

Cover Story

Ms. Bindu Ajit, Program Dean, on New National Education Policy

National Education Policy (NEP) is the first education policy of the 21st century, replacing the National Policy on Education (NPE), 1986. NEP provides the missing flexibility in the Indian education system by catering to the unique capabilities of each student by making college education more holistic.

Over the next 15 years, all Higher Educational Institutions of India will go through a graded accreditation and autonomy process in a phased manner focusing mainly on innovation and excellence. NEP specifically emphasizes in preparing professionals in areas such as biotechnology, genomic studies, nanotechnology, neuroscience etc. with important applications to health, environment, and sustainable living. Greater emphasis will be on preventive healthcare and community medicine in all forms of healthcare education.

With a vision to enhance the employability of the youth, higher education will be re-engineered so that the duration, structure & design of the courses match the industry requirement. NEP is also focused on creating job creators than job seekers by focusing on the application of innovate ideas. It is very important to create a strong talent pool in this sector to convert this surge to quality growth and sustain. Given the confidentiality, high cost and long-term nature of projects, Biotechnology industries are very cautious in choosing and hiring the right candidate. Majority of students, though being good in theoretical knowledge, lack their practical skills and hence, are usually not considered industry ready.

It is commonly observed that the pay scale for a Biotechnology fresher is not so good when compared to other industry standards. However, it is important to understand the reasons discussed above. The pay scale mainly depends on the type of industry, role, and qualification. While startups generally pay around Rs 1.8 - 2.4L, medium scale and established companies pay around Rs 2 – 3L and Rs 2.8 – 4L respectively. It is important to note that the candidates start getting better packages once they complete 1 – 2 years of work and start contributing.

Government entities like BCIL through BITP, state-level initiatives like BiSEP, and private sector initiatives like Biocon Academy are playing a key role in providing a finishing school experience and making graduates industry-ready. Though novel, the scale of these initiatives constrains them to cover a larger student population. Reforms in the policy level is certainly a welcoming one which will help students in making to research, academic or industry professionals.



NATIONAL EDUCATION POLICY 2020

It's a delight to see this long-awaited reform in the education sector to ensure access and opportunity to all students with focus on 21st century skills in teaching, learning and assessment. The curriculum content is reduced to core essentials and gives way to more options for students. This system will encourage critical thinking & holistic learning. The teachers are going to be trained to be equipped for the new system which is also important.

Ms Bindu Ajit
Program Dean, Biocon Academy

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Chromatographer Certificate
Program

Message from the Academic Manager

The Changing Landscape of Imparting Education: Are you In-line for On-line?



DR RAMGOPAL RAO S
ACADEMIC MANAGER,
BIOCON ACADEMY

Emergence of online education has been one of the unexpected benefits reaped by mankind in this post-COVID-19 era. The pandemic has driven lakhs of students out of their college/university spaces and confined faculty to their homes. Although majority of faculty and students of HEI's could somehow cope-up with this sudden change by completely switching over to virtual teaching-learning paradigm, many have suffered setbacks and delays. It is increasingly becoming evident that today's student wants to learn more through such new models that are both accessible and convenient. To cater to these digital-natives & mobile-first-generation students, educational institutions must invariably turn more student centric to sustain and become successful. What this digital-leap means to everyone is getting clearer day by day for institutions, academic leaders and administrators. As technology and automation is drastically changing the future of work, we must prepare a workforce who can continually upgrade their skills accordingly. It is time for everyone to realize that this holistic and highly personalized online education is going to be **the-new-normal** owing to its adaptive nature and long-term benefits.

For bringing such digital learning ecosystem into the foray of school and higher secondary education, Government of India have taken several steps in this direction with the help of CBSE, NCERT, ICSE and States, be it creating '**Diksha**' – a digital platform with 80,000 plus e-Books for classes I to XII along with a mobile app option, or creation of '**e-Pathshala**' with a collection of thousands of audio & video content, e-books and flip books in different languages. Government has also started supporting the innovation journey of students from their homes by launching Atal innovation mission and Atal tinkering lab programs. It is time both public and private higher educational institutions of India start adapting next-gen technologies like artificial intelligence and deep learning models to create customized digital learning tools and systems across all science and technology domains. Although majority of the faculty feel that they are subject experts and great classroom teachers, they need to get re-trained and orient themselves better suited for implementing online teaching-learning systems to be relevant with these changing times. Coming days will see more and more Institutions adapting virtual learning environments (VLE) and assessment platforms (ex. Google classroom) along with e-meeting apps like Zoom, WebEx, Microsoft Teams, Google Meet & so on to impart quality education. However, as we shift to e-learning, we cannot undermine the fact that the digital divide prevailing in India, be it device access issue or non-availability of connectivity is bound to have a huge impact on the students from lower socio-economic backgrounds.

Biotechnology being interdisciplinary nature holds the key to solve many societal problems. Biotech education is heavily dependent on not only integrating latest developments and technologies into their curriculum but imparting more practical training. Although several HEI's of India have been successfully churning out hundreds of biotech graduates/postgraduates every year, those who could not employ digital learning systems or those who could not collaborate with external e-training partners in this post-COVID-era are facing lot of difficulties in sustaining the success of their courses. Biocon Academy has been successful in running with a strong belief of graduates/post graduates getting trained based on the principle of '**unlearn-and-relearn**' to enable them constantly up-skill themselves with the changing needs of Biotechnology Industry towards making them the ideal workforce of the future. As blended learning will become the new-norm, we at Biocon Academy have successfully embraced online & digital educational platforms with experiential learning to make students more successful and industry ready.

Hear it from MSR Faculty

India's National Education Policy (NEP), 2020

The long-awaited National Education Policy (NEP) has been approved by the Indian Cabinet on 29th July 2020. The NEP intends to bring transformational reforms to tackle the existing challenges in higher education in India, such as, low Gross Enrollment Ratio (GER) in Higher Educational Institutions (HEIs), high emphasis on rote learning over experiential learning, and lack of 21st century skills in students.

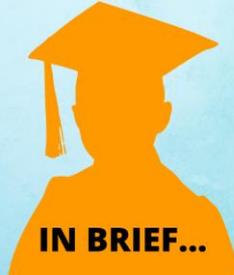
As per All India Survey on Higher Education (AISHE), 2018-2019, the GER in HEIs is at ~26.3%. The main reasons for the low enrolment in HEIs are lack of flexibility and variety in the courses which offer better career aspects, fewer Institutions within the reach of students, and low quality of research. To tackle these issues and to increase GER in HEIs to 50% by 2035, NEP aims to bring holistic, flexible, and multidisciplinary college education that suits well to 21st century needs. The options of multiple exit points, flexibility in choosing course work, and a centralized credit transfer system will greatly benefit the student community. NEP also envisions to introduce a possible 1-year master's program for those who will be pursuing the new 4-year bachelor's program. This initiative will help students to reduce redundancy in academic years and gain eligibility in applying for Study Abroad programs with ease. But then again, we need to ponder who will be funding the student research projects? How much of the allotted 6% Gross Domestic Product (GDP) will contribute to research in terms of resources and infrastructure augmentation in HEIs?

Importantly, NEP aims to replace the existing 10+2 school system to a new (3+2) +3+3+4 system, which is divided into 5 years-Foundational stage, 3 years-Preparatory stage, 3 years-Middle stage, and 4 years-Secondary stage. Significantly, the emphasis on experiential learning given at the Preparatory stage (aged 8-11, classes 3 to 5) is praiseworthy. Experiential learning will surely replace the traditional rote learning through play and activity-based pedagogy. Furthermore, children will develop critical thinking by 'learning through doing' and thus shifting focus from 'what to think' to 'how to think'. Nevertheless, proper implementation of experiential learning it is imperative to improve infrastructure at both primary and secondary levels and the existing teachers need to be trained well to deliver the expected outcomes. In addition, end-semester/end-year exams need to be replaced by a system of continuous evaluation.

To empower HEIs and to make them competitive for the 21st Century Skills, NEP proposed to strengthen National Higher Education Qualification Framework (NHEQF) in association with the National Skills Qualification Framework (NSQF). This will help students to acquire competency-based skills. Nonetheless, it should be also noted that both skill councils and educational institutes should work collaboratively through proper design, curriculum, and pedagogy to make Skill India a success. In addition, bringing stronger Industry-Academia collaborations to prepare students to be industry ready is also necessary.

Conclusively, we strongly opine that the intent of NEP is laudable, but the implementation needs a coordinated and timely planned approach from Ministry of Education by uniting both the Central and State Governing Councils. Thus, the NEP can make us atma-nirbhar, provided we ingrain its mission and implement it appropriately.

Views above on NEP 2020 are presented by Faculty from Ramaiah College of Arts, Science, and Commerce, Bengaluru – Dr. Nagarathna A, Dr. Nagagireesh B, Prof. Prasanna Kumar SG, Dr. Vemula Vani & Dr. Vasanth KB.

National Educational Policy (NEP) 2020	First such policy in 34 years!	4 Year multidisciplinary bachelor's programme
 IN BRIEF...	Flexibility to choose subjects across streams	Affiliation system to be phased out in 15 years with graded autonomy to colleges
	Multiple entry/exit to be allowed with appropriate certification	To encourage logical decision-making and innovation among students



'In Conversation with Dr Narendra Chirmule'

"From my vantage point, the courses that Biocon Academy has put together are outstanding. Over the years, and with each class, Bindu, Easwaran and Ram have obtained feedback from all their advisors as well as students, to improve every aspect of the program. I am sure the students find enormous value from these courses, notwithstanding, almost guaranteed placement."

We recently had a chat with **Dr Narendra Chirmule** who is a Biotechnology professional and a music enthusiast. He comes with 30+ years of industry experience. He has published and presented seminars on subjects like immunology, biologics and vaccines, and contributed to the development of vaccines and biologics.

Dr Narendra delivers guest lectures at Biocon Academy on a regular basis. He is currently the CEO & Co-Founder of SymphonyTech Biologics. Before embarking on his mission to establish SymphonyTech Biologics, he was the Senior Vice President and Head of R&D at Biocon. He is also a member of Scientific Advisory Board for Immuneel. He has a vast experience with global pharma companies such as Amgen, Merck, Cipla, etc.

He holds a PhD on development of a leprosy vaccine from Cancer Research Institute, Mumbai, and has completed his post-doctoral studies on pathogenesis of AIDS from Cornell University Medical College-North Shore Hospital, and taught immunology at the University of Pennsylvania.

He is an amateur musician and plays a variety of rhythm instruments. He has recently started learning the flute and vocal music in the Dhrupad style. He actively worked on promoting Hindustani classical music in Los Angeles (Rupak School of World Music) and Philadelphia (Sangeet Society). His passion is to "get folks together" to play music, using soundscapes and drum circles. He has also delivered an inspiring TedTalk on Biotechnology: Inflection Points for Success which was indeed thought-provoking.

To read the full interview: [Click Here](#)



DR NARENDRA CHIRMULE
CEO & CO-FOUNDER,
SYMPHONYTECH BIOLOGICS



Alumni Speak

"The Covid-19 crisis also showed us that our organization truly values and prioritize our well-being. They are always there to benefit us with health and safety measures and help us to navigate the daily challenges with a healthier mind and body."

Nimisha A. Mishra, student of batch 12 of Biocon KGI Certificate Program in Biosciences.

She pursued M.Sc. in Zoology from The Institute of Science, Churchgate, Mumbai. She is currently working as Senior Executive in API Commercial at Biocon. Prior to this she worked at Symbio Generrics India Pvt Ltd., Mumbai as a Marketing Executive. She has also worked as a ZuResearcher (Non- Medical) on the on project 'Use of Mobile phones & Risk of Brain Tumor' at TATA Memorial Centre, Mumbai in Centre for Cancer Epidemiology.

Nimisha's hobbies include reading, gardening, dancing. She has shown her contribution for BioZesta, where she has written a blog on 'Managing work life balance amidst Covid-19/WFH.'

To read the blog: [Click Here](#)



NIMISHA A. MISHRA
BIOCON KGI CERTIFICATE
PROGRAM IN BIOSCIENCES,
BATCH 12



- Indian-origin surgeon creates a new Covid-safe mask with an inbuilt SNAP device that can stop patients from spreading COVID-19 virus & protect healthcare workers from catching the infection.

To Read: <https://bit.ly/3618lo6>

Teaser for next edition:

Biocon Academy has signed MoU with Andhra Pradesh State Skill Development Corporation as their knowledge partner in the development of skills through Skill Colleges. Stay Tuned!

Be Healthwise

"Strengthen your Immune System"

With the linear curve in coronavirus cases and growing need to boost one's immunity, here are few immune system boosters that will help boost your immunity to fight the infection during the pandemic.

Citrus fruits such as, limes, tangerines, lemons are great source of Vitamin C

Fruits such as papaya, apples, kiwis are rich in iron and vitamin C

Vegetables such as red bell peppers, broccoli, spinach are great source of Vitamin C, Vitamin A, Iron, Zinc and antioxidants

Spices such as turmeric, garlic & ginger have great anti-inflammatory & anti-viral properties and helps in fighting infection

Greek yogurt may stimulate your immune system to help fight diseases

Nuts and seeds such as almonds, flax seeds, walnuts, sunflower seeds are powerful source of antioxidants, Vitamin E & Vitamin A and omega-3 fatty acids



With good nutrient rich food, it is highly important to maintain a healthy lifestyle and practice hygiene. Engage yourself in yoga & meditation. Practice pranayama everyday to keep your lungs healthy. Take adequate amount of sleep. It is necessary to know your immune system and take care of it accordingly.

Stay Healthy And Stay Safe!

Events and Happenings – Glimpses of Chromatographer Training

Chromatography is an essential analytical technique and is widely used in biopharma industry. With the aim to train the analysts from R&D Dept. of Biocon and Syngene with right principles and technique to operate Chromatographic Instruments, we rolled out an exclusive 3-week '**Chromatographer Certificate Program**' in partnership with Thermo Fisher Scientific.

Our goal is to enhance, evaluate, and certify the technical skills of analysts involved in performing chromatographic analysis of drug substances.



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For suggestions and feedback, please write to us at:

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Know more about us: www.bioconacademy.com