not promoted.

Professional Ethics in Higher Education

We are largely proud of the Indians for their roles and professional ethics. In spite of all adverse conditions, they perform their duties with all dedication. For parenting Indian parents are models for the globe, for software industry Indian Engineers, for patients Indian Doctors, for learners Indian Teachers. We have harmonious culture and healthy constellation amongst all entities. However, some deviants, here and there spoil the professional excellence, peace and harmony. How? Needs no illustrations. Everyone needs to rear the baby. We should not leave it to others. The very presence of doctors relieves the patients of disease and discomfort. All doctors need to observe punctuality and presence. Software engineers should produce vaccines to remedy than viruses to replicate. We teachers need to renew ourselves to remain alive and innovative rather than becoming stale to delete even the already running programs and courses. Rather than neo-liberalism, neo-capitalism, neo-colonialism,

let humanism flow through all professions govern higher education in India.

Higher Education and Source Resource Dichotomy

Bipolarity is essentially the basis for genesis, creation and recreation of life and living, designing and sustainable development. It is not difficult to research the misperceptions of the beauties of nature. Beauties of nature need to be respected and appreciated. But, our obsessions for possession are destroying the beauties and bounties of the nature. Could we realize detached love for the nature through unconditional love for all the entities? Instead we have started treating the nature as a resource rather than adoring Thee as Source. We are happy to learn that there is revival of the name- Ministry of Education. The emerging question is --are human beings sources or resources.What should be the suitable name for HRDC? Could it be Human Development Centre? In the process of treating mother nature as a resource, rather than respecting her as a source, we human beings have lost our identity from source to resource. Universities ought to teach us that every entity of the universes ought to be identified and treated as a source. Reality is only a bit known and largely unknowable. So, we have only a limited knowledge base and skill base. Let us learn to have unconditional love for all.

Teacher Competency: Mapping and Management

Every teacher from pre-primary through middle, secondary, higher secondary and higher and continuing education ought to be competent in teaching, that is, having rich knowledge base, favorable attitude towards teaching and learning, and innumerous skills for learning and transaction. Today the challenges for teacher preparation are numerous, such as, bridging the gaps between expected and practiced teacher competencies, development of techno-pedagogic skills, integration of life skills, gaps between teaching styles and learning styles, preparation for inclusive education, specialization in emerging areas, such as, humanistic education, peace education, value education, Yoga Education, and Information and Communication Technologies (ICT) in Education. The present demand is to create lifelong autonomous learners and to evolve learner-inspired and not merely a learner centered approach which is the utmost challenge for teachers. The latest Teacher Education Curriculum Framework

(2009) expects Humane and Professional Teachers. Teacher at any level has a remarkable identity, more so, as per the educational heritage, ethos and vision of India- a Friend, Philosopher and Guide, Harbinger of Human-hood, Backbone of the Country, Architect of the Society, Closer to the Learners, Role model for the Learners, a self confident, inquisitive, faithful, dutiful, simple and humble person, who is always ready to relegate powers, competent, ICT literate, sincere and hardworking, fast renewing, socially sensitive and professionally committed, autonomous and accountable.

There is a need to model the knowledge, skills, and attitudes reflecting the best available practices in teacher education. Research can contribute to some of the areas of scholarly activity that are related to teaching, learning and teacher education. Teacher Educators can reflect on their own practice and sustain commitment for lifelong professional development. They can provide leadership in developing, implementing, and evaluating programs for educating teachers that embrace diversity, and are rigorous, relevant, and grounded in accepted theory, research, and best practices. They can collaborate regularly and significantly with representatives of Schools, Universities, State Education agencies, professional associations and communities to improve teaching, learning and teacher education. They can serve as constructively critical advocates for high quality Education with deep understanding of educational issues, and realize excellence in teaching and teacher education. They can contribute significantly to strengthen Teacher Education.

Higher Education: Teacher Appraisal

With the invention of Academic Performance Indicators many a e-publishers have appeared in the virtual world, with ready ISSN. Earlier the authors used to seek the publishers, now the publishers seek the authors. With the implementation of some of the recommendations of the new Pay Commissions, in the State Universities, there is abrupt cut in the Teaching and Research Staff positions, justifying it on the bases of increase in work load. Is not it blowing the theoretical framework of teaching, mechanically. Which school of thought has recommended the increase in work load? Can education be purchased with coins? Bricks, stones, cement, computers and white boards do support education. Buildings do facilitate education. Machines cannot replace humans.

Money cannot replace men. It is humans and humans only who can formulate and address problems. The credibility of the Cambridge Press and Oxford Press is well established. But, if we are genuinely interested in publication and dissemination, we need to strengthen the Indian Press. We need to enhance the fidelity and testimony of Indian Research and Researchers, Indian Press and Publishers.

Prognosis

There is a need to de-colonize minds. Who will do that? It is Education and Education only. Globalization with equity and equality and sensitivities to the basic culture, liberalization with civilization, Privatization with Service motive, and State with Public Spirit should govern the higher education. The State should not shun away from the responsibility of higher education. With a tendency of doing so, we have already done the greatest harm to the nation. The economy should not try to overarch State and Schools of Higher Education. The economy should realize that it is the return of education. Traditional, conservative, bureaucratic, hierarchical model being a big failure and impeding power, we need to recourse to human relations model. Autonomy, transparency and de-centralization ought to be the salient features of higher education.

Sustaining Genuine Demand of Higher Education

Approval for the new Higher Education institutions through NOC should be provided on the basis of up-to-date data, need and demand in public interest. In no case it should be a function of vested interests and malpractices. The norms for recognition of the institutions need to be developed and objectively observed, irrespective of who constitutes the inspection teams. There should be valid criteria for admission into the Higher Education Programs.

Correspondence among Objectives, Curricula, Transaction and Evaluation in Higher Education

We are relatively creative in enunciating the objectives of any program. First dilution takes place at designing of curricula, next in transaction of curricula and highest in evaluation. Every higher education institution should observe an inventory of correspondence amongst various elements of educational instruction design. We need to have clear vision and mission. Gaps between these are lowering the higher education. Particularly, mission functional procedures need to be worked out more meaningfully.

Consortiums in and Networking of Higher Education

There should be networking of higher education institutions. More of disciplinary and inter-disciplinary consortia need to be created for sharing of resources. Also, there is a need to establish Consortiums of Research in Education.

Inter-disciplinary and Trans-disciplinary Higher Education

More and more inter-disciplinary programs should be designed and implemented in higher education. It should be mandatory for every student of higher education to opt for a course from other faculties to facilitate trans-discipline, and it should be credited.

Integration of Various Skills in Higher Education

Various skills, namely, techno-savvy skills, net-savvy skills, Life skills should be integrated in higher education. In addition to cognition there should be adequate focus on affect attributes and psycho-motor skills. Higher Education ought to be holistic rather than fragmented.

There should be choice based credit system in higher education. It is possible only when we have numerous approaches to learning resources, such as, e-contents through open source, learning modules, sharing of credits intra-faculty, and inter-faculties, intra-university and inter-university. Induction of choice based credit system is very challenging, but, highly desirable.

Focus on Process Norms

If inputs and processes are well taken care of then the output yield and quality are almost ascertained. We do not have adequate mastery on the processes. Some of the institutions have the problem of capacity and burnout, whereas, a sizeable number of them have the problem of throughput and rust-out. Over years we have laid relatively more emphasis on examination reform. We need to reform the processes. There is a need of evolving process norms in almost all areas of Higher Education.

Evaluation in Higher Education

There should be semester based credit system and continuous comprehensive internal evaluation in higher education. various modes of evaluation

need to be practiced, such as, activities, assignments, projects, seminars, field work, tests having variety of items, such as, essay, objective and notes. Evaluation should be inclusive of subject specific knowledge, relationship with other subjects, development of psycho-motor skills, life skills and affect attributes. Electronic Distribution of Examination Papers needs to be inducted.

Research in Higher Education

Research in higher education should be revealing and suggestive. Along with scientific realism, there should be added focus on phenomenology, naturalistic enquiry and construction. Research finds cause and effect relationship. A researcher reasons the cause and effect relation. The reason is re-as-on. Very often a researcher recursively revisits the knowledge, skills and feelings. This re-as-on recursive quest is never ever complete. So, no knowledge is complete. No skills are ultimate. Rarely the feelings are ANUPRANIT into Action. No, theories are perfect. So, despite all efforts the ultimate reality is only a bit known, but largely, unknowable. So, should we stop researching? The immediate answer is No. It is because more and more we know, m ore and more we tend to the reality.

Need to Observe Intelligentsia and Ethics in Board of Studies, Faculty Boards, Academic Councils Executive Bodies and Courts

The Board of Studies of various Departments and Faculty Boards should abstain from arbitrary decisions. Not only such decisions are harmful for the particular departments and faculties, but also, these have implications for the wider field. All these Boards, Councils, and Bodies should observe their identities and function as per the acts specified in the constitution observing code of ethics. The executive bodies of the universities should strictly adhere to the acts, statutes and ordinances and rise above dirty politics. The courts of the Higher Education institutions should be very vigilant and fully functional. Once in the Court Meeting of a University the newly appointed Vice- Chancellor said that we will try our level best to develop our university as a World Class University. One of the Court Members made a humble submission that let us develop our university as per the vision and mission of Pandit Madan Mohan Malviya. Let the rest of the World emulate this University as the World Class University. The slogan *"Satyameva Jayate"* (Truth alone triumphs) is also a legacy given to the nation by Pandit Malaviya as the President of the Indian National Congress in its session of 1918 at Delhi, by saying that this slogan from the Mundakopanishad should be the slogan for the nation.

Innovations in Higher Education

To sustain its identity as Higher, the Higher Education has to be innovative, creative and constructive. The Higher Education ought to be self sustaining through its innovations, production and patents. We feel proud of our Engineers and Doctors who have produced highly valuable products with patents. Our Software Experts are Domain Leaders Globe over.

Causes of Degeneration of Higher Education in India

1. Our Policies are reasonably good. But, the faults come up at implementation level. Our Educational Objectives are Excellent. But, first dilution takes place at the Transaction level, next at the Evaluation Level.

2. We have a tendency to disregard the indigenous, even that of High Quality, and have developed a Craze for the Foreign. It is evident through our APIs.

3. We have gone recursive after enforcing a Common University Act, State or Central. The Question is why should we have a Common University Act. The Root cause is we are neither powerful enough to appreciate autonomy, nor diversity. Let us learn to respect the uncommon and unique in us.

4. We should not have a tendency to disrespect the Educational Administrators who very often operate in a multi-parametric setting. Many of we Educational Administrators serve as Honourary Honourable Servants.

5. We need to develop a very strong Service Cadre in India. of the Profile of Shri Shankran, Andhra Pradesh, 1957 batch and Shri S.C. Behar, Madhya Pradesh, 1961 batch.

6. The UPSC should have due place for Education in Service Cadre.

7. Establishment of Universities demands thorough preparation. We should assure and ensure that the Universities are properly established. India cannot afford to erect Universities arbitrarily.

8. Some of the Universities have become abode of some criminal tendencies. The Universities should employ strong security with high level intelligence to control and counter all such devastating forces.

9. The products of a large number of Scientists are not utilised, because of lack of facilities for clinical trials and patenting.

10. Indian Scientists should be provided due facilities in India.

Suggestions to Strengthen Higher Education Policy Perspective

1. The Vice Chancellors, Executive Committee Members and Senate Members ought to be identified very rigorously. They should be the persons of very high caliber.

2. The acts, statutes and ordinances of the higher education should be fully and strictly observed.

3. It is high time that we do away with the crowds of regulatory bodies. Our higher education has degenerated with the induction of such regulatory bodies. In fact, these have become the hubs of malpractices. If such bodies cannot live by the principles, religiously, then how can these observe the act, statutes.

4. Higher Education, by virtue of its ethos, has to be autonomous. The higher education institutions should be stand alone. It is high time that we do away with the affiliations. The learning outcomes ought to be worked at for every type and level of higher education and those should be the referents for observing the quality of higher education.

5. There should be uniform curricula of Science, Mathematics, Engineering ,Technology, and Medicine throughout India, to control any further dilution.

6. The Liberal Arts should be fully strengthened. The power of India can be revived through the Cultural Heritage and Religious Heritage of India. The Liberal Arts ought to strengthened.

7. Teacher Education Policy, Health Education Policy, ICT Education Policy should have the same status as that of Economic Policy and Fiscal Policy.

8. Minimum 5-6% GDP should be spent on Education.

9. Minimum 2-3 % of the GDP should be spent on Research.

10. The Ph.D. Course Work made mandatory has mechanized Research in all the disciplines, all over India. The nation should attempt, aggressively, to de-mechanize research.

11. The Academic Performance Indicators need to have Scientific Bases.

12. Grants and Endowments are respectable in the Realm of Education, but, to sustain the status as 'Higher Education', the Higher Education should construct ample Patents to be self-supportive.

13. Higher Education should realize autonomy in its True Sense and Spirit. It should no more be governed by Bureaucratic, Conservative, Hierarchical systematically Self-Killing Model.

14. Who is the most Supreme Governor of India? Is it Education? Is it Society? Is it State? Is it Legislative? Is it Executive? Is it Judiciary? The immediate history is a witness to Judicial over-activism. Why? No in-depth evidence is required to infer that all the rest have more or less lost their identities. It is bitter to relish the hard reality. The fact is that we all have over loaded the Judiciary to be over-active. Due to over-load on any system, either it goes mad or burns out. It is Education and Education only, and more so, the Higher Education, which can bewitch the minds and control the crimes.

15. The entire Higher Education is sick right from Higher Education Policy to Practice, from Gross Enrolment Ratio to the % of the Pass-outs Employed. Over and above, the norms at all phases of the system parameters are highly wanting. The input norms, process norms, output norms, pick-place and promotion norms have to be worked out very scientifically.

16. There is no Parallel amongst the Higher Education Institutions across India. Why? There is no comparability amongst the products of the various institutions, though towards the same PG Degrees or PG Diploma. The services rendered in one State largely do not count towards the service benefits in the other States. The superannuation age varies from State to State, State University to Central University.

17. Is there no Press and Publisher in Our Village, Town, City, District, State, Neighbor State, Nation, Continent , that we like to fly to Oxford, Cambridge, VDM, to get our publications done? It is good that through this plight we are trying to realize the Universe- ideas ought to be distributed and disseminated globally. But, the problem lies else where- We value more where it is published rather than what is published**.** We are seeking high-fidelity media. Cannot we develop these in India? There is a request and caution to all of us to revise our thinking. Let us learn to Love My India..

18. Come what may, we should safe guard our Higher Education. The Higher Education should revive its identity. Modernization demands revival of the culture of ancient Indian Universities, such as, Nalanda, Takshshila, Vikramshila. There should be Higher Education *Dvarpandits*!

Reviving and Reconstructing the Universal Character of the Universities and other Institutions of Higher Education

The moment we utter World Class Universities, we recall Takshila, and Nalanda, the Ancient Universities of India which have been found to have eternal universal expression. At present why India is very far from the World Top Institutions and Universities? We have entered into a vicious net of Anti Plagiarism Software, Academic Performance Indicators, State Level Eligibility Tests and National Eligibility Tests, and at the top of all Assessment and Accreditation by NAAC.

We need to treat our Higher Education respectfully. Let the services of top scientists be respected in India. Let us develop software to identify Innovations in India. Let us have Quality Control in our Academic Institutions, so as to have Knowledgeable, Humanistic, Competent Graduates, not merely wearing Scarf and Holding Degree, but resonating with the universe with complete invocation and immersion. More than external controls let us learn to observe inner quality. There are Pioneers and Pioneers in India. Let us revive our heritage of Takshila and Nalanda. Let us revive our respect for Education. Let us revive Identity of Education. Let us respect Education.

World Class Universities ought to be universal in character. What use are colourful citations, unless there is scaled expression at the field and functional levels? What use is the International Outlook unless there is emancipation and liberation of the universal constituents and entities of the miserable painful states? World class universities are where ideas germinate and spring, feelings flow, motor creates, the soul spirit reins, and the self resonates within and with the universe, where the Human Beings Transcend from Human Development Index (HDI) to Universal Development Index (UDI) and Human Beings tend to be Universal Beings, where we have unconditional love for the nature with super inner control. Let us cleanse ourselves with all compatible rinsing agents and submit fully, with complete immersion for understanding the manifestations of the universe. With this prayer India has the potency to establish Universities, which are true Universities, universal in character and expression. The World Class Universities should aspire to be Universal Universities as depicted through the following expression:

Concluding Remarks

India is a proud Nation, because, come what may we do not compromise with our principles. We have a very rich Vidya Heritage. It is a blissful experience to dive deep into the Indian Scriptures. The deeper we dive the higher we are! We feel proud of our education which is education in the true sense. Truthfulness, Compassion and Forbearance are the essential features of Indian Education which are always higher. India is full of pioneers. Let us realize our collective wisdom!

The NEP (2020), our New Education Policy, seems to be highly idealistic, when we perceive its face validity. But, its content and ethos deeply touch our cores and souls. We need to dive deep into our scriptures to cultivate and nurture this biosphere. There is a need to remove Khar-Patvar and useless contents from our texts right from school education (5+3+3+4) through Higher and Continuing Education. The universities and Higher Education institutions have to be true representatives of the universe. Universe Development Index (UDI) ought to be the concern of every university. Unconditional love for all is the means of renunciation, to integrate with the whole, to merge with the whole, to be one with the whole. Our Higher Education should transcend us of the time, space and mind. University Education is based on the principle that we find identity and purpose in life by connecting to the community, nature through

humanitarian values. The purpose of Higher Education is not only to prepare for academic success, but also to enable us to learn the challenges of living as a whole, connecting with the self and environment, with, truth, compassion and forbearance.

What we call here holistic education or university education as a new way in learning according with our times is really a very old technique that was used in diverse cultures in history. According to Swami Vivekananda: Education is the manifestation of the perfection already in man. Education is gained by living in constant communion with Nature. It can be realized by resonating with Nature. Identification with the self, interrelation, interdependence, resonance, rhythm, coexistence and completeness are some of the indicators of wholeness.

We feel proud of Indian Education where Legacies are Nurtured and Dreams are Sustained, Developments are Continuous and Journeys are eternal. Our legacies are unconditional love and dreams are peaceful coexistence having knowledge of Thy creation, interrelation and interdependence, our developments are holistic and our Journeys are 360 degrees round the clock, endless infinite. Our Education prepares saints and seers, artists and scientists, technocrats and engineers, researchers and pioneers. Our NEP(2020) aims to develop we learners as holistic beings, as universal beings, where, entry into the Universities or HEIs will be on satisfactory dialogues with the *Dvarpadits*' profiles of *Nalanda and Takshila* and exit by the *Acharyas*, all in one, such as, STEAM and SCOPE, that is Science Technology, Engineering, Arts and Mathematics, as well as, Spiritual, Clinical, Organizational, Positive, Educational Psychology all in one, PNHENTOP, that is, Physiotherapist, Neurologist, Heart- Specialist, Ear-Nose-Throat, Orthopedic and Physiotherapist all in one. As per the NEP (2020) our Higher Education will deterministically prove its identity at the functional level. It will justify its name only when it revives our legacy and realizes our dreams. It will groom us into our ancient universities and religious scriptures, as well as, facilitate full, meaningful, peaceful, happy, and healthy coexistence! The ultimate aim of our Higher Education or University Education is Uni-verse. To realize uni-verse all the constituents of the universe have to be in unison, treating every one as a source than re-source. There has to be eternal connect of *Aatma* with *Pramaatma.* We believe in *Satyam-Shivam-Sundaram.* We need humanistic, holistic, completely interconnecting always smiling Vice- Chancellors of the Universities who can nurture the legacies and sustain the dreams. Who believe in growing together, developing together, where, the journey is eternal despite all the odds and evens. Let us utilize our Collective Wisdom for Development.

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Effective Governance and Leadership for Higher Education Institutions in National Education Policy–2020

Meena*

The Chapter Nineteen of the National Education Policy (NEP), 2020 deals with 'Effective Governance and Leadership for Higher Education Institutions'. As per OECD (2008), "Governance encompasses the structures, relationships and processes through which, at both, national and institutional levels, policies for tertiary education are developed, implemented and reviewed. Governance comprises a complex web including the legislative framework, the characteristics of the institutions and how they relate to the whole system, how money is allocated to institutions and how they are accountable for the way it is spent, as well as less formal structures and relationships which steer and influence behavior." According to Fried (2006), "good governance can be understood as a structure which strives to preserve the integrity of the academic value system while at the same time positioning universities vis-à-vis their larger environment to make them receptive and answerable to external messages, demands and expectations."

In international development, good governance is the process of right decision making and the process by which those right decisions are implemented or executed in an appropriate desirable manner. Since the chief parameters of good governance do include the element of effective governance, we can assume that the policy is considering only this one parameter (i.e. effective governance) in comprehensive terms. Some of the chief parameters of Good Governance as highlighted by United Nations Economic and Social Commission for Asia and the Pacific (2020) *in* higher education institutions are:

1. Having a set of goals on which one remains focused.
2. Clear roles and responsibilities that separate governance and management.
3. Lead by setting a constructive tone of the institution.
4. Involve the right people.
5. Invest in effective relationship built on trust and respect.
6. Accountability and transparency in performance.
7. Manage risks effectively.
8. Having information, system and controls.

The best feature of the new policy is that it is ultimately focusing on the concept of '*Atamnirbhar*' (i.e. Self –Governance), which embarks the journey of:

- Clear responsibilities to the institutions.
- Decision making to the Governing Boards.
- Well defined composition of the Governing Board and its various committees.
- Transparency and accountability in the working of institutional functioning.
- Leadership with good followers.
- Strategic planning to foster the culture of excellence and governance.
- Outcome based appraisal.
- Best Human Resource Management.
- Continuous improvement and learning from past mistakes.
- Benchmarking of the qualitative education.
- Empowerment and Teamwork based on the principles of cooperative strategies.
- Creativity and innovation which leads to best R & D (Research and Development) strategies.
- Focusing on employee engagement in the development of institutions.
- Expansion of higher education with changing times.

The latest concept of '*atamnirbhar*' and '*karamyogi*' in any organization or institution in itself connote the self accountability, transparency, self sufficiency, self- dedication, self-independence in terms of better Human Resource Development.

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Powers of Board of Governance as per National Education Policy (NEP)

The policy is deliberately making an effort not only to give powers to Board of Governance (BoG) but also the autonomy to govern higher education institutions. The following powers as specified to Board of Governance as per National Education Policy (NEP), 2020 are:

- They can govern the institution free of any external interference.

- They will make all appointments including that of head of the institution.

- They will take all decisions regarding governance of the institutions.

- 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 (NEP, 2020).

- 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 (NEP, 2020).

- Equity considerations will also be taken care of while selecting the members. It is envisaged that all HEIs will be incentivized, supported, and mentored during this process (NEP, 2020). Equity consideration implies how to distinguish between people in terms of their needs, abilities, their competencies, their professional achievements and their individual rights with reference to their selection in the development of the higher education institutions.

Thus, it is good that the Board of Governance will be responsible and accountable to the stakeholders through transparent self disclosures of all relevant records. They will also meet all regulatory guidelines mandated by Higher Education Commission of India (HECI) through the National Higher Education Regulatory Council (NHERC) [NEP, 2020].

Leadership in Higher Education Institutions

For effective leadership in Higher Education Institutions (HEIs), the policy emphasized on outstanding merit- based appointments of institutional leaders. For this, the policy has developed a core policy to develop internal as well as external leadership strategies.

Since the internal leadership of the institution is based on the common vision, the New Education Policy satisfies this criterion from the beginning. As per National Education Policy (NEP), 2020, "all leadership positions and Heads of institutions will be offered to persons with high academic qualifications and demonstrated administrative and leadership capabilities along with abilities to manage complex situations. Leaders of an HEI will demonstrate strong alignment to Constitutional values and the overall vision of the institution, along with attributes such as a strong social commitment, belief in teamwork, pluralism, ability to work with diverse people, and a positive outlook."

The external leadership will surely based on the contribution of leaders of the higher education institutions in making the society a better place to live in, bridging the gap between various social, political, economic and cultural platforms, providing a beacon to the policy issues at local, regional/state, national and international level.

Thus the effective leadership will connect the education from the individual's self development notion to the active public/citizen partnership in the socio, economic, political and cultural spheres of the world development.

How to Select Leaders for Higher Education Institutions?

The National Education Policy (2020) has rigorously prepared a Blue Print for selecting the right visionary leaders for Higher Education Institutions growth, via:

- The selection of leaders will be carried by Board of Governors.

- Rigorous, impartial, merit-based, competency based process led by an Eminent Expert Committee (EEC) constituted by Board of Governors (NEP, 2020).

How to Retain and Secure the Leaders for Longer Terms?

The National Education Policy (2020) has not ignored the retaining and sustainability criterion for keeping the visionary leaders for longer duration in the development of Higher Education Institutions, via:

- Only strong leaders will be chosen and encouraged.

- Stability of tenure of the leaders will be ensured.

- Leadership succession plans will be done in advancement.

- There will be smooth transitioning of the leadership succession.

- There will be no vacant gaps in between the leadership succession phase.

- Institutions will identify and develop an early outstanding leadership.

Culture of Excellence and Innovation in Higher Education Institutions

The National Education Policy (2020) strongly favoured a culture of excellence and innovation in higher education institutions as the transmission and transformation of ideas and other manifestations of human intellectual achievement can be passed to the next generation. Promotion of institutional culture of excellence and innovation will not be a one time show rather it will be a continuous feature of the higher education institutions.

How the Culture of Excellence will be Developed in Higher Education Institutions?

As stated by New Education Policy (2020), the culture of excellence in Higher Education Institutions will be developed:

- By a suitable system of graded accreditation and graded autonomy.

- In a phased manner over a period of 15 years, i.e. by 2035.

- Ultimately, HEIs will become independent self-governing institutions pursuing innovation and excellence.

- A Board of Governors (BoG) will be established consisting of a group of highly qualified, competent, and dedicated individuals having proven capabilities and a strong sense of commitment to the institution. (*commitment-The policy's best self explanatory criteria for effective governance, that is missing now-a-days is worthy of applause).

How to Develop the Culture of Excellence and Innovation in Higher Education Institutions?

The culture of Excellence and Innovation in Higher Education Institutions demands a long and stringent measure for its development, which will be accomplished by the following strategic efforts:

- There will be an arrangement of adequate funding to Higher Education Institutions.

- Legislative enablement support system will be there, which will cater to the immediate and future demands of the higher education institutions.

- Autonomy of the higher education institutes will be done in a phased manner.

- Local communities will be involved, since they are more familiar with the immediate and future demands of the region.

- Highest standards of financial probity and accountability will be maintained (NEP, 2020) and the misappropriation of funds will be strongly dealt.

- A strategic Institutional Development Plan will be developed to achieve goals set therein (NEP, 2020) and the efforts will be done to ensure its execution and implementation.

Role of NAAC in Evaluating Governance and Leadership in Higher Education Institutions

The National Assessment and Accreditation Council's (NAAC) Criterion 6 has addressed all the parameters and guidelines on governance and leadership to be followed in higher education institutions. The guidelines suggest that all constituencies and decision- making processes of the institution should be governed by "principles of participation and transparency (NAAC, 2007)". The criterion six of NAAC (2020-21) deals with governance, leadership and management, which is briefly mentioned in Table-1, has been compiled from various institutional links (see references for Criterion 6).

We can observe from the Table-1 that NAAC (2020-21) not only supplements the National Policy on Education (2020) but also supports in evaluating the various parameters of governance and leadership in higher education institutions in an exhaustive manner.

Missing Links of the National Education Policy (2020) with Reference to Effective Governance and Leadership

- The policy does not differentiate its criteria on good governance and effective governance. Why the policy is more concerned with effectiveness

NAAC (2020-21): Criterion VI: Governance, Leadership and Management

Metric No.	Curricular Aspects
6.1	**Institutional Visions and Leadership**
6.1.1	The governance of the institution is reflective of and in tune with the vision and mission of the institution.
6.1.2	The effective leadership is visible in various institutional practices such as decentralization and participative management.
6.2	**Strategy Development and Deployment**
6.2.1	The institutional Strategic/ Perspective Plan are effectively deployed.
6.2.2	The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures etc.
6.2.3	Implementation of e-governance in areas of operation 1. Planning and Development 2. Administration 3. Finance and Accounts 4. Student Admission and Support 5. Examination
6.3	**Faculty Empowerment Strategies**
6.3.1	The institution has effective welfare measures for teaching and non-teaching staff.
6.3.2	Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the year.
6.3.3	Number of professional development/administrative training programmes organized by the institution for teaching and non-teaching staff during the year.
6.3.4	Number of teachers undergoing online/face-to-face Faculty Development Programmes (FDP) during the year.
6.3.5	Institutions Performance Appraisal System for teaching and non-teaching staff
6.4	**Financial Management and Resource Mobilization**
6.4.1	Institution conducts internal and external financial audits regularly
6.4.2	Funds/ Grants received from non-government bodies, individuals, philanthropist during the year (not covered in Criterion III)
6.4.3	Institutional strategies for mobilization of funds and the optimal utilization of resources.
6.5	**Internal Quality Assurance System**
6.5.1	Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes
6.5.2	The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities.
6.5.3	Average number of quality initiatives by IQAC for promoting quality culture per year
6.5.4	Quality Assurance initiatives of the institution include: 1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analyzed and used for improvements 2. Collaborative quality initiatives with other institution(s) 3. Participation in NIRF (National Institute Ranking Framework) 4. Any other quality audit recognized by State, National or International agencies like International Organization for Standardization (ISO) Certification, National Board of Accreditation (NBA).
6.5.5	Post accreditation quality initiatives

of the governance while ignoring the qualitative domain of the ignorance?

- Is the policy focusing only on work performance or outcome related productivity?

- How the loyalty and commitment among the entire workforce from hierarchy to bottom will be ensured for effective governance and leadership?

- The policy is silent about how the level of satisfaction among various stakeholders of the higher education institutions will be measured so that transparency and accountability of their administrative actions can transpire confidence among others.

- The policy is also not discussing the stimulating factors of the effective governance and leadership process.

- The policy is not sure whether it can make higher education a brand to look for an international comparison.

- The policy is silent about treating student as a customer or client to the services of education. There are certain questions regarding this: How the intensity of the service will be measured? How governance and leadership will be made accountable for the deficiencies in service?

- Whether the efforts of the policy with reference to governance and leadership will lead to the expansion of the Higher Education in terms of its internationalization.

- Whether the heterogeneous factors cropping up from different socio, economic, political and cultural set up of the country will give the higher education institutions uniformity in dealing with issues of effective governance and leadership.

- Whether the concept of effective governance and leadership in higher education institutions is based on the corporate model or Public Private Partnership.

- How much the governance and leadership is ready for the changes with reference to technological innovations, natural epidemics, disaster management strategies, international political or market fluctuations is crucial?

- The role of moral values and ethical considerations is crucial in building the persistent and inspiring leadership. The policy has to devise new code of conduct in this regard which reflects the culture of excellence in leadership also.

- Whether the decisions of the Board of Governors will be based on the constitutional provisions of right to equality.

- How much student participation will be considered for making the effective governance as transparent as it should be?

Conclusion

The constructive approach of the policy towards effective governance and leadership is appreciable since it is outcome oriented and its impact will be seen in the near future after its implementation in totality. Though the critical evaluation of the policy can be done via its quality assurance framework, performance, active participation of various stakeholders, NAAC accreditation parameters, the litmus test will be dependent upon only on the one criteria, that is, how much the policy has contributed towards the society and reached to the public at large.

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Innovative Implementation Strategies for National Education Policy–2020

Ajit Mulajkar* and Naresh Pinamkar**

"Those who get caught in the past and resist change will be forced deeper into commoditization." (Friedman, 2006)

The earlier education policies have created both hard and soft infrastructure in the forms of buildings, offices, classrooms, libraries and laboratories; and Acts, Government regulations, curriculum and syllabus. "No system could be written on a clean slate: there were always rights exists in land though they might be complex in nature and very numerous and even though the promoters of the new system may not have had a proper understanding of them." (Shukl, 1976) In 2019 Union Government introduced the "Draft New Education Policy 2019". Now the Government has introduced New Education Policy 2020 (NEP–2020). Here it is important to note that the evolution of these systems depend to some extent on the earlier knowledge.

Tremendous changes in technology and understanding of many things are found in twenty-first century, particularly after COVID-19. Reaping the demographic dividend is also a big opportunity before the government, and NEP–2020 will play vital role in it. Government has no choice but to anticipate the future, to achieve to long-term goals. Therefore, Government needs to be very particular in making decisions with long futurity. "The future will not just happen if one wishes hard enough. It requires decision—now. It imposes risk—now. It requires action—now. It demands allocation of resources, and above all, of human resources—now. It requires work—now." (Drucker, 1974)

The Union Government had taken decision by drafting and introducing NEP–2020. The ideal part of the policy document is over. Now its implementation in its spirit and intent is the biggest challenge. NEP 2020 has launched in a suitable berth; now it requires an action plan which is feasible in the present strange situation emerged after COVID–19.

Strategic planning and action plan are important to implement the NEP–2020 both in its spirit and intent and within stipulated time. "Everything that is 'planned' becomes immediate work and commitment." (Drucker, 1974)Strategic planning is not the application of scientific methods. "It is the application of thought, analysis, imagination, and judgement. It is responsibility, rather than technique." (Drucker, Management, 1974) Good action plan will put the strategy into mind and heart of the people.

Strategic planning does not mean planning something on paper by sitting in a room and leaving rest of the things for fortune to decide. It is a continuous process of taking a number of decisions systematically with short-term and long-term goals, as per the need and by analysing the feedbacks, with a good knowledge of their futurity. "Strategic planning does not deal with future decisions. It deals with the futurity of present decisions." (Drucker, Management, 1974)It does not eliminate risk, but it minimizes risk.

For the effective and speedy implementation of NEP–2020, work is to made both at physical level as well as psychological level. Changes on paper and in some physical infrastructure will not bring the policy in force in totality. To implement it in its both spirit and intent much work is to be made at psychological level.

The existing structure is to be used for its implementation along with it some new infrastructure is to be created. Some new offices and committees are to be formed and used along with the existing offices such as "The District Education Officer (DEO) and the Block Education Officers (BEO)" and National Assessment and Accreditation Council (HRD Ministry, 2020), some committees for better and speedy implementation of NEP–2020.

Effective Communication

The biggest hurdle in implementing of the policy will be the psyche of the people, both who are directly involved in the process of its implementation and those who are indirectly involved, which is accustomed to practice the existing education policy.

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And it can be overcome by communicating it in a proper way. "How something is communicated can make a very big difference. A communication may be confusing, unclear and muddled. This may cause real problems or at least require a lot of efforts on the part of the receivers of the communication to the changes out." (Bono, 1996) So, there must be effective communication at different levels. The essence of 'Sarva Shiksha Abhiyan' can be found in its effective communication. It was communicated very effectively the heart-touching advertisement of DD National channel and very imaginative picture of a school boy and girl sat on a pencil, painted on the outside wall of every school building. Advertisements like *"School Chale Hum..."* should be prepared for effective communication of the NEP–2020.

The benefits of this change must be communicated both digitally and nondigitally, for a great number of people are not much connected with the digital media and they trust print media and radio. Some eminent educationists should also communicate it.

When something changes people think in different directions. They may be lead or mislead by those who have created some influence on them. In such a situation, it is very essential to communicate people at large in a proper manner regarding the positive changes which the present change may bring them in future. "After a change thing are not the same as they before the change. Not one is forced to think about change in this open-ended way. But you can 'choose' to think about the change in this way. 'What are the effects of this change?'" (Bono, Teach Yourself to Think, 1996) What opportunities are opened up by the NEP–2020 is to be communicated effectively. A mass dream is to be formulated and communicated to set out the journey of its implementation.

Leadership

For effective and speedy implementation of the NEP–2020 good leadership should be there, for achieving the goal of NEP–2020 is not an individual task. The process of its implementation should be at multiple levels. Leaders who are having ability to persuade a group of people working to implement NEP–2020 should be traced and appointed as special task officers.

After the pandemic, the world has become more complex than ever before, so we do not need simple leaders, but better leaders. Because relying on past experience will not be enough in this new normal. So, there should a quest for better leaders who are capable of, not simply confident, undertaking this great task. We have a number of not only confident, but overconfident leaders who are much better for making things worse. Such overconfident leaders must be kept aside and the responsibilities should be shouldered on those who are really capable.

Quality Service

"Goods are traded but services are consumed and produced in the same place." (Friedman, 2006) Education is a good service, one who consumes, produces it in the same place, provided that one must be served in a good way; otherwise, the results will be unexpected. So, to reach the expected goal at the decided time quality education must be imparted. If the Government expects the best from the youth of the nation, then the government should give them the best.

Use of ICT

The world after the pandemic caused by COVID-19 is changing at a great speed. New normal requires new thinking strategies. To transform India, transformation in education, infrastructure and governance are essential.

The NEP–2020 has made provisions for ICT, but; they should be implemented rapidly. The world after COVID-19 has been on a great change at various levels. Attempts are made to rethink about everything. Everything should be technology driven is the new narrative of the world. "The next generation is growing up online, rather than adapting to it in their mid-adult years, says Micah Sifry." (Friedman, The World is Flat, 2006) To cope up the future uncertainties, technology is the only answer. To bring quality, high speed, accuracy and effective delivery of the content technology will play a vital role. So, ICT centres must be established both at centre and state levels for school and higher education independently.

We are living in a new world where data religion is emerging as a new religion of the world. "For politicians, businesspeople and ordinary consumers, Dataism offers ground breaking technologies and immense new powers. For scholars and intellectuals, it also promises to provide the scientific holy grail that has eluded us for centuries: a single overarching

theory that unifies all the scientific disciplines from musicology through economics to biology." (Harari, 2017)

It is the age of data. It has emerged as a new religion of the world. The blast of information is both good and bad for the young generation. If the young generation failed to make a wise selection of data to be used for their growth, there is possibility of getting misled by it. During the lockdown period a lot of garbage is created and forwarded through Internet to the future of India. So, it is high time in making correct choice of data, for data has colour, religion, pathogenicity with a great possibility of pestilence. Therefore, wise selection has to be made for the better future of the nation and humanity. "In the process of Datism inverts the traditional pyramid of learning. Hitherto, data was seen as only the first step in a long chain of intellectual activity. Humans were supposed to distil data into information, information into knowledge, and knowledge into wisdom." (Harari, Homo Deus: A Brief History of Tomorrow, 2017)

Implementation Committees

From central to district level different committees are to be framed for effective implementation of NEP–2020. These committees will continuously monitor the implementation process; and take decisions from time-to-time by getting upward communication in the form of feedbacks from different stakeholders. The working of these committees should be as shown in Figure-1. The committees at centre and state level will monitor the implementation process

Figure-1 Working of Implementation Committees
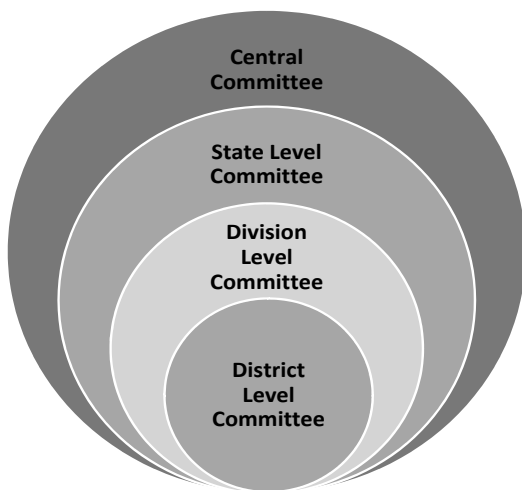
of NEP – 2020 with respect to school education and higher education. The important thing about the structure of these committees is that every smaller or subordinate committee should be independent and privileged to take necessary decisions from time-to-time, but should work within the purview of greater or upper committee(s).

Teachers

Most of teachers feel that implementation of NEP –2020 is the business of Government only; but the fact is that they are at the centre of it. Teacher is at the centre of the new pedagogical and curricular structure of the NEP–2020. It is impossible to imagine the implementation of NEP–2020 without teachers. Their role will be decisive. The success in implementation of NEP–2020 in its spirit and intent largely depends upon the roles of teachers (Figure-2).

Figure-2 Role of Teachers
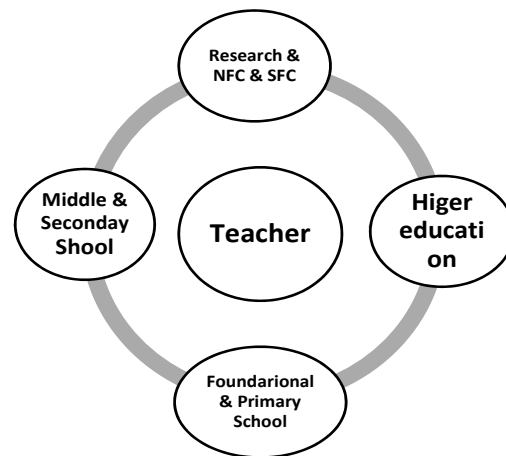
Teacher Programmes

Orientation and Refresher Programmes should be organized through Human Resource Centres, which are at present working at different Universities for the faculties in higher education; and through District Institute of Education and Training (DIET) and through Block Education Officers' Office for school teachers at district and taluka level. To implement the NEP–2020 in its spirit, teachers must be oriented and refreshed, for their earlier understanding of rote teaching must be replaced by experiment-based teaching as per the NEP–2020.

Redesigning of Curriculum

Curriculum should be redesigned as per the intent of NEP–2020 by both National Curricular

Framework (NCF) and State Curricular Framework (SCF). And the syllabi, especially of traditional degree programmes should be replaced by the new one, for it is observed that it has remained unchanged, with little superficial modifications, from last so many years.

Institutional Digital Card

It is to be given to each institution with teacher at the centre. All the data of the institution must be available in that digital card. It will not only bring transparency, but also speed and better quality in the implementation of NEP–2020. Data-driven decisions should be taken for the speed and accuracy; and these Institutional Digital Cards (IDC) will play a very vital role in it. One school complex/cluster, one IDC should be there. The teacher should upload the school data as well as download the curriculum and other data with the help of this card.

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Life Can Teach More from Failures

K Kasturirangan, Padma Vibhushan; Former Chairman, Indian Space Research Organisation; Chairman Drafting Committee, National Education Policy–2020; and currently Chancellor, Central University of Rajasthan, Rajasthan delivered the Convocation Address at the First Convocation (Virtual Mode) of Indian Institute of Science Education and Research, Tirupati on 26th August, 2020. He said, "Notwith standing the considerations of professionalism, challenges, opportunities, risks and so on, you need to explore the limitless frontiers of knowledge throughout your life. My Dear Friends, the path to great achievements and success will put enormous demands on you and call upon you to bring to bear the highest degree of professionalism inspired by being a part of a fast changing knowledge ecosystem. This in turn, will imply continuous updating of your knowledge and thus making the process of learning a continuous one." Excerpts

I am delighted to note that Indian Institute of Science Education and Research (IISER), Tirupati is being mentored and guided at the highest level by none other than Prof Ashutosh Sharma, a Scientist of great repute, who has further established himself as a key visionary to promote Science & Technology research in this country in its multiple dimensions. Besides being a respected academician, the Chairperson has wide ranging interests including in education. More recently, he has come out with a unique suggestion to examine how multiple institutions under DST could become part of a strong conglomerate of higher education and research through appropriate reconfiguration of their roles and structure- something very timely and important to consider.

I am very happy to see Shri Amit Khare, Secretary, Ministry of Education, who is also a Member of the Board of Governors of this institute and who just now shared his valuable thoughts about the future evolution of higher education within the framework of the new National Education Policy-2020. I should particularly highlight the critical role that Shri Amit Khare played in moving this policy at the highest levels of the government, first through the conduct of several consultations and reviews and subsequently working with Hon'ble Minister of Education and finally with the Hon'ble Prime Minister himself. It is pertinent to mention here that Shri Amit Khare deserves lot of credit for the speed with which the entire processes were carried out and bringing his own wide-ranging professional knowledge in the subject of education to guide crucial steps at appropriate times. It is timely at this juncture to inform this erudite audience that our Hon'ble Prime Minister had several sittings with experts, policy makers, stake holders and others in reviewing every element of this policy. It is also of interest to state that the Hon'ble Prime Minister made

several innovative and pragmatic suggestions both in school and higher education. One is happy to note that these steps in no way compromised the policy with respect to its original letter and spirit. Further, Hon'ble Prime Minister in his recent address at the All India Conclave of Vice Chancellors declared that NEP 2020 will be now onwards the policy of the government and that no efforts will be spared to implement the same.

Prof K N Ganesh, who is now the Founding Director of IISER, Tirupati, has had a very illustrious career as an academic, researcher and an institution builder. As the Founding Director of IISER Pune, he brought up this institution to a position of preeminence and for over more than a decade took several innovative initiatives that transformed this centre of erudition into one of the front ranking institutions among the family of IISER's. I can say without hesitation, the originality and creativity that he brought to bear in shaping the evolution of IISER Pune certainly gave the family of IISER's a brand name for science education and research both nationally and internationally. It is therefore; very fortunate that such an experienced visionary is now heading IISER Tirupati which is destined to reach highest levels of excellence and erudition in the years to come. I am elaborating these three key names associated with IISER Tirupati not only because of their intrinsic stature and credentials, but, also they could serve as role models for many of you, my dear young friends who are graduating today. I also use this opportunity to compliment the academic staff; each of you have a critical role to play in the evolutionary phase of this institute, besides of course ushering an era of transformation called by the imperatives of 21st century knowledge society enunciated appropriately within the framework of the new National Education Policy (NEP) 2020.

My Dear Young Friends, as the first group of students graduating from this Institute, you are in a sense pioneers and thus the torch bearers of an Institution poised to reach high level of achievements in the coming years. Further, I can also expect this Institution to be the beneficiary of the rich tradition and heritage of its sister institutes in the IISER family, spread in different parts of the country having transformed the life of more than fifteen thousand students with diverse backgrounds.

Tirupati, called as the 'Spiritual Capital of Andhra Pradesh' is one of the major holy cities of our country, being the abode of Lord Venkateshwara. Apart from the Sri Venkateshwara temple, Tirupati is also home to centuries old temples whose architectural splendours have a heavenly aura finding their mention in the Vedas and Puranas. The Vijayanagara rulers, the Pallavas, the Cholas were all patrons of this holy city. Tirupati is one among the 100 Indian cities which have been selected to be developed as a "Smart City" under the Smart Cities Mission of Government of India. Being the most visited heritage city in the world, tourism forms the major economic component. Tirupati is also a major medical hub to the surrounding cities and is home to many educational institutions and universities. This institute located at foothills of Tirupati provides a holistic environment of peace, tranquillity, enchanting ecosystem combined with a divine force that attracts people from all walks of life both from different parts country and world. Such a unique setting, certainly will provide all the necessary ingredients for the inspirational minds of the students to bring out their highest level of creativity and originality. The academic staff will find this location most ideal to perform academic activities at the peak of excellence. The kind and ever caring Lord Venkateshwara bestows his benign blessings on one and all standing majestically atop the sacred seven hills with his consorts. His kind hearted disposition for the well-being of this institution is sure to influence the future growth and evolution of IISER, Tirupati and transform it into a world renowned centre of knowledge and erudition. The most recent significant development that could add considerable value to the performance of IISER, Tirupati is the decision to locate IIT and IIIT in the neighbourhood, thereby, increasing the potential outcome of each of these institutions through synergy in academic and related activities.

It is refreshing to see the agenda that IISER Tirupati has drawn up as its academic program and its linkages to NEP- 2020. Some of the important components that the institute proposes to introduce in the forthcoming year itself includes placing emphasis on holistic and multidisciplinary education with flexibility of subjects, provision for multiple entry and exist particularly in the 4 year UG program, a PG program with one or two years or integrated with BS/MS, doing away with MPhil as well as facility for credit transfer and availability of academic bank of credits. Even though, some of this may go beyond the coming first or second year; the resolve of the institute with regard to its implementation is in no doubt. Further, I am extremely happy to note IISER Tirupati is working towards a model to transform itself into a research intensive/ teaching intensive university. Noting that the policy does emphasize the need to have considerable attention to language development and also awareness of the Indian cultural knowledge systems, the institute is looking at appropriate institutional mechanisms to realise the same. I also note with satisfaction the review that the institute has done towards induction of technology for education. In this connection, IISER Tirupati could host a Centre of Excellence in Educational Technology and work closely with the proposed National Educational Technology Forum (NETF). Such a forum is expected to provide independent evidence based advice to central and state government agencies on the use of technology, building related intellectual and institutional capacities, identify strategic thrust areas related to educational technology, besides articulating new directions for research and innovations. I am sure, this institution hosting such a Centre of Excellence and working closely with NETF could provide new and innovative inputs that would make introduction of technologies into education, assuring among others robustness and resilience

The vision of India's new educational system has been crafted to ensure that it touches the life of each and every citizen consistent with their needs and necessities; besides, creating a just and equitable society. The approach is to create a new system aligned with aspirational goals of 21st century education while remaining consistent with India's value systems and ethos. The policy provides an integrated yet flexible approach to education. Further, it has kept the interconnectedness of the various phases of education in mind and how the same will enable continuity, coherence and processes to ultimately realize an end-to-end educational road-map for the country. Major emphasis is given in the policy to the aspect of holistic, multi- disciplinary education as a

foundational component in the undergraduate level. The Under-Graduate (UG) level will also ultimately provide a holistic approach to education by slowly bringing in professional and vocational education into the mainstream education. At the Post-Graduate (PG) level one of the key recommendations relates to the strengthening of research in the University system. The Policy recommends the creation of a National Research Foundation for this purpose. A light but tight mechanism for regulation is envisaged under this policy. Providing a more cohesive structure for the higher educational institutions in the context of teaching and research, ensuring increased autonomy and empowered governance and effective leadership are the other features of the policy. On the whole, the policy aims at the development of 21st Century skills for the students, while giving enough flexibility in making choices consistent with the dynamics of a knowledge society.

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choices consistent with the dynamics of a knowledge society.

At this point, I would like to share some of my thoughts in the context of the importance of holistic and multidisciplinary education with focus on undergraduate education. This concept sometimes also referred to as "Liberal Education" in the contemporary discussions has its origins in India's age old idea of liberal arts dating back to almost fourteen thousand years. In the modern day social and economic landscape this age-old Indian concept is now finding recognition in a new form. As per our policy and I quote, "Liberal education explores the remarkable relationships that exist among the sciences and humanities, mathematics and arts, medicine and physics etc., and more generally, the surprising unity of all fields of human endeavour" Unquote:

A comprehensive liberal education develops all capacities of human beings, intellectual, aesthetics, social, physical, emotional and moral in an integrated manner. In a specific context, I would like to bring in the importance of knowledge related to arts, crafts, architecture and aesthetics as a part of science and engineering education. For example, it is often commented that India produces very competent scientists and engineers, but falls short of being great innovators. Steve Jobs, founder of Apple was famous for his ideas on what makes products successful; according to him the secret was to bring top notch aesthetics with top notch science and engineering. He himself is known to have said about why the Macintosh computer revolutionised computing and I quote: "I think part of what made the Macintosh great was that the people working on it were musicians and poets and artists and zoologists and historians, who also happen to be the best computer scientists in the world". I am sure this institute with its plans for bringing multi-disciplinarity and holisticity to its various courses could be in the forefront of creating world-class innovators and producing seminal ideas coming out of a thinking process that cuts across disciplines by marrying Science education with arts and humanities and other fields.

If one were to look at the present trends of job recruitment in the western world, it is of relevance to note that many employers, especially in hi-tech areas, emphasize the need for learning outcomes associated with integrated learning such as critical thinking, communication skills, team work and abilities for lifelong learnings. With the rapid strides in technology

that include artificial intelligence, machine learning, robotics and communications, graduates will need transferable and uniquely human skills to be able to adoptively and continuously learn to work with and alongside new technologies. It is also important to recognise that each person entering the job market today, will look forward not only to several jobs but also to several careers in his/her working life.

As India aspires to grow and sustain a large and vibrant economy and uplifting its society, one of the key elements to its successful realisation is to have a robust ecosystem of research and innovation. The present inadequacies in this context are very much evident through the low number of researchers in India per lakh of population which is only 15 compared to 423 for US and 825 for Israel. This in turn has implications with regard to the number of publications and most importantly patent applications and industrial growth involving indigenous technologies. The problem is very much acute in the university system, even as I recognise the increasing prominence to research and its outcomes given in institutions like IISERs, IITs and other institutions of national eminence. Considering that we have nearly 900 universities, there is a sense of urgency in boosting the research capability in our higher educational institutions, particularly in the University systems. In order to seed, nurture, grow and transform Universities into full-fledged research centres of excellence, the NEP-2020 has recommended the creation of National Research Foundation (NRF). It will support research programs in sciences, technology, social sciences, arts and humanities and many other areas. Institutions like IISERs besides taking advantage of NRF also will have the responsibility of mentoring neighbouring institutions towards establishing research capabilities.

Dear Students, a word about what is in store for you. When you step out from this institution, you have to face the world which is full of challenges and uncertainties. In the very heart of challenges, there are hidden opportunities. Further, in the progress of your life, you will certainly come across hurdles, handicaps and failures. I can only advise that for everything you do, have a strong conviction, have the persistence to follow through your conviction and have the courage to face failures. I still remember the events in ISRO related to the failures of the first two Augmented Satellite Launch Vehicles. Even though, a sense of despondency overtook us initially, we did not allow this setback to override our resolve to succeed. I should say, the critical analysis and the in-depth assessment of the problems, we made and the technology and quality issues that we addressed really paved the way for the success of the present generation of PSLVs and GSLVs. In analyzing the failures, we got an insight into the inadequacies and the marginal nature of our initial design. Further our courage of conviction made us work with redoubled vigor to succeed which we did. I have often felt that life can teach you more from a failure than through success.

Notwith standing the considerations of professionalism, challenges, opportunities, risks and so on, you need to explore the limitless frontiers of knowledge throughout your life. My Dear Friends, the path to great achievements and success will put enormous demands on you and call upon you to bring to bear the highest degree of professionalism inspired by being a part of a fast changing knowledge ecosystem. This in turn, will imply continuous updating of your knowledge and thus making the process of learning a continuous one. The ancient Indian wisdom, reflected in the following Subhashitam shloka is apt to the situation and I quote:

"A student learns one quarter from his master The second quarter accrues from one's own intelligence 18 The third from fellow-students Time and experience confers the last quarter" Unquote:

In conclusion, I would like to emphasize that as inheritors of a society which blossomed up great values for life and a deep concern for human development, you should intensely aspire for deepening and broadening your knowledge, learn to experience the power of collective team work, and always be guided by higher values which you believe in. In all that lies before you, may God grant you wisdom, success and true sense of fulfilment of your cherished ideals and goals.

Thank you.

CAMPUS NEWS

National Seminar on Enhancing Quality in Teacher Education

One-day National Seminar on 'Enhancing Quality in Teachers Education' was organized by PSNL College of Education, Sattur, Tamil Nadu, recently. Dr. V Thanodharan, Former Principal, V O Chidambaram College of Education, Tuticorin, Tamil Nadu and Dr. C Praveen, Principal, Institute of Advanced in Education, Thrisur Kerala were the Guests of Honour. About three hundred and fifty teachers, research scholars and student were participated in the Seminar. The Seminar was chaired by Thiru K Raju, Chairman of College and inaugurated by Dr. V Thamodharan. Mr. B Kannan, Assistant Professor of Physical Science delivered the welcome address. Dr. G Gopalakrishnamoorthy, Academic Advisor, in his address stressed the importance of such events. He expressed his happiness for getting university first rank in Tamil continuously for the second year.

Dr. V Thamodharan, in his Inaugural Address lamented on the diminishing status of education in Tamil Nadu. He pointed out that Tamil Nadu is at 23rd place among the states in India and is nowhere in the world ranking. He said that the youngsters are the backbone of our country and the teachers are the backbone of the youngsters. During the technical session, Dr. Thamodharan spoke on 'Revamping the Professional Enrichment of Teachers'. He pointed out that a good teacher touches the heart of the students where as a teacher simply touches his ears. A teacher should behave ethically as well as morally. He should update his knowledge regularly keeping in mind the fast changes in the world. He said that a teacher should have the qualities of a mother and father and he should tries to know the strength and weakness of a student. He should impose only positive thinking in students mind. Further, nowadays many students have the feeling of insecurity and a teacher should uproot such feelings from the students. Welcoming questions from the students and allowing them to interact with the teachers are the good qualities of a teacher. He opined that a teacher teaches but a good teacher makes students learn more. He explained few strategies to impart excellence and efficiency in teacher education.

Dr. C Praveen spoke on 'Integrating ICT for Quality Enhancement in Teacher Education'. He rightly pointed that ICT benefits both the students as well as the teachers. He said that ICT enables greater imaginative understanding, provides clear logical thinking, enhances learner capacity and provides new forms and structure for representing knowledge. He said that in the era of technology, ICT supports plenty of resources to enhance the quality of teacher education. He is of the opinion that the quality of knowledge in a society depends upon the quality of education it provides. He stressed the need of creating positive learning environment. He said that in a positive learning environment all students feel comfortable and secured in an environment where they can interact with the teachers. Teachers can also help to create a positive environment by simply caring for the students and telling each of them that they are special. He opined that a teacher should enter the classroom with an energetic and positive attitude. In the paper presentation session, seventy three research articles were presented. Dr. R J Rathiees, Principal of the College acted as the moderator. Mr. K Raju, Chairman of the College distributed participation certificates to the participants. Professor S Karthika, Assistant Professor of English proposed the Vote of Thanks.

National Web Lecture on Health and Fitness Awareness

One-day National Web Lecture on 'Health and Fitness Awareness' was organized by the Centre for Disability Studies and Educational Research (CDSER) under the aegis of School of Education, Netaji Subhas Open University (NSOU), Kolkata through Zoom App, recently. Dr. A N Dey, Director, School of Education, Netaji Subhas Open University, Kolkata presided over the programme. He spoke on health as a key of staying focused in life long struggle. Prof. Sabyasachi Mukherjee graced the occasion as Chief Guest.

The digital event started with greetings from Dr. Papiya Upadhyay, Assistant Professor, School of Education, Netaji Subhas Open University, Kolkata the Host and Organizing Secretary of the event. She

highlighted the sequence of events in brief and staged the initiating spirit of Dr. A N Dey, Director, School of Education, NSOU and unparallel inspiration of Prof. Subha Sankar Sarkar, Vice Chancellor of the host university in organizing the digital event dedicated towards global citizens. The formal welcome of the invited speakers, participants, delegates and other attendees was addressed by Prof. Swapan Kumar Sarkar, Head, School of Education, NSOU.

Prof. Sumanta Chattaraj, Professor, School of Education of the host university introduced the illustrious speakers with their lauded credentials. The next phase of the event was thematic deliberations by the distinguished speakers. Prof. A M Moorthy, Former Vice Chancellor, Tamil Nadu Physical Education and Sports University threw light on the positive impact of yoga on dealing with physical and psychological ailments. He also cited different examples where medicines have failed but yoga might not disappoint the patients but have disappointed the disease. He advised that yoga actually boasts an impressive plethora of physical benefits suitable for all groups and can be used as complementary therapy in combination with conventional treatments of various diseases.

Prof. Sabyasachi Mukherjee, Vice Chancellor (Officiating), Laxmibai National Institute of Physical Education (Deemed University), Gwalior, Madhya Pradesh enumerated that the purpose of yoga is to establish strength, awareness and harmony in both body and mind and stimulates them to work harmoniously in a linear way. He assured that the relaxation techniques incorporated in yoga can lessen chronic pains.

Prof Asis Goswami, Ramakrishna Mission Vivekananda Educational and Research Institute. pictured how the age old techniques of yoga helps a person to manage stress, anxiety, traumas which are known to have devastating effects on mind and body. He assured that Yoga's incorporation of meditation and breathing can help improve a person's mental well being.

Prof Sanjib Mridha, Head, Department of Physical Education, Jadavpur University indicated that the main mantra of survival in the struggle of life is health and fitness. In a mentally depressed society, good health and sound body are the only two way out which can be achieved only by physical fitness.

Dr Sudarshan Biswas, Associate Professor, Department of Physical Education, Visva Bharati and President, Physical Education Foundation of India (PEFI), West Bengal Chapter told that a good health means that a person is physically and mentally strong and fitness refers to the ability of the person to encounter the demands of the environment.

Dr Sougata Sarkar, Head, Department of Sports, Mizoram Central University threw light on the inter-relatedness between health and fitness. Health is coined as the state of well being in which a person is free from illness and injury. Fitness denotes a stage of being healthy and physically fit.

Dr. Hira Chatterjee, Assistant Professor, Prabhu Jagatbandhu College delivered a vibrant and motivational lecture on the 'Importance of Health and Fitness'. She stressed on that health and fitness should be a lifestyle for all people. She also adumbrated the necessity for a healthy and fit community for a prosperous nation like India.

The sessions were moderated by Somsankar Chatterjee, Assistant Professor, SNIPEW, Hastings House, Kolkata and Biswajit Bala, Assistant Professor, West Bengal University of Teachers' Training, Education Planning and Administration (WBUTTEPA), Kolkata. This was followed by summing up of all the deliberations by Prof. S K Ghosh, School of Education, NSOU.

The event progressed with the Presidential Address delivered by Prof. A N Dey. He extended his gratitude to all the eminent speakers, their contribution towards the society at large and their valuable lectures. He also hinted that these professionals and academicians are an inspiration to the youth and community for their tireless effort for making a healthy nation. The event passed to the end with proposing Vote of Thanks by Dr. Parimal Sarkar, Assistant Professor, School of Education, NSOU. Participant's feedback from the link was released in the Zoom Chat box for the participants to fill in and submit. E-certificates were emailed to all participants of the event.

International Conference on Current Trends in Computational Mechanics

A two-day International Conference on 'Current Trends in Computational Mechanics' is organized by the Mechanical Engineering Department, National Institute of Technology, Raipur during March, 19-20, 2021. The students and research scholars,

academicians and R & D professional and Industry personnel. The Themes of the event are:

- Computational Solid Mechanics.
- Computational Material Science.
- Fracture Mechanics.
- Composites and Composite Mechanics.
- Computational Fluid Mechanics.
- Computational Heat Transfer.
- Multiphase Flow.
- Any Other Topic of Relevance.

For further details contact Organizing Secretary, Dr. N V Swamy Naidu, Associate Professor, Mechanical Engineering Department, National Institute of Technology, Raipur–492010 (Chhattisgarh), Mobile: 08247439930, E-mail: *icccm-2021@nitrr.ac.in*. For updates, log on to: *www.nitrr.ac.in/*

Workshop on Understanding India's National Security Challenges

One-week Online Workshop on 'Understanding India's National Security Challenges' is being jointly organized for teachers by the Centre for Security Studies, School of National Security Studies and Centre for Policy Research in Education, School of Education, Central University of Gujarat, Gandhinagar (Gujarat) during March 08-14, 2021. The faculty/teachers from various university departments and autonomous and affiliated colleges in various universities may participate in the event. The event is conceptualised to orient teachers from various disciplines to understand the nature and scope of India's myriad national security challenges in an increasingly interconnected and globalised world. As education plays an important role in nation-building, understanding the issues and challenges of national security by any educator/teacher would play a critical role in shaping students into responsible citizens aware of India's national security challenges. As responsible citizens, each and every student can take active role in creating a more secure environment at every level of our social and national life and make his/her contribution to the growth of our nation. The issues discussed during the event are:

- Introducing Concepts and Theory of National Security.
- Global Security Environment Understanding Regional Security.
- External Challenges to India's National Security.
- Internal Security Challenges to India's National Security.
- Non-Traditional Security Challenges.
- Management of India's National Security.
- Technology, Mass Media, and Cyberspace.
- Education System and National Security.

For further details, contact Coordinator, Dr. N Mohandas Singh, Assistant Professor, Centre for Security Studies, School of National Security Studies, Central University of Gujarat, Sector-29, Gandhinagar, Gujarat-382030, E-mail: *snssworkshop2021@gmail.com*. For updates, log on to: *www.cug.ac.in*

International Conference on Changing Business Paradigm

A three-day Online International Conference on 'Contemporary Issues and Challenges in Business Management : Post-COVID –19' is being organized by the Management Development Institute, Murshidabad, West Bengal during March 19-21, 2021. The event aims at capturing role of innovations in management practices. It seeks to deliberate upon the emerging theories, concepts and models in general, practical challenges encountered and solutions adopted in particular in the field of innovations in management practices keeping in view current pandemic situation too. The event endeavours to create forum for academician, researchers, practicing managers and students to share their ideas and research findings, and address contemporary issues and challenges in business and industry. The topics of the event are:

Contemporary Issues and Challenges in Marketing

- Digital Marketing.
- Permission Marketing.
- Consumer Behavior Analysis.
- Product and Brand Management.
- Integrated Marketing Communications.
- International Marketing.
- B2B Marketing.
- Services Marketing.
- Green Marketing.
- Retailing.
- Consumer Psychology.

- Rural Marketing.
- CRM.
- Marketing During Crisis.
- Marketing Analytics, etc.

Contemporary Issues and Challenges in Finance and Accounting

- Macroeconomics and Monetary Economics
- International Economics,
- Agricultural and Natural Resources
- Corporate Finance
- Banking, Insurance and Financial Services
- Asset Pricing
- Derivatives and Risk Management
- Managing Financial Institutions
- International Finance
- Corporate Accounting and Financial Disclosure Practices
- Mergers and Acquisitions
- Market Micro-structure
- Financial Literacy and Financial Inclusion
- Financial Innovations/Engineering
- Sustainable Finance
- Cryptocurrencies
- Blockchain and Fintech applications in finance
- Behavioural Finance
- Financial Modelling and Analytics
- Corporate Governance
- Capital Markets

Contemporary Issues and Challenges in OB and HRM

- HR in COVID Times.
- Organizational Behavior.
- Diversity.
- Equity and Inclusion.
- Human Resource Planning and Development.
- Talent and Competency Management.
- Change Management and Organizational Development.
- Employer Branding.
- Employee Engagement.
- Technology and HR.
- HR Analytics.
- HR Accounting.
- HRIS, Employee Relations.
- Strategic HRM and Global HR.

Contemporary Issues and Challenges in Operations and SCM

- Manufacturing Processes, SCM.
- Optimization Techniques.
- TPM.
- Project Management.
- TQM • Six Sigma and Productivity Management.
- Technology Management.
- Applications of Analytics in op.

Contemporary Issues and Challenges in IT

- E-commerce.
- E-governance.
- Soft Computing Techniques.
- Management of Information Technology.
- ERP.
- Information Technology.
- Project Management.
- Software Engineering.
- Decision Support.
- Experts Systems.
- Knowledge Management.
- Analytics and IT.

Contemporary Issues and Challenges in Business Policy, Strategy and Entrepreneurship

- Corporate Ownership.
- Governance Control and Business Ethics.
- Inclusive Growth – Strategy and Policy.
- CSR.
- The New Age Start-ups SMEs for Sustainable and Global Development.
- Entrepreneurship.
- Intrapreneurship.
- Socio Entrepreneurship.
- Techno Entrepreneurship and Women Entrepreneurship.

Case Studies

- In Any Functional and Cross-functional Areas of Management.

For further details, contact Organizing Secretary, Management Development Institute Murshidabad, Sakim-Katnai, Kulori, PO-Uttar Ramna, PS - Raghunathganj, Murshidabad, West Bengal-742235, Phone: 09674727164 **;** 09674757164, E-mail: *iccbp@mdim.ac.in.* For updates, log on to: *https://www.mdim.ac.in/iccbp* ❑

THESES OF THE MONTH

HUMANITIES
A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of December 2020- January 2021)

Geography

1. Chandran, Sarath. **Land and water management in Kuttanad Wetland of Kerala**. (Dr. Subrata Purkayastha), Department of Geography, North Eastern Hill University, Shillong.

2. Karmakar, Papri. **Hydro-geomorphic evaluation of Pachmarhi Hills using remote sensing techniques**. (Prof. Purshottam Soni), Department of General and Applied Geography, Dr Harisingh Gour Vishwavidyalaya, Sagar.

3. Mandal, Pronob. **Educational and employment status of the scheduled tribes population in Malda District, West Bengal**. (Dr. S K Bhattacharya), Department of Geography, University of North Bengal, Darjeeling.

History

1. Becha Lal. **Emergence of Christian educational and medical institutions in United Provinces, 1920-1947**. (Prof. S Victor Babu), Department of History, Babasaheb Bhim Rao Ambedkar University, Lucknow.

2. Choudhary, Ajay Kumar. **Mahatma Gandhi aur Bihar mein rajnaitik jagran**. (Dr. Anand Kumar Jha), Department of History, T M Bhagalpur University, Bhagalpur.

3. Gupta, Akhil Kumar. **Bharat ke rajnitik evam sanskritik vikas mein railway kee bhumika (1853 isvi-1947 isvi)**. (Prof. B K Shrivastava), Department of History, Dr Harisingh Gour Vishwavidyalaya, Sagar.

4. Jatav, Mukesh Kumar. **Malwa kee pramukh Masziden: Ek aitihasik anusheelan: 13v se 18v shati tak**. (Dr. Alpana Dubhashe), Department of History, Vikram University, Ujjain.

5. Mandloi, Vinita. **Malwa ke vaishnav dashavtar pratimaoan ka aitihasik adhyayan: Arambhik kal se 13v shatabdi tak**. (Dr. Ramkumar Ahirwar), Department of Ancient Indian History Culture and Archaeology, Vikram University, Ujjain.

6. Pandey, Umesh Chandra. **Damoh Jile ke prachin sthapatey evam murtishilp**. (Dr. Surendra Kumar Yadav), Department of Ancient Indian History & Culture, Dr Harisingh Gour Vishwavidyalaya, Sagar.

7. Rajput, Neha. **A study of condition of women in post independence India with special reference to Madhya Pradesh**. (Dr. Pankaj Singh), Department of History, Dr Harisingh Gour Vishwavidyalaya, Sagar.

8. Ramanandi, Trikalram Himmatram. **The contribution of Ravibhan Legacy in various fields in the special context of Rapar (From 1800 A D to 2000 A D)**. (Dr. S S Zala), Department of History, Saurashtra University, Rajkot.

9. Shrimali, Nikhilesh Bhanuprasad. **Parsi diaspora in Western India (700 C E to 1850 C E)**. (Dr. Abhay Kumar Singh), Department of History, Gujarat University, Ahmedabad.

10. Zhokusheyi, Rhakho. **The Battle of Kohima (1944) and its consequences on Naga Society**. (Prof. S N Lamare), Department of History, North Eastern Hill University, Shillong.

LANGUAGES & LITERATURE

Bengali

1. Dey, Prasenjit. **Abanindranather Gadya silpo: Boichitre O Bhabanay**. (Dr. Snehalata Das), Department of Bengali, T M Bhagalpur University, Bhagalpur.

2. Saifullah, Syed Md. **Nazruler probandhe manan evam binyas**. (Dr. Suhrid Das), Department of Bengali, T M Bhagalpur University, Bhagalpur.

English

1. Bhati, Shaktisinh Arunsinh. **Cultural consciousness in the works of Tahmima Anam and Monika Ali**. (Dr. Rakesh Damir), Department of English, Gujarat University, Ahmedabad.

2. Bodar, Dipti Shantilal. **A study of Arun Joshi's novels through mythological perspective**. (Dr. Ketan Vyas), Department of English, Saurashtra University, Rajkot.

3. Chhabra, Inderdeep Kaur. **A translation of selected Bhisham Sahni's short stories from Hindi to English with a critical introduction**. (Dr. A G Khan), Department of English, Vikram University, Ujjain.

4. Chouhan, Sona. **Portrayal of identity as crises: A study of selected plays of Mahesh Dattani**. (Dr. Jayakrishnan Nair), Department of English, Vikram University, Ujjain.

5. Desai, Rajvi Gurudatt. **Subaltern voice: A critical analysis of selected African-American women novelists**. (Dr. Deepakumar J Trivedi), Department of English, Rai University, Ahmedabad.

6. Fathima, Minhaj. **A study on the perception of students and teachers of Hyderabad District towards Continuous and Comprehensive Evaluation (CCE) method in English curriculum**. (Dr. M Latha), Department of English, Koneru Lakshmaiah Education Foundation, Guntur.

7. Joshi, Prakruti Tulajashankar. **Quest for identity in the works of Meena Alexander and Neil Bissoondath**. (Dr. Rakesh Damir), Department of English, Gujarat University, Ahmedabad.

8. Malik, Upasna. **Indian and Western myth narratives: A study in relation to the aesthetic form and structure**. (Prof. B I Guru), Department of English and Other European Languages Languages, Dr Harisingh Gour Vishwavidyalaya, Sagar.

9. Malviya, Ashok Kumar. **The selected novel of Alejo Carpentier and Amitav Ghosh as chronicles: A critical study**. (Dr. Ajay Bhargava), Department of English, Vikram University, Ujjain.

10. Nayak, Priti Sureshkumar. **Vision of life as reflected in the fiction of Ayn Rand: A critical study**. (Dr. Neeharika Rawat), Department of English, Saurashtra University, Rajkot.

11. Ojha, Meeti. **Thematic concerns in the novels of Chitra Banerjee Divakaruni**. (Dr. Laxman Singh Gaursya), Department of English, Vikram University, Ujjain.

12. Oza, Shivangi Dipakkumar. **The female protagonists in the selected novels of Anita Desai and Kajal Oza Vaidya: A comparative study**. (Dr. Rachit D Kalaria), Department of English, Saurashtra University, Rajkot.

13. Rathore, Ramnath Singh. **Portrayal of women characters in the select novels of Brian Moore: A critical study**. (Dr. Laxman Singh Gaurasya), Department of English, Vikram University, Ujjain.

14. Sharma, Rani. **Feminist perspectives in the selected plays of Caryl Churchill**. (Dr. Anjana Pandey), Department of English, Vikram University, Ujjain.

15. Shekhar, Sonu. **An experimental study on blended learning approach to teach presentation skills to tertiary level engineering students**. Department of English, Hindustan Institute of Technology and Science, Chennai.

16. Solanki, Sameerkumar Naranbhai. **Representation of dalit voices in select Indian fiction: A study**. (Dr. Maheh Bhatt), Department of English, Gujarat University, Ahmedabad.

17. Srikanth, N. **A comparative study of grammatical competence among the high school students of Municipal, A P residential and Zilla Parishad School of Guntur District in Andhra Pradesh**. (Dr. G Chenna Reddy), Department of English, Acharya Nagarjuna University, Nagarjuna Nagar.

18. Tanna, Rasikkumar Jivanlal. **A study of the effectiveness of mobile assisted language learning among engineering students of Gujarat**. (Dr. Vikas Raval), Department of English, Gujarat Technological University, Ahmedabad.

19. Thakor, Viral Manojbhai. **Decoding Their/story from His/story: A reading of postcoloniality is selected Canadian first nation writing**. (Dr. Darshana Bhatt), Department of English, Gujarat University, Ahmedabad.

20. Thakore, Nibha Arvind. **1947 revisited: A study of contemporary partition fiction in the light of trauma theory**. (Dr. Darshana Bhatt), Department of English, Gujarat University, Ahmedabad.

21. Yadav, Lokesh. **Family relationship in the select works of Zora Neale Hurston: A study in culture**. (Dr. Laxman Singh Gorasiya), Department of English, Vikram University, Ujjain.

Hindi

1. Ballanna, Ushamwar Gangadhar. **Devkinandan Shukla ke katha sahitye mein yatharth bodh**. (Dr. S L Muneshwar), Department of Hindi, Swami Ramanand Teerth Marathwada University, Nanded.

2. Chauhan, Maharudrapratapsinh Vikarmsinh. **Paryojanmulak Hindi ka swarupgat, vyavharik aur vyavsayik anusheelan**. (Dr. Sahilesh K Mehta), Department of Hindi, Saurashtra University, Rajkot.

3. Dhepe, Prashant Narayan. **Sanjeev ke katha sahitye mein upekshit samaj ka chitran**. (Dr. Ramkrishna Badne), Department of Hindi, Swami Ramanand Teerth Marathwada University, Nanded.

4. Maheshwari, Reeta. **Amarkant kee kahaniyoan ka samagre mulyankan**. (Dr. Shashi Joshi), Department of Hindi, Vikram University, Ujjain.

5. Patel, Ramashraya. **Hindi kee pragatisheel kavita mein nari chetna**. (Prof. Virendra Mohan), Department of Hindi, Dr Harisingh Gour Vishwavidyalaya, Sagar.

6. Sharma, Bhavana. **Hindi kee yatravrit parampara aur Govind Mishra**. (Dr. Uma Bajpayee and Dr. Jagdish Chandra Sharma), Department of Hindi, Vikram University, Ujjain.

7. Shaw, Sunil Kumar. **Television ke Hindi sahitya kendrit dharawahikoan mein abhivyakta yugin samasyayein: Ek adhyayan**. (Prof. Bharat Prasad

Tripathi), Department of Hindi, North Eastern Hill University, Shillong.

8. Sweta Kumari. **Hindi navgeet: Paridrishey aur mulyankan**. (Dr. Arbind Kumar), Department of Hindi, T M Bhagalpur University, Bhagalpur.

9. Upadhyay, Nirupa. **Malwi lok-kathaoan mein varnit istree sambandhit samasyayen**. (Dr Uma Bajpayee and Dr. Premlata Chutel), Department of Hindi, Vikram University, Ujjain.

10. Vaishya, Darshna Gangaram. **Hindi Gujarati upanyasoan mein bhumandalikaran ka prabhav tulnatamak adhyayan: 21v sadi ke pratham dashak ke chyenit upanyasoan ke vishesh sandarbh mein**. (Dr. Ranjana Argade), Department of Hindi, Gujarat University, Ahmedabad.

11. Vaniya, Tara. **Shrilal Shukla ke vyangya nibandhoan ka samagra anusheelan**. (Dr. Jagdish Chandra Sharma), Department of Hindi, Vikram University, Ujjain.

12. Yadav, Sandeep Kumar. **Bhagawandas Morwal ke katha sahitya mein yug sangharsha: Ek anusheelan**. (Dr. Geeta Nayak), Department of Hindi, Vikram University, Ujjain.

Kannada

1. Rathnakar, C. **Reconstructing the realities of cultural history in Kannada plays: With reference to selected plays**. (Dr. Sabitha Bannadi), Department of Kannada, Kannada University, Hampi, District Bellary.

Maithili

1. Putul Kumari. **Ekesam shatabdi dosar dashkak Maithili katha sahitiyak vishleshnatamak adhyayan**. (Prof. Raman Jha), Department of Maithili, Lalit Narayan Mithila University, Darbhanga.

Oriya

1. Suna, Kuna. **Odia upanyasare Kuhuka Bastabatara pratiphalana: Rupa O rupantarana (1980-2015)**. (Dr. Alok Baral), Department of Odia, Central University of Odisha, Koraput.

Sanskrit

1. Chaursiya, Shivpoojan. **Shivrajvijay ka sahitiyak evam sanskritik adhyayan**. (Dr. Sanjay Kumar), Department of Sanskrit, Saurashtra University, Rajkot.

2. Gajera, Bhavnaben Haridas. **Vishvagundarsha-champu of Venkantadhvari and Keralabharanachampu Ramachandramakhi: A comparative study**. (Dr. H M Kikani), Department of Sanskrit, Saurashtra University, Rajkot.

3. Kanasagara, Avinash Govindbhai. **A critical study and textual criticism of Ramapanivada's Vrattavartika**. (Dr. M K Moliya), Department of Sanskrit, Saurashtra University, Rajkot.

4. Patel, Rupa Natwarbhai. **Shrihitvijayigani-Ramchandra ganivaryoh: Meghduttikayah path-sampadnam samikshatatamakam adhyayanam**. (Dr. Hetalben M Pandya), Department of Sanskrit, Gujarat University, Ahmedabad.

5. Reddy, Avula Malla. **A study of Sanskrit poets in Karimnagar Mandal of Telangana State**. (Prof. K Satyanarayana), Department of Sanskrit, Acharya Nagarjuna University, Nagarjuna Nagar.

6. Sharma, Vinod. **Sanskrit vangmay mein Omkar Niroopan**. (Dr. Balkrishan Sharma), Department of Sanskrit, Vikram University, Ujjain.

Telugu

1. Bhai, Edam Geetha. **The Lexical Neighbourhood Test, Telugu version for hearing impaired children**. (Prof. G S Gabriel), Department of Linguistics, Potti Sreeramulu Telugu University, Hyderabad.

2. Murala, Ratna Leela Sankara Rao. **Jonnavithula Cinee saahithyam-pariseelana**. (Dr. E Madhavi), Department of Telugu, Acharya Nagarjuna University, Nagarjuna Nagar.

Urdu

1. Kuchay, Arshid Ahmad. **Urdu novel mein Jammu O Kashmir ke siyasee O Samaji Masayil: 1947 ke baad**. (Prof. Fidaul Mustafa and Dr. Waseem Anwar), Department of Urdu & Persian, Dr Harisingh Gour Vishwavidyalaya, Sagar.

LINGUISTICS

1. Srinivas, G. **Development and performance of computerized Telugu speech identification tool in normal hearing children and children with hearing loss**. (Prof. G S Gabriel), Department of Linguistics, Potti Sreeramulu Telugu University, Hyderabad.

PERFORMING ARTS

Visual Art

1. Rao, Kota Mrutyunjaya. **A study on visual art forms of Andhra Pradesh with special reference to Lepakshi Mural paintings**. (Dr. M Srinivasa Rao), Department of Archaeology & Architecture, Potti Sreeramulu Telugu University, Hyderabad.

Philosophy

1. Begum, Arifa Ara. **The ethics of Kant and the teachings of the Bhagavadgita: A comparative study**.

(Prof. B K Agarwala), Department of Philosophy, North Eastern Hill University, Shillong.

2. Chanchal, Chandan Kumar. **Apradh nivriti aur dand sidhant: Ek samajik evam naitik adhyayan**. (Dr. Swastika Das), Department of Philosophy, T M Bhagalpur University, Bhagalpur.

3. Jha, Uttam Kumar. **Swami Dayanand and Raja Ram Mohan Roy ka samaj darshan: Ek tulnatamak adhyayan**. (Dr. Shambhu Prasad Singh), Department of Philosophy, T M Bhagalpur University, Bhagalpur.

4. Marak, Rajesh M. **Garo Songsarek religion and culture: A philosophical study**. (Dr. E R Tongper), Department of Philosophy, North Eastern Hill University, Shillong.

5. Paraste, Meena. **Buddha Dharma sampardayaon ka darshanik adhyayan: Mahayan ke vishesh sandarbh mein**. (Dr. Hemant Namdev), Department of Philosophy, Vikram University, Ujjain.

6. Patel, Amitkumar Mafatlal. **Cognitive change through three socio philosophical movements- Theosophical Society, Prarthana Samaj and Brahmo Samaj: A philosophical analysis**. (Dr. Dyuti J Yajnik), Department of Philosophy, Gujarat University, Ahmedabad.

7. Vijaya, Muni Sanyam Ratn. **Jain darshan mein pooja ka swroop evam adhyatamik mehtav**. (Dr. T B Shrivastava), Department of Philosophy, Vikram University, Ujjain.

RELIGION

Buddhism

1. Vuong, Phan Khoa. **The relationship between the vipassana meditation and the noble eightfold path in the Pali canon: The philosophical thought**. (Prof. L Udaya Kumar), Department of Mahayana Buddhist Studies, Acharya Nagarjuna University, Nagarjuna Nagar.

Jainism

1. Jain, Anil Kumar. **Vishav ke vibhinn darshanoan mein Rishabhdev ka prabhav**. (Dr. Harshit Jain and Prof. Veersagar Jain), Department of Jainology, Teerthanker Mahaveer University, Moradabad.

2. Jain, Nitu. **Jain dharm-darshan ka adhunik vigyan ke sath tulnatamak adhyayan**. (Dr. Asha Rani Arora and Prof. Anekant Kumar Jain), Department of Jainology, Teerthanker Mahaveer University, Moradabad. ❑

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Applications are invited for the post of **Assistant Professor** (Substantive Vacancy – Aided)

No.	Subject	Open Quota	Community Quota
1	**Commerce**	2 (1 vacancy waiting for final government order)	1
2	**BSW**	2	1

The Scale of pay, Qualifications and age as prescribed by the UGC and applicable rules of Government of Kerala and Mahatma Gandhi University.

Application forms can be downloaded from the college **website https://www.mariancollege.org** on payment of Rs 7000/-.

Apply **within one month** from the date of publication of this notification.

Appointment is subject to the approval of the University and Government of Kerala.

16-02-2021   **Manager**
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(Affiliated to Mahatma Gandhi University, Kottayam)
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WANTED

Applications are invited from eligible candidates for the following permanent posts.

1. Chemistry - Assistant Professor - 1 (Open Merit)

2. English - Assistant Professor - 1 (Community Merit)

3. Computer Application - Assistant Professor - 4 (Open Merit - 2, Community Merit -2)

4. Botany - Assistant Professor - 1 (Open Merit)

Age and qualifications are as per Kerala Govt./ UGC/ M.G. University Rules. Application forms can be had from the college office on payment of Rs. 500/-. Apply **within one month** from the date of this notification.

Aruvithura   **Principal**
08-02-2021

NATIONAL LAW UNIVERSITY AND JUDICIAL ACADEMY, ASSAM
(ESTABLISHED BY ASSAM ACT NO. XXV OF 2009)

Advertisement No.NLUJAA/VCO/F/OFF-VCSC/2021/1
Date: 17.02.2021

SELECTION OF VICE-CHANCELLOR

Applications are invited by the Selection Committee appointed by the Executive Council for the post of Vice Chancellor, National Law University and Judicial Academy, Assam from eligible persons.

Details relating to the eligibility and service conditions, and the format of the application is available on the university **website: www.nluassam.ac.in.** Duly filled in applications should be sent by email to: **searchcommitteenlujaa@gmail.com** and/ or by speed post to :

     Justice Hrishikesh Roy,
     Judge, Supreme Court of India
     34, Prithviraj Road
     New Delhi -110011

Application forms must be received latest
on or before 10.3.2021.

                             Selection Committee

SACRED HEART COLLEGE (AUTONOMOUS)
THEVARA, KOCHI - 682 013
Tel : 0484-2663380; 2870500, 2870503
Email : office@shcollege.ac.in

NOTIFICATION

Applications are invited from qualified candidates for the appointment to the following permanent posts subject to concurrence and approval by the Government of Kerala.

Assistant Professor		
Subject/Post	General	Community
Aquaculture	2	1

Age, Pay, Qualifications, etc., as prescribed by Kerala Government / MG University / UGC Rules. Apply through the college web site only.

Last date for submission of application **within one month** of this notification. For more details**: www. shcollege.ac.in**

Date: 10/02/2021   **Principal**

Diocesan Society of Education's

Rosary College of Commerce & Arts

Navelim, Salcete, Goa 403707.
Minority Institution under Article 30(1) of the Indian Constitution
(Affiliated to Goa University) (Grant-in-Aid)
Re-Accredited by NAAC with `A' Grade with a CGPA Score of 3.29 (3rd Cycle)

Applications stating full name, address, age with date of birth, educational qualifications with marks or grades and percentage, experience, etc., are invited from Indian nationals for the post of

LIBRARIAN --- 1 post Full Time – On Probation

Essential Qualifications:

1. Master's degree in Library Science/Information Science/Documentation or an equivalent professional degree with at least 55% marks or its equivalent grade B in the UGC given point scale plus a consistently good academic record and knowledge of computerization of Library.

2. Candidates should have cleared the Eligibility Test conducted by UGC/CSIR such as NET/SET or similar test accredited by UGC. However, candidates who have been awarded the Ph.D. degree in compliance with the UGC (minimum standards and procedures for award of Ph.D. degree) Regulations, 2009, as incorporated in the relevant Goa University Ordinance, shall be exempted from the requirement of the minimum eligibility condition of NET/SET for recruitment. In case candidates having passed the said Eligibility Test / Ph.D. are not available, or are not found suitable, candidates fulfilling all other conditions would be considered for appointment on Contract Basis (subject to the approval of the Goa University / Govt. of Goa and / or as per the prevailing guidelines of Goa University / Govt. of Goa) on purely temporary basis for a period of 11 months.

Service Conditions: As per the provisions of Goa University, University Grants Commission, Directorate of Higher Education, Govt. of Goa, Diocesan Society of Education and other competent authorities. Candidates must have 15 years domicile in Goa. Knowledge of Konkani is essential and knowledge of Marathi is desirable. Persons who are already employed shall send their applications through proper channel. Break in service, if any, should be accounted for.

Scale of Pay: As per the provisions of the Goa Government and Goa University.

The vacancy will be filled up, subject to approval of Goa University and Directorate of Higher Education, Government of Goa, and other stipulations. All other regulations/guidelines as those prescribed by UGC, Goa University, Govt. of Goa and Diocesan Society of Education will apply.

The right not to fill up the above mentioned post is reserved. Application with incomplete information will be rejected outright.

Application along with attested photocopies of mark sheets of all examinations from SSC onwards should reach the Acting **Principal, Rosary College of Commerce and Arts, Navelim, Salcete, Goa 403707**, **within 20 days** from the date of publication of this advertisement by superscribing on the envelope **'Application for the post of Librarian'**

Date: 29th January, 2021   **Acting Principal**

ANNOUNCEMENT

Special Number of University News
on
Implementing National Education Policy–2020 to
Transform Higher Education in India

A **Special Number of the University News** on the theme **'Implementing National Education Policy -2020 to Transform Higher Education in India'** is being brought in the month of March, 2021. The **Special Issue** will cover articles of eminent educationists and policy makers. Readers of the University News are also invited to contribute to the Special Number by submitting papers/articles on above theme by March 08, 2021. The papers will be published in the Issue subject to fulfillment of AIU Norms for publication as given in AIU Website and on the approval of the Editorial Committee of the University News.

1. Innovative Implementation Strategies for Recommendations on Various Components of the Policy.

2. Implementation Strategies for Different Dimensions Viz., Teaching, Research and Community Engagement.

3. Issues and Challenges in Implementation of the Policy.

4. Practicability, Suitability and Ease of Implementation of the Policy.

5. Roadmap for Holistic Implementation of the Policy.

6. Actionable Points on the Part of Government, HEIs and other Stakeholders.

7. Implementation Strategy for NEP–2020 With reference to

   a. *Governance Reforms and Financing of Higher Education*

   b. *Holistic and Multidisciplinary Education with Technology Integration*

   c. *Promoting Quality, Research and Internationalization in Higher Education*

   d. *Teacher Education, Vocational Education and Professional Education*

   e. *Equity and Access in Higher Education including Promotion of Indian Languages, Art & Culture*

Manuscripts may be emailed to the Editor, University News, Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi-110 002. E-mail: unaiu89@gmail.com/universitynews@aiu.ac.in/rama.pani2013@gmail.com, Fax: 011–23232131 **on or before March 08, 2021**.