



# NEP 2020: A move to multidisciplinary approach in higher education

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## Introduction

India's best education thinker, Swami Vivekanand (1), states, "*Education is the manifestation of the perfection already in man.*" This means that education plays a fundamental role in achieving the full potential already present in a man. The best way of shaping talent is by ensuring the availability of high-quality education in a nation; it becomes a good resource for developing a society, a nation, and the world. Because today's students will be civilians of tomorrow for a nation, it is the only way to develop creative imagination, scientific temper, rational thinking, human values, and sound ethical values attributes in students.

Kothari Commission (1964-66) on education also said that "*The destiny of India is being shaped in the classrooms*" (2). Education is the best tool for achieving inclusion, equality, and economic and social mobility in society. The aim of education should not only be cognitive development but also to help build character. It should enable learners to be compassionate, ethical, rational, and caring, thus creating holistic and well-rounded individuals. The world of the 21st century needs a skilled workforce, especially in mathematics and computer science, with various disciplines across the sciences, climate science, agriculture, humanities, and social sciences. Thus, education must prepare the learner to fulfill the need for 21st century skills that are useful for employment.

Sustainable livelihoods of citizens and a growing national economy must require that the nation's higher education form the basis for the creation of knowledge and innovation. Quality higher education can only provide meaningful and satisfying lives and economic independence to the citizens. Higher education should play a key role in developing a progressive, cultured, innovative, productive, and prosperous nation. Higher education aims to create a well-rounded and creative individual. It must offer the students the deep study of one or more specialized areas of interest, and it must also develop characteristics like curiosity, creativity, scientific temper, ethical values, and a spirit of service.

The agenda of providing quality education is reflected in the Sustainable Development Goal 4 (SDG4) 2030, which India adopted in 2015. Such critical targets can be achieved by reconfiguration of the entire education system.

## Goals and expected outcomes of previous NEPs

The National Education Policy is a policy framed by the Indian Government to promote the education system in India according to the needs of India's people. Indira Gandhi launched the First National Education Policy-led government in July 1968. In 1979, the Morarji Desai government presented her new NEP. The Rajiv Gandhi government launched a more inclusive and elaborate National Education Policy in 1986. National Education Policy 1986 was reviewed in 1992. Since the last policy, there have been many developments in the education sector.

Previous education policies were mainly focused on the issues of access and equity for all learners regardless of socioeconomic background.

Implantation of these policies developed a traditional system of education in India, lacking a multidisciplinary education pattern; fragmented higher educational system; rote learning or exam-oriented learning; less emphasis on the learning outcomes and development of cognitive skills in students; rigid separation of disciplines; early specialization and streaming; limited access of higher education (HE) because of languages problem; limited institutional autonomy; lesser focus on research; lack of peer-reviewed research funding; large affiliated universities having low levels of undergraduate education, suboptimal governance and ineffective regulatory system of HE.

## Goals and expected outcomes of NEP 2020

Keeping focus on the problems generated in Indian education system by implementation of previous policies a New National Education Policy 2020 was announced by Narendra Modi government in 29 July 2020. It is a comprehensive framework for school to college/university education.

- *Karnataka was the first and Madhya Pradesh was the second Indian states were announcing implementation of NEP 2020 in undergraduate education in their states.*

## Vision of NEP 2020

National Education Policy 2020 proposes reconfiguration of Indian education system in all aspects with the vision-

*"NEP 2020 envisions an education system based on India's tradition and values that contributes directly to transforming the nation sustainably into an equitable and vibrant knowledge society by providing high-quality education to all. The curriculum and pedagogy of our educational institutes must develop a deep sense of respect in our students towards the constitutional values, fundamental duties and pride in being Indian, not only in thought, but also in spirit and deeds."*<sup>(3)</sup>

## **Goals of NEP 2020**

The goals for the changes to the education system in India proposed by the New Education Policy are as follows-

Elimination of the fragmentation in higher education by introducing multidisciplinary institutes by 2030; Multidisciplinary Education and Research Universities (MERUs) will be set up with aim to achieve the highest standards in quality of education; increase the Gross Enrolment Ratio (GER) up to 50% by 2035 in higher education including vocational education; local/Indian languages will be medium of instruction in more HEIs; undergraduate education will be more multidisciplinary and focused on every field of knowledge; emphasis on conceptual understanding; move towards faculty and institutional autonomy; renovation in the curriculum, pedagogy and assessment system; funding and supporting a vibrant research and innovation culture in HE will be achieved by the establishment of a National Research Foundation (NRF); single regulatory institute named as Higher Education Commission of India (HECI) will be established for regulation of higher education, it having 04 independent verticals; National Higher Education Regulatory Council (NHERC) for regulating higher education, National Accreditation Council (NAC) for accreditation of HEIs, Higher Education Grant Council (HEGC) for funding of HEIs and General Education Council (GEC) for to set standards for higher education system in India.

## **Expected outcomes of NEP 2020**

Expected outcomes of the implementation of NEP 2020 for educational system are:

- No rigid separation will be in various disciplines of education,
- Flexibility in subject choice,
- Holistic and multidisciplinary education,
- Emphasis on conceptual understanding,
- Development of critical thinking, creativity, ethics, and values like human values, and constitutional values in students,
- Promoting multilingualism,
- Consistent formative assessment,
- Use of technology for teaching learning,
- Synergy in curriculum from elementary education to higher education,
- Promotion of outstanding research by set up of NRF.

*Meenakshi* in her comparative study of present and previous policy on education find that new policy on education 2020 has much scope of holistic development of students through multidisciplinary approach in higher education with choice based flexible curriculum, autonomy to institutions, digital and student centric learning. <sup>(4)</sup>

### Holistic and multidisciplinary approach

Ancient India had world-class universities like Takshashila, Vikramshila, and Nalanda, vibrant multidisciplinary environments for teaching and research, and hosted scholars across the countries. Charaka, Susruta, Bhaskaracharya, Aryabhata, Panini, Patanjali, Maitreyi, and Gargi, like great scholars, were produced by the ancient Indian education system and contributed to the world in diverse fields of knowledge. Thus, India has a long tradition of holistic and multidisciplinary education system.

A holistic and multidisciplinary education should aim to develop all human capacities in an integrated manner and help develop well-rounded individuals with 21st-century capacities in various fields. For the development of holistic individuals, an identified set of skills and values should be incorporated into the curriculum from school to college education. *Pathak* explained that this education policy focuses mainly on the holistic development of students by ensuring access, quality, equity, and intense foundational learning. <sup>(5)</sup>

Studies (*Pathak, 2020*) and assessments in undergraduate education showed that integrated education promotes critical thinking, improves students' educational experience, and empowers them toward success. A multidisciplinary educational approach also enhances research. Under the interdisciplinary approach in HE, it is required to establish various departments like Languages, Art, Literature, Music, Philosophy, Education, Sociology, Geography, History, Economics, Statistics, Mathematics, Pure and Applied Sciences, Sports, and other subjects needed at all HEIs.

In the multidisciplinary concept, the students will be free of subject selection according to their needs, interests, or future career plans (Fig 1). For example, suppose a science faculty student wants to study any subject of art or other faculty along with the primary subject of their faculty. In that case, they can study this subject as an Open Elective. A multidisciplinary approach will also open various career opportunities.

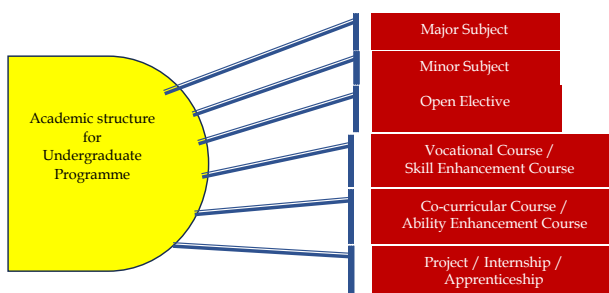


Fig. 1. Multidisciplinary approach in higher education

### **Choice Based Credit System (CBCS)**

NEP 2020 introduces a *Choice Based Credit System* under multidisciplinary education pattern, which means all higher education institutes will offer credit-based courses that will open for students' choice. It will replace the traditional system of previous policies on the Indian education system. The CBCS-based syllabus for the Graduate Programme will be a maximum of four durations. In this system, any student admitted to any faculty will study a Major subject, Minor subject, Open Elective, Vocational subject, and Co-curricular/ foundation subject along with Field Projects / Internship / Apprenticeship / Community Engagement and Services (Fig 1).

Credits will be given for the subjects in all Bachelor's Degree programs, whether completed from any HEI departments or through Open Distance Learning (ODL) mode. Study hours for each question paper are fixed by NEP 2020 and are called *credits*. Credits mean study hours for any course. According to the guidelines of the NEP 2020 study, 15 hours is equal to 01 Credit. The total number of Credits for each question paper has been fixed accordingly, and earning these credits is required to complete any course.

The Choice-Based Credit System will be helpful for flexibility in education patterns and innovations. HEIs shall move to a criterion-based grading system. This system assesses student achievements based on the learning goals for each program.

### **Academic Bank of Credit (ABC)**

An *Academic Bank of Credit (ABC)* shall be established by all Higher Education Institutes (HEIs), which will digitally store the students' academic credits earned by completing a course from various recognized higher education institutes. (3) Degrees from an HEI can be awarded by taking into account credits earned by the student, and any student can use these deposited credits only once for a degree. Earned credits stored at ABC will be helpful for students if they come back years later and join the program after dropping out and the study gap. These credits will be transferable when the student changes colleges or universities.

### **Curricular structure and flexibility in choice**

NEP 2020 advised HEIs to create a student-friendly environment with a holistic approach; design choice-based flexible curricula, apply interactive pedagogy, and arrange a consistent formative assessments of learners. The flexible curricular structures would enable creative combinations of disciplines and offer multiple entry and exit points at the graduate level, which means any student can exit at the end of any year of a graduate program, like 1st year, 2nd year, or 3rd year after earning of required credits and again take admission in a new level of their program when they are feeling the need for further study (Fig.-2). Thus, traditional rigid boundaries are removed, and possibilities for lifelong learning are created.

Teaching and learning will be participatory and collaborative. Pedagogy will emphasize discussion, discovery orientation, research, and opportunity for cross-disciplinary thinking.

Curriculum content will be reduced to make space for critical thinking and more holistic learning. To make education more well-rounded, the curriculum must include essential arts, crafts, sports and fitness, languages, humanities, literature, culture, and values, in addition to science and mathematics. Flexibility in the curriculum will offer students course options and rigorous specialization in a subject. To attain holistic and multidisciplinary education, the curricula of all HEIs should be flexible and innovative. They should include credit-based courses and projects, value-based education, and internships. Undergraduate, Master's, and Doctoral education in large multidisciplinary HEIs, while providing rigorous research-based specialization, would also offer opportunities for interdisciplinary work.

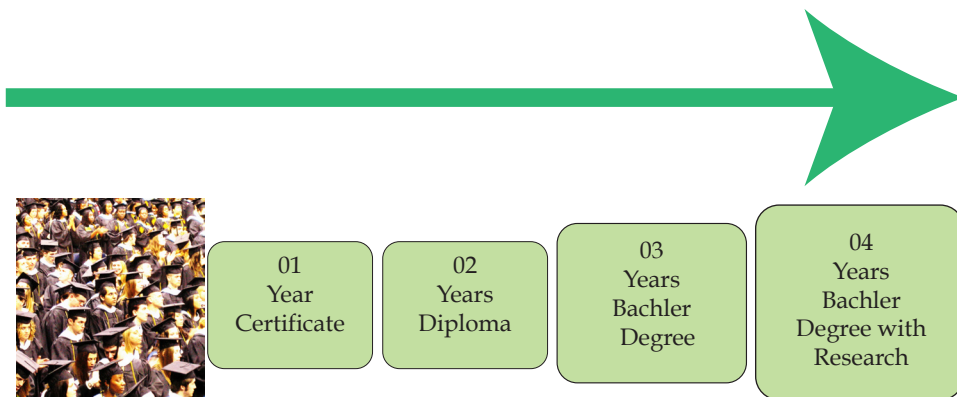


Fig. 2. Multiple entry and exit scheme at graduation level

To attaining multi-displinary following subject combinations will be offered by HEIs to students at the time of taking admission in undergraduate programmes.

#### **Major subject:**

Institute will offer 01 major subject (as in MP state)<sup>6</sup> or 03 major subjects (as in UP state)<sup>7 & 8</sup> in the process of admission from own faculty selected by the student based of pre-requisite, means it will be based on subject combination of senior secondary education. Major subject will providing rigorous research-based specialization to the students and they will complete his Master and Ph.D. degree in future on this subject.

#### **Minor Subject:**

Minor subject may be chosen either from the remaining 2 subject of own faculty after selection of a major subject (as in MP state)<sup>6</sup> or from other faculty of that HEI based on interest, choice or need (as in UP state)<sup>7 & 8</sup>.

### **Elective subject / Open Elective**

Students can choose either 3<sup>rd</sup> remaining subject from own faculty as an elective subject (as in MP state)<sup>6</sup> or as open elective subject from another faculty's course of that or nearby HEI or through UGC approved ODL programme / SWAYAM portal. Self-study through online mode will create tendency of reading in students. It will also instil confidence in them.

### **Vocational Subject**

It is vocational course, also called as *Skill Enhancement Course (SEC)*, an important section of NEP 2020 specially for higher education, develop skills to fulfil the need of industries and helpful also for the employment to our students. On the basis of carrier opportunity and personal ability and interest, students can choose a vocational subject from different SECs available in universities / colleges. Students can either choose new vocational subject in the second year of Bachelor programme or carry on study of previously selected vocational subject in the first year for further enhancement of skill. HEIs will permit to students for the study of own choice vocational subject from any open distance learning platform / UGC approved online learning platform / SWAYAM portal and earned credits will be included in learner's result. According to the target given by NEP 2020 that by 2025, vocational education shall cover at least 50% of learners. Curriculum related to skill development in students will be compulsory in first 2-year or 4 semester of undergraduate study programme.

### **Co-curricular subject/foundation subject**

It is an *Ability Enhancement Course (AEC)*, develop patriotism, sociality, ethics, health awareness, leadership and human values like attributes in learners. Students can select any one subject from the various co-curricular subjects available in their university or college. Co-curricular subjects for any HEIs may be Human values & Environmental study, Communication skill, Personality development, Food, Nutrition and Hygiene, First Aid and Health, NSS, NCC, Sport, Physical education and Yoga etc.

### **Project/ Internship/Apprenticeship**

Actively engagement of students in Project / Internship / Apprenticeship / Community engagement and service will provide practical knowledge of their learning and improve their employability. A student can choose one of these from work field of own faculty, on the basis of his interest, ability or future usefulness. By doing Project / Internship or Apprenticeship students will develop himself according to the need of industries and learn well about research activities. Thus it will promote good research activities in HEIs.

### **Course duration and exam scheme**

Bachelor's degree programme will be of either 3 or 4-year duration. The multiple exit



options will be open for the students within this period, with appropriate certifications (Table no -1 & Fig no -3).

- 1- The Institutes will provide a *certificate* to students after completing 1 year of study and earned required credits in a discipline with Major, Minor, Open Elective, Vocational, Co-curricular subjects and Project / Internship / Apprenticeship / community engagement and service.
- 2- Students can achieve a *diploma* after completing 2 years of study and earned required credits in a discipline with same combination of subjects.
- 3- *Bachelor's degree* will be provided after completing 3-year programme and earning required credits in a discipline with same combination of subjects.
- 4- The 4-year programme leads to a *Bachelor's degree with Research* if the students complete the study and earned required credits on a Major subject, a Minor subject and a Major Research Project in their major area(s) of study (as in UP state)<sup>7 & 8</sup>.

❖ According to the NEP 2020 designs of Master's programmes offered by HEIs will also have the flexibility (Table no - 2).

- 1- Institute can design an *integrated 5-year Bachelor's/Master's programme*.
  - 2- *one year Master's programme* for those students who have completing a 4-year Bachelor's programme with Research (as in UP state)<sup>7 & 8</sup>.
  - 3- There may be a *2-year Master's programme* with the second year devoted entirely to research for those students who have completed the 3-year Bachelor's programme.
- Entry and design of a Ph.D. programme offered by HEIs will have the following provisions (NEP 2020).
1. Entry in a *Ph.D. programme* shall require either a Master's degree or a 4-year Bachelor's degree with Research.
  2. *Post Graduate Diploma in Research* (PGDR) (as in UP state)<sup>7 & 8</sup> after completing study of 6 year.
  3. *Ph.D. degree* will be provided after completing 7<sup>th</sup> and 8<sup>th</sup> year's study. Ph.D. programme will focus on study of Research Method, a Major subject and a Major Research Project.

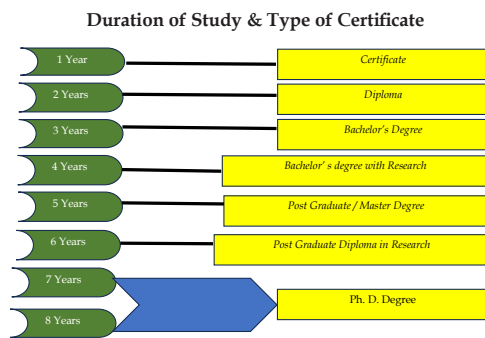


Fig. 3. Degree scheme in higher education

Table no 1- **Exit and certification scheme for bachelor's degree programme.**

Sr. No.	Duration of study	Types of certifications
1	1 year	<i>Certificate</i>
2	2 years	<i>Diploma</i>
3	3 years	<i>Bachelor's degree</i>
4	4 years	<i>Bachelor's degree with Research</i>



Table no 2 - Designs of Master's programmes and eligibility of admission.

Sr. No.	Designs of Master's programmes	Eligibility of admission
1	01-year Master's programme	4-year Bachelor 's programme with Research
2	02-year Master's programme	3-year Bachelor 's programme
3	Integrated 5-year Bachelor's / Master's programme	Certificate of senior secondary education (12 <sup>th</sup> )

### Summary

Higher education of a nation must form the basis for creation of knowledge and innovation and must offer students for the deep study of one or more specialized areas of interest and also develop character, ethical values, creativity, scientific temper and spirit of service with fulfil the 21st century capabilities across various disciplines.

NEP 2020 envisions an education system based on India's knowledge tradition and values that contributes directly to transforming the nation by providing high-quality education to all. It instils in the learners a pride of being Indian, and also give new motivations. This education policy has provision for flexibility in subject choice; holistic and multidisciplinary education concept; emphasis on conceptual understanding; development of critical thinking and creativity in students. NEP 2020 advocates that flexible curricular structures, which will enable creative combinations of disciplines and would offer multiple entry and exit points in graduate level. Under multidisciplinary concept there will be freedom of subject selection for the students according to their interest and need or future carrier plan. The curricula of all HEIs shall include credit-based courses and projects in the areas of environmental education, community engagement and service, and value-based education, internships with local industries, as well as research internships with faculty and researchers, so that students may actively engage with the practical side of their learning and improve their employability.

Academic Bank of Credit (ABC) shall be established by all Higher Education Institutes (HEIs) which would digitally store the academic credits of the students earned from various recognized HEIs by fixed hours study of courses, utilised for providing *Certificate*, *Diploma* and *Degrees* to the students.

All NEP students will study Major subject, Minor subject, Open Elective, Vocational subject and Co-curricular subject along with Field Projects / Internship / Apprenticeship / Community Engagement and Services. Major subject will providing rigorous research-based specialization to students and they will complete his Master and Ph.D. degree in future on this subject. Option for the self-study through online mode will create tendency of reading in students and also instil confidence in them. The Vocational course, develop skills in students to fulfil the need of industries and helpful also for the employment to our students. Study of co-curricular subject like NSS, NCC, Sport, physical education and Yoga etc. will develop ethics, patriotism, sociality, health awareness, leadership and human

values like attributes in learners, helpful in development of well-rounded personality.

It is expected that this new policy on education will bring long-lasting and positive change in higher education system of our country and students after higher education not only realize the full potential of their personality but also, they will employable and financially independent with contributing their best towards nation building.

### **Abbreviation**

ABC	Academic Bank of Credit
AEC	Ability Enhancement Course
CBCS	Choice Based Credit System
GER	Gross Enrolment Ratio
HE	Higher Education
HECI	Higher Education Commission of India
HEGC	Higher Education Grant Council
HEIs	Higher Education Institutions
MERUs	Multidisciplinary Education and Research Universities
NAC	National Accreditation Council
NCC	National Cadet Core
NEP	National Education Policy
NHERC	National Higher Education Regulatory Council
NRF	National Research Foundation
NSS	National Service Scheme
ODL	Open Distance Learning
PGDR	Post Graduate Diploma in Research
SEC	Skill Enhancement Course
STEM	Science, Technology, Engineering and Mathematics
SWAYAM	Study Webs of Active-Learning for Young Aspiring Minds
UGC	University Grant Commission

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