

# NEP 2020: An Effort Towards Transforming Technical Education in India

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## Abstract

One of the most significant requirements of any developing country is education. India is also among the nations that focus largely on education since it has the 33rd position in the world regarding educational system as of 2020. Since education results in economic and social development, a school-level and college-level education plan of the country should be clear and progressive. To render it effective, different countries have various education systems that reflect their cultural and traditional significance at various phases of their life structure within the school and college education levels. An alternative education plan initiated by the Indian government has been on the basis of recommendations by an expert committee headed by Dr. Kasturirangan, the former chairman of the Indian Space Research Organization (ISRO). To meet the demands of a modern society, which is fast-paced, knowledge-based, the NEP 2020 provides a structure of the reform of all the technology and engineering education in India. The paper will exhaust the views and execution of NEP in qualitative change in technical and engineering training. Another critical aspect also talked about in this conceptual paper as the connection between industry and higher education institutions as a source of innovation and research in the technical area; the application of technology to diffuse the disconnection between technical education and the other fields are but a few of NEP, 2020 views.

**Keywords:** NEP-2020, Technical Education, Implementation Strategies

## Introduction

Each nation requires a unique and creative education policy because education is the most significant element of the economic and social progress. The NEP 2020 and its policies of introducing technical education in mainstream education have come at the opportune time and it is a noble objective (Kurien, 2020). To a great degree, the success of NEP 2020 and the subsequent stages of its implementation will rely on the extent to which the government and universities can maneuver around the challenges on its path.

In India learning and teaching has been extensively focused both at the national and the institutional level, and the sector is exploring ways in which higher education can meet the many and rapidly changing demands of students and the industry (Jagadesh, 2020). On this aspect, NEP, 2020 offers the field of technical and engineering education amazing transformations to equip competent skilled

human resources. Based on this, NEP, 2020 suggests that we need to incorporate a combination of degree and certificate courses in the field of engineering, technology, management, architecture, town planning, pharmacy, hotel management, and catering technology in our curriculum in order to develop students and the country.

Technical education will be provided as well as a part of interdisciplinary educational institutions and programmes, and a new stress on opportunities of fruitful cross-disciplinary cooperation is being done. To enhance the workability of the youth, India should also be at the forefront of producing professionals in the latest fields such as artificial intelligence (AI), 3-D printing, big data analysis, and machine learning. The same disciplines will be introduced in undergraduate education (GoI, 2020).

### **NEP 2020 and Technical Education**

An independent body will be established as the National Educational Technology Forum (NETF) to facilitate the open discussion of the possible ways to use technology to better learning, assessment, planning, and administration (Venkateshwarlu, 2021). In this case, proper integration of technology in classrooms will be applied at all levels of education to enhance classroom activities, facilitate professional growth of educators, increase access to education by disadvantaged groups, and accelerate educational planning, administration and management (Prakash and Singh, 2020). The incorporation of DIKSHA/SWAYAM and other educational platforms, which are based on technology, in K-12 and higher education will be enhanced. HEIs will conduct researches of disruptive technologies and offer educational materials, among which are online courses in emerging disciplines.

### **Policy Perspectives on Technical Education**

The National Education Policy envisions advocating an inclusive, participative and holistic approach to education that considers field experiences, empirical knowledge, stakeholder-feedback and the lessons of best practise (Malik, 2021). There is a trend of gradual shift to more scientific approach of teaching. The surrounding will nurture the social and physical growth of the child, including the phases of cognitive development (Narayanan, 2020). With its full implementation, the new structure can be able to compete with the best countries in the world.

In 1945, the All India Council for Technical Education (AICTE) was established as a national apex advisory organisation and was made a statutory institution in 1987. It aims at establishing and advancing coordinated comprehensive technical education in the country. The current goal of the Council is to achieve a meaningful relationship between the technical education and the R&D programs through the pull-and-pull initiative towards the national development.

The competition within the technical education at every level is very high and only the institutions that focus on quality will survive. The Council believes that institutions should consider taking knowledge enhancement training outside the curriculum and be advised to do so when offering training on the same.

The NEP 2020 states that the year 2019-2020 and the period preceding it is a year of transformation in the education sector. The Council has also made several important initiatives this year. The NEP 2020 has received the approval of the Union Cabinet, which would introduce several relevant changes. The policy, among other things aims to promote the feeling of deep-rooted pride in being an Indian not only in words but also in deed, in the spirit and in the mind. It is also meant to promote knowledge, skills, values and attitudes that would facilitate a commitment towards human rights, sustainable development and global well being.

AICTE had been paying attention to the changes the NEP, 2020 is going to propose three

years ago, through numerous activities and initiatives, including the development of the “Short and Medium Term” Perspective Plans of Engineering Education in India, which concentrates on the demand in the courses related to Artificial Intelligence (AI), Internet of Things (IoT), Machine Learning, Block Chain, Robotics, Quantum Computing, Data Sciences, Cyber Security, and 3D Printing.

The AICTE is a proponent of an open and comprehensive governance framework, portals of application, approval processes, career programmes, internships, and other programs. The goal of the organization is to make the competitiveness of technical manpower globally, which will result in technological and economical prosperity of the nation.

AICTE is sensitive to the changes in the world concerning technology and they feel the need to come up with new policies and programmes, or even to complement the current ones, through organizing seminars, conferences, and others where stakeholders will be present to discuss and give their feedback. AICTE has attempted to provide its students with the best educational system and be to the example of producing brilliant, noble and modest brains in the view of NEP, 2020.

### **NEP, 2020: Provisions of Technical Education**

The National Education Policy, 2020 (paragraph 20.6) sets forth a platform on which the whole Indian technical education system can be reformed to address the needs of a fast-moving, knowledge-based Indian society. Technical education improvements in terms of content and processes should be guided by the following concepts.

Other than increasing the demand of competent individuals within these disciplines, more connections between business and institutions of higher learning will be required to enhance innovation and research.

- The boundaries between the technical and non-technical schooling will be also less visible due to the impact of technology on human activities.
- Technical education will be provided in multidisciplinary institutions and programmes with a new focus on a possibility of significant interaction with other disciplines.
- In areas that are rapidly popularising, including, artificial intelligence (AI), 3-D printing, big data analysis, and machine learning, India should be at the forefront in the training of experts. To make the youth more employable, these and other disciplines, genetic, biotechnology, nanotechnology and neuroscience will be included in undergraduate studies. These areas apply very much to the health and environment and sustainable living.

### **NEP- 2020 and Its Implementations in Technical Education**

#### **I. Technical Education as a part of General Higher Education**

On July 29, 2020, the Union Cabinet lastly passed a new National Education Policy after 34 years. It is the third education policy since the first two were 1968 and 1986 to promote significant changes to formal education, postsecondary education and technical education. Although the school system of 10+2 has been substituted with the system of higher education of 5+3+3+4, the multiple entry and exit system has been instituted. The abolition of stream concepts like Science, Arts and Commerce, the introduction of undergraduate programmes of four years, the abolition of M.Phil. degrees and others are among major changes. Technical Education will be included in the General Higher Education.

The NEP indicates that the application of technology in education will be encouraged, and e-teaching and learning will be encouraged. Virtual laboratories are proposed. The e-content will be developed in various languages. Divyang friendly educational software will be implemented to help the differently abled to keep studying without much effort. According to NEP-2020 recommendation, National Educational Technology Form (NETF) was also determined.

Everything that NEP, 2020 has to offer will assist in the successful development of the skillful and employment oriented with the focus on the practical knowledge rather than the theoretical bookish knowledge. Vocational education will consist of internships and this will start in sixth grade.

### **Encouraging Industry-Institution Collaborations**

Relationships between the industry and technical education institutions that result into innovation and research should be encouraged. Such interactions can be promoted by the following efforts:

- Creating industrial centers of Excellence and Incubation Cells in institutions with shared funding.
- Hiring professors with research and industry experience in addition to their academic credentials.
- Recruiting industry professionals to serve on Boards of Studies and as adjunct instructors.
- Providing learners with internship opportunities, particularly in adjacent firms, to develop goods for local requirements. Collaborative activity between industries must be reported.

### **Conclusion**

The 2020 national education policy has been highlighted in this document, along with its history and the extensive changes and implementations that it proposes in the field of technical education. It is an unquestionably long-awaited technical education reform that will contribute to the formation and strengthening of the development of the country. The AICTE is a firm in offering all forms of support and encouragement to students and institutions so that they are not only motivated to look beyond the program but also train to increase knowledge. E-governance has seen the AICTE achieve several changes in Approval Process such as increased transparency and accountability. Nevertheless, though the suggested strategy of the education situation in India seems to be viable, there are also operational challenges to it. However, NEP 2020 offers much scope and potential to India to emerge as a global information superpower which has a world-class education system.

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