

National Education Policy - 2020: A Sustainable Approach for Academic Research

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Abstract: Education is fundamental for creating the human resource, and essential for building and sustaining a large and robust economy, elevating society, and inspiring a nation to reach new heights. In these regards, the Ministry of Human Resource Development, Government of India has proposed a comprehensive National Education Policy - 2020. In this NEP, emphasis is given on academic research for the quality education. NEP - 2020 suggested for multidisciplinary research based on collaboration by the academic institutes. The lifelong learning and research prevent humans from becoming outdated in society in terms of knowledge, skills, and experience needed to live comfortably. In this research paper, academic research in the light of National Education Policy (NEP) - 2020 has been discussed.

Keywords: National education policy, Academic research, Higher Educational Institute, Scope and limitation

1. Introduction

Education is fundamental for creating the human resource and for developing an equitable and promoting national development. Universal high - quality education is the best way for developing and maximizing our country's rich talents and resources for the good of the individual, the society, the country [1]. Quality education is the key of a country to continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, and scientific advancement [2, 3]. Indeed, with the quickly changing employment landscape and global ecosystem, it is becoming increasingly critical that children not only learn but more importantly learn how to learn. Therefore, education is moving towards less content, and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in changing world [4 - 6]. Align with national demand, learning is focused on critical thinking and problem - solving [7, 8]. In this aspect, multidisciplinary research based on collaboration is highly needed. In the growing emergence of pandemics, the collaborative research has shown the great importance in the management of infectious diseases and the development of vaccines. Such social issues heighten the need for multidisciplinary learning as well as research. Therefore, pedagogy must be evolved to make education more experiential, holistic, integrated, discovery - oriented, learner - centered, discussion - based, and of course, enjoyable. The curriculum must be designed covering all the social needs, based on basic arts, sciences, humanities, crafts, games, sports and languages, literature, culture, and values to make the education more useful, and fulfilling to the learner. The gap between the current state of learning and what is required must be bridged through undertaking major reforms that bring the highest quality, equity, and integrity into the education system. Overall, education must be designed that buildup character, enable learners to be ethical, rational, compassionate, and caring,

while at the same time preparing them for gainful, fulfilling employment.

Recently, the Government of India announced its new Education policy which is based on the recommendations of an expert committee headed by Dr. Kasturirangan, former Chairman of the Indian Space Research Organization (ISRO) [9]. This National Education Policy 2020 is the first education policy of the 21st century that addresses the many growing developmental necessities of our country. This policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the ambitious goals of 21st century education [10]. This education Policy paid particular emphasis on the development of the creative potential of each individual. It is based on the principle that education must develop not only cognitive capacities - both the 'foundational capacities' of literacy and numeracy and 'higher - order' cognitive capacities, such as critical thinking and problem solving - but also social, ethical, and emotional capacities and dispositions. Special emphasis is given on the quality education along with creation of scientific temperament among the students and teachers. In this paper, the different aspects of academic research highlighted in NEP 2020 has been discussed.

2. Objectives of the Study

The objectives of this study are as follows

- To find out the recommendations regarding academic research in NEP - 2020.
- To make a comparison between NEP 1986 and NEP 2020 in respect of academic research.

3. Methodology

The qualitative study has been adopted to accelerate the comparative analysis between NEP 1986 and NEP 2020 in the light of academic research. The primary data is collected

from the drafts of NEP - 1986 and NEP - 2020. The secondary data is collected from articles, books and website.

4. Need of Quality Research

Despite the crucial necessity of research, according to the World Development Indicators published by the World Bank, India spends barely 0.69% of GDP on research, whereas other foreign countries such as Germany, the US, China and Japan spend 3%, 2.8%, 2% and 3.2%, respectively of their GDP on research. Challenges such as sanitation, quality education and healthcare, improved transportation, air quality, energy, and infrastructure will necessitate the implementation of approaches and solutions through high - quality interdisciplinary research across fields, which must be done in India and cannot simply be imported; the ability to conduct one's own research also allows a country to develop its own research [11]. Furthermore, history, art, language, and culture contribute significantly to a country's identity, upliftment, spiritual/intellectual fulfilment, and innovation, in addition to their worth in solving societal problems. As a result, research in the arts and humanities, as well as advances in the sciences and social sciences, are critical for advancement and expansion. In India, educational institutions, particularly those involved in higher education, must be innovative. The best teaching and learning processes at the higher education level occur in circumstances where there is also a strong culture of research and knowledge development. Therefore, academic research activities are highly needed for the development of society, for the creation of the best human resources and to uplift the nation at the highest pick in term of knowledge, skill and economy.

5. Gap between the present education policy and NEP 2020

The 1986 National Education policy focused on the modernization of the education sector using information technology. More attention was given to restructuring teacher education, early childhood care, women's empowerment, and adult literacy. In the National Education Policy 1986, it also proposed that the autonomy of universities and colleges will improve the quality of education services. However, NEP 1986 failed to improve the quality of education in terms of creating graduates with employability skills and failed to generate research output in terms of patents and scholarly publications.

The present education Policy envisioned a comprehensive approach to transform the quality and quantity of research in India. For this purpose, NEP 2020 included conclusive shifts in school education to more play and discovery - based learning with special emphasis on the scientific method and critical thinking. To identify students' interests and talents, career counselling in schools is lighted in the policy. Teaching - learning method mainly focuses on classroom training, fieldwork, and research projects. The emphasis in NEP is given on the research and innovations starting from the school level.

The support of research funds through UGC, or any other agencies was mainly for Universities than Colleges. The funding agencies like DST, DBT, and CSIR, etc. are rarely funded to the college teachers although experts are available in the field. To compensate for the shortcomings of previous NEPs, NEP 2020 has proposed a liberal education to support multidisciplinary and cross - disciplinary education and research in under - graduation and post - graduation levels in all higher educational institutes. The support of research funds through the National Research Foundation (NRF) and any other agencies will be equally distributed to all types of HEIs based on a fair evaluation of the research proposal. To promote the research culture in college and universities [17, 18], the multidisciplinary nature of higher education institutes with good infrastructural facilities, and the inclusion of research and internships in the undergraduate curriculum, faculty career management systems that give due weightage to research, and encourage an environment of research in the institutes, are recommended in NEP 2020 [19, 20]. Four years of Bachelor degree holders with proven research performance during the fourth year can directly admit to Ph. D. programme without Masters degree in both types of HEIs. All of these aspects are extremely important for creating a research environment in educational institutes for the future generation.

6. NEP 2020 and Academic research

Presently, most of the universities and colleges lacking from quality research and innovations activities. It was observed from the history of the world's best universities, the best teaching and learning processes at the higher education level occurred in an environment where there is also a strong culture of research and knowledge creation. Most importantly, much of the very best research in the world has occurred in multidisciplinary university settings. In NEP 2020, stress is given on the multidisciplinary research culture and collaboration with industries at the national and international levels. Multidisciplinary Universities will be of two types as (i) Research - intensive Universities, and (ii) Teaching - intensive Universities. More importantly, research will be included in UG, PG level and have a holistic and multidisciplinary education approach. Two years Master degree with full research in the second year, One year Master degree for four years Bachelor degree holders, and Five years integrated Bachelor/Master degree is recommended by NEP 2020. All HEIs will focus on research and innovation by setting up (i) Start - up incubation centres, (ii) Technology development centres, (iii) Centres in frontier areas of research, (iv) Centre for Industry - academic linkage, and (v) Interdisciplinary Research Centres including humanities and social sciences research. In NEP, it was acknowledged that research in the arts and humanities, along with innovations in the sciences and social sciences are extremely important for the progress and enlighten the nation.

Research is an integral part of the higher education system. The faculty members who are guiding quality research should have research motives and experience so that they can be role models for their students. The new education policy focus on merit - based promotions which depend on faculty members annual performance indicator score with

major portion depends on their performance in research and publications or patent to contribute to the IPR of the organization and hence of the country. The accountability of every faculty member in higher education system will depend on their research productivity for a given time period. In this aspect, in NEP - 2020 it is also recommended that faculty incentives & accountability will be fixed based on academic and research performance. Faculty fast-track promotion system for high impact research contributions will be offered. NEP 2020 proposes lifelong learning and research avoid human beings from becoming obsolete in society in terms of knowledge, skills, and experience. It is believed that education and research at any stage of life will give further maturity for the satisfaction in life.

7. Recommendation for Academic Research

(i) National Research Foundation (NRF)

For the creation of a vibrant research environment in the country, the establishment of the National Research Foundation (NRF) has been proposed in NEP 2020. The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education. It has a goal to build and pervade the "Research Culture" throughout our HEIs/Universities is catalysing outstanding academic research in all subjects. The purpose of this body will be to encourage and grow research and innovation in universities and colleges across the country, as well as to support and seed research. The main objective of NRF is to provide funds for competitive and innovative research proposals of all types and across all disciplines. The support of research funds through NRF will be equally distributed to all Higher Education Institutes based on a fair evaluation of the research proposal.

The main objectives of NRF in catalyzing quality academic research as proposed in NEP 2020 are as follows:

- To enable a culture of research to permeate through the colleges and universities.
- The NRF will be governed, independently of the government, by a rotating Board of Governors consisting of the very best researchers and innovators across fields.

The primary activities of the NRF will be to:

- (i) Fund competitive, peer-reviewed grant proposals of all types and across all disciplines;
- (ii) Seed, grow and facilitate research at academic institutions where research capability is currently limited
- (iii) Act as a liaison between researchers and relevant branches of government as well as industry; to allow breakthroughs to be optimally brought into policy and/or implementation; and
- (iv) Recognise outstanding research and progress.

The NRF would endeavour to satisfy the research-related needs of all disciplines, including funding, research capacity building, and effective links between diverse stakeholders such as researchers, industry, and government. This institution will initially be divided into four primary divisions: science, social sciences, technology, and arts and humanities. Thus, the NRF's main purpose will be to catalyse outstanding research and promote a research-

friendly climate, as well as to ensure that great research is rewarded and recognised through prizes, awards, and other means.

(ii) Integrated Research and Academic Programmes

Because it believes that young minds uncover feasible solutions to any problem quickly, the NEP 2020 suggests integrating research with academic programmes for youth-led innovations. With research at the forefront, a new education policy suggests that students be offered a variety of Master's degree options. (i) To begin, it recommends continuing with a two-year Master's programme, with the second year devoted totally to research. This programme will be available to students who have completed a three-year Bachelor's degree. (ii) Students who complete a four-year bachelor's programme with research will be eligible for a one-year master's programme. (iii) A five-year Bachelor's/degree Master's with research could be offered. A Master's degree or a four-year Bachelor's degree with research is required to pursue a PhD. All Ph. D. registered students should take one subject related to teaching/curriculum development and accept teaching Assistantship for enhancing teaching skills. The NEP 2020 suggests that colleges cease the present M. Phil programme, which has failed to meet its goal since its inception.

8. Analysis of the Recommendation

The NRF could bring some hope to the younger generation who are keen on excelling in the research field. One of the goals of NRF is to recognize outstanding research and progress achieved via NRF funding/mentoring across subjects, through prizes and special seminars recognizing the work of the researchers. The proposed NRF in NEP is good if the principles are strictly followed. India has excellent talented faculty and researchers who never had the opportunity to get inducted into research proposal scrutiny committees. In NEP 2020, it is stated that the National Research Foundation will fund competitive peer-reviewed grant proposals of all types, across all disciplines. For these purposes, NEP created several committees right from governing board, divisional council, sub-committees, etc. These committees should be liaison committees and all the proposals should be sent to other top scientists/universities/agencies/foundations of the world for review. This process will have an unbiased review process and a strong review input.

Research is an integral part of the higher education system. "Assessment and accountability" of the new NEP perhaps will be a game-changer for research and innovation in the country. The new education policy focus on merit-based promotions which depend on faculty members' annual performance indicator score with a major portion depending on their performance in research and publications or patent to contribute to the IPR of the organization and hence of the country. Thus, the accountability of every faculty member in the higher education system depends on their research productivity for a given period. Based on academic and research performance, faculty incentives and accountability will be fixed. This is a good incentive and will motivate the researcher to do cutting-edge research. Perhaps NEP could have made all faculty positions in HEI a non-tenure track

position so that accountability will automatically fall in line, and research output will go up. Along with a non - tenure track policy, there should be strong funding and research support with a good research laboratory facility. Otherwise, it will be like flogging a non - performing horse without giving good food!! Research should go hand in hand with entrepreneurship. This will happen only when along with the basic degree course formulated under NEP 2020, a strong skill development component is included as a part of the academic programme.

Age should not be a criterion for research and academics as long as a person is active in academic and research output. The new NEP 2020, fortunately, realized this and stated that 'there will be no age limit for Mentors; they will be permitted to serve as Mentors and apply for funding for as long as they are active and add value to their institutions'. The expertise of outstanding retired faculty in the country is currently severely underutilized. This will be an invaluable opportunity to utilize their expertise to expand research culture across the country". Keeping an experienced faculty active in research among the young faculty in HEIs is a great advantage to the institute for capacity building and to get large international funds under cross - country collaboration. NEP is encouraging international collaboration and here the retired faculty's role will help immensely in getting the project funding and mentoring the younger generation.

At higher research levels, all sciences (including medical) and engineering disciplines merge; and interaction between these groups is a healthy practice and will help in developing new ideas that may lead to start - ups. NEP 2020 is already included in the policy for creating HEI in all disciplines. Like in undergraduate programme graduates in a Ph D programme should be allowed to transfer credits from one institute to another. In fact, at research levels, there should be international interaction that will help the student to use laboratory facilities in universities abroad. To achieve this mentors should have collaborated with foreign universities with good laboratory facilities. The best way to achieve this is to have bilateral academies as established by a few IITs. In order to establish a good rapport with reputed foreign universities, the HEI should prove themselves with proven faculty with good publication records and good laboratory facilities.

9. Conclusion

The NEP talks about strong academia - industry interaction. New development of a product, prototype, formula, *etc*, can easily be achieved through an industry - sponsored project in higher education institute. The collaboration with industry will also increase the job opportunity of the graduates. One of the reasons, why bright students are not joining research, is job opportunities. The master students, even after Ph. D., can find jobs only in teaching/research institutes. Unfortunately, the HEIs are not well equipped to absorb these Ph. Ds because there is greater supply than demand. As a result, a large percent of Ph. Ds go abroad for post - doctoral work and they did not come back to the country due to the non - availability of a suitable job. To stop this brain drain Government should take initiatives to create more higher education institutes with good infrastructural

facilitates as proposed in NEP 2020 so that highly talented researchers could be absorbed with a research project funded by NRF. Currently, research and innovation investment in India is 0.69% of GDP against a global average of 3% of GDP. The NEP - 2020 has expected the allocation of 6% of its GDP in the education sector so the issues related to infrastructure and funding in the research could be minimized.

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