



Multidisciplinary Education: Strategies for Implementation

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ABSTRACT

Multiple skills are required to be exhibited by an individual at the workplace in order to be successful and productive. Skills like, critical thinking, problem solving, team building, communication and ICT are all required to perform any job effectively. Further, the solutions to the problems in the real world do not lie in any one specific discipline, rather need a multidisciplinary approach. Taking note of this issue, The National Education Policy announced in 2020, has proposed a shift towards multi-disciplinary education. The present paper discusses the various recommendations given by NEP 2020 with regard to multidisciplinary education and the strategies that are needed to implement these recommendations.

Introduction

One of the important purposes of higher education is to foster thinking, analyzing and interpreting skills among the students, which shall prepare them to face and solve real life problems and be successful in life. A multitude of skills e.g. problem solving, critical thinking, ICT skills, teamwork, soft skills, time management are crucial in the work environment. Presently in India, we have a strongly fragmented higher education system.

The students choose their streams at a very early stage, and thus gain only subject specific knowledge without any holistic development.

The National Education Policy announced in 2020, taking note of this issue, has proposed a shift towards multi-disciplinary education. Multidisciplinary education promotes imagination, creativity and leads to all round development of the students, who are the future of any nation. The multidisciplinary approach helps an individual to understand and look at any issue from

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diverse perspectives. An engineer can certainly develop a better product if he understands the requirement and scope of the market. Similarly, a doctor needs to understand the psychology of his patients and should be able to communicate in a soothing manner.

Moreover, knowledge cannot be compartmentalized. The different subjects are interconnected. Learning a particular subject in isolation without understanding its linkages is not sufficient. Understanding and exploring these linkages make learning more meaningful and enjoyable. Most of the real world problems are multi-disciplinary and need a multi-disciplinary approach for solutions. In order to tackle the problem of water pollution, along with understanding the nature of chemicals/ pollutants, there is also a need to look into the water polluting habits of the society that might need correction. The sustainable development goals given by the United Nations, including good health, clean water, affordable and clean energy, sustainable cities and quality education can be achieved by shifting focus towards multidisciplinary education.

The new and rapid technological developments like robotics and artificial intelligence are taking over many jobs performed by humans. In order to respond to these new challenges, individuals need to develop new skill sets to ensure that these technologies do not overpower human intelligence and remain in control. Individuals need to develop multiple skills so that if one aspect becomes obsolete in the rapidly changing environment, the other skills can be put to use.

National Education Policy Recommendations

National education policy 2020 focuses on holistic development of students and recommends a shift towards a multidisciplinary approach in education. The policy refers to the old Indian Universities like Nalanda and Takshashila which provided multidisciplinary learning, combining subjects from diverse fields. It also talks about the Banabhatta's literary work 'Kadambari' which described good education as knowledge of 64 kalaas or arts, which included not only performing or visual arts like, singing or painting, but also scientific fields like Chemistry, Math and vocational fields like

Carpentry and Cloth making. The National Education Policy 2020 recommends that this system of "knowledge of multiple arts" needs to be introduced again in the system of education. The policy points out that integration of Humanities with Science, Technology, Engineering and Math (STEM) has been found to improve skills like creativity, problem solving abilities, communication skills, teamwork etc. and also improve social and moral awareness along with higher engagement and enjoyment in learning.

National Education Policy recommends that all the undergraduate programs (including technical and vocational) should follow a multidisciplinary approach to ensure that the students develop holistically and have all the crucial skills required in the 21st century. Science students need to learn more of Humanities, while Humanities students should be exposed to knowledge of Sciences and both should be made to learn soft skills and other vocational subjects.

The policy proposes the setting up of large multidisciplinary universities in the country. This will enable students to choose courses from different disciplines and hence they will get diversified exposure.

The policy provides for a flexible curriculum that enables a combination of varied disciplines of study, and also offers multiple entry and exit points in order to open the gates for lifelong learning.

In order to achieve flexibility in curriculum, policy proposes to increase autonomy of the faculty and institution in deciding the curricula. The policy further recommends that the pedagogy should emphasize communication, discussion, debate and research. It should also provide opportunities for interdisciplinary thinking.

The policy lays down that different departments like Art, Music, Dance, Sports, Math, Science, Economics and others that are needed for multidisciplinary education should be established in all higher education institutions. Credit has to be given to the student who studies any subject from a different department or who studies any subject through open or distance learning mode, in case that subject is not offered by the higher education institution.

National Education Policy further requires the provision of courses in the areas of environment, value

education and community service. Alongside, Global Citizenship Education needs to be provided to make learners aware of global issues and challenges.

The policy also recommends that in order to provide hands-on experience and to improve employability, higher education institutions should provide opportunities to students to take internships with local industry or to carry out research projects with their own faculty or faculty of other higher education institutions or any research institution.

The National Education Policy proposes the establishment of an Academic Bank of Credit that will digitally store all the credits earned by a learner from various recognized higher education institutions. All these credits shall be taken into account by the higher education institution while awarding the degree. The degree program is recommended to be of three or four years with multiple exit options. Certificate credit shall be given after one year of study, diploma will be awarded after two years of study and degree after three years of study. Further the policy emphasizes that a 4 year multidisciplinary degree should be a preferred option as it allows experiencing the full range of holistic education.

The policy also provides for the setting up of Model Public Universities, to be called multidisciplinary education and research universities (MERU) and these will aim to attain the highest global standards in education.

Strategies Needed for Implementation

There are three major proposals of National Education Policy 2020, related to multidisciplinary education (NIEPA, <http://www.niepa.ac.in/>):

- To convert existing higher education institutions into multi-disciplinary institutions (teaching intensive universities, research intensive universities, and autonomous colleges)
- To set up world-class multidisciplinary education and research universities (MERU)
- To established higher education clusters, forming multi-disciplinary Universities

To implement these proposals, there is an immediate need to chalk out a strategy which will facilitate

and bring these recommendations to reality. Multi-disciplinary institutions are those which provide courses from different and varied disciplines under one institutional framework. The aim is to develop intellectual, social, emotional, aesthetic and physical capacities in the learner and enable him to look into various issues from diverse perspectives (NEP 2020, para 11.3).

- To start with, there is a need to identify the higher education institutions which already are multi-disciplinary and have a scope of further expansion into other streams of study like vocational education and soft skills (NIEPA, 2020).
- Those Institutions which presently have a single stream of study need to be evaluated for their potential to shift to multiple disciplines.
- Yet another task is to explore the possibility of consolidating higher education institutions which provide separate streams of study and bring them together in the form of a cluster.
- The higher education department needs to collect information and data from these higher education institutions and look into their accreditations from agencies like NAAC and NIRF, in order to understand their potential to expand or shift towards multiple disciplinary education (NIEPA, 2020).
- In depth mapping is required to gather information about various higher education institutions operating in a region and the varied disciplines of study being offered by them, so that the possibility of forming clusters can be explored.
- Another important requirement will be the financial support by the government, in order to bring about this shift towards multidisciplinary education. The higher education institutions will need finances to develop the infrastructure required for the purpose (NIEPA, 2020).
- Faculty training will be required as they too need to gain interdisciplinary knowledge, so they are able to relate their subject with other fields of study and have capacity to carry out interdisciplinary research. Moreover, only such trained faculty will be able to motivate students to opt for varied interdisciplinary courses, by making them understand the need and importance of interdisciplinary knowledge.
- Inter departmental coordination will require strengthening. The possible interdisciplinary

subject combinations (as majors or minors) need to be explored.

- Since the National Education Policy recommends acceptance of credit earned through distance and open learning and through MOOCs, the faculties at higher education institutions need to map the available courses and guide students as to which of these courses can be taken. The higher education institutions need to clearly lay down guidelines as to what online courses, from what platform shall be recognized. This is needed because a plethora of courses are available online but there is a need to have some quality assurances for these courses.
- Technology has to play a very crucial role in implementation of National Education Policy 2020. The credits earned by learners will be stored in Academic Bank of Credit. The implementation of Choice Based Credit Systems has to be facilitated by use of technology, the time table coordination among different streams shall be needed and here again technology will have to be used. Hence technology will play an important role in teaching learning, assessment, institutional governance and administrative work.
- As National Education Policy 2020 provides for multiple entry and exit points and aims to enhance student mobility, the higher education institutions need to have some common structure.
- Another very crucial aspect for implementation of National Education Policy 2020 is to bring about a change in the eligibility qualifications for different

jobs. Since the learners will be studying interdisciplinary courses, the already existing minimum qualifications for jobs need to be looked into and revised to ensure these interdisciplinary qualifications are accepted.

Conclusion

The emphasis of the National Education Policy 2020 on multidisciplinary education is a step in the right direction. This will ensure holistic development of the students and will develop better employability skills among them. However the success of the policy will certainly depend on its effective implementation. Hence the government, the higher education institutions, the regulatory agencies and the academic faculties need to come up with effective and viable strategies to ensure a proper implementation of this policy.

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