



## THE FUTURE OF INDIAN SCIENCE AND TECHNOLOGY IN THE CONTEXT OF NEW EDUCATION POLICY

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*"together we can and we will make a difference"*

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## ABSTRACT

National Education Policy 2020 (NEP 2020) is the first education policy of 21st century. In NEP 2020, Indian scholars have tried to remove the loopholes of old Education Policy 1986. A roadmap is given in NEP 2020 for attaining from basic literacy and number knowledge to higher level knowledge and capacities. If it is implemented properly, it will be a milestone in development of India.

Modern age is the age of science and technology. Those countries which are advance in science and technology, they lead the world. NEP 2020 is written keeping in mind importance of science and technology. Examples of Indian science and technology progress are ISRO, DRDO, IT HUB, pharmaceutical industry etc. which reflects present picture of Indian science and technology. In modern time, India is competing with world in the field of IT services, vaccine and medicine manufacturing, space missions etc. But at present we are lagging in some subareas of science and technology like cyber safety, electronic components manufacturing as processors, API manufacturing etc. A roadmap is given in NEP 2020 to advance our knowledge in each area of science and technology by boosting researches.

New generation has some new and different problems and necessities in modern time. Technology has gone to be an integral part of their lives. They will face problems which are born in environment due to ugly side of science and technology like cyber frauds. The major impact of NEP 2020 will be making Indians capable to fight with problems of present and future strongly and transforming India in a scientifically, culturally advanced and enriched peaceful country.

If NEP 2020 implemented properly according to its vision, Indian society will be able to transform itself in a noble society where Indian science and technology will make India a global power economically, socially and geopolitically.

**Keywords:** NEP 2020, Education, NRF, Vocational Education, Technology etc.

## INTRODUCTION

Progress, development, happiness comes due to citizens of that country. A good education system of that country produces good citizens. National education policy of any country decides how will the education system of that country be. In other way, when Education policy of any country will be noble then the citizens of that country will also be noble who carries the country on the way of progress, development and happiness.

World is changing day by day very fast due to the development of Science and Technology. Old Indian National Education Policy 1986 does not come fit in the modern age of Science and Technology so Indian government brought a new National Education policy 2020. A roadmap is drawn in NEP 2020 which will decide the education on different levels. Vision of NEP 2020 in students should not only in thoughts of priding as Indians but also be in behaviour,

intelligence and works along with knowledge, skills, values and thinking which is committed for human rights, stable development, living and world welfare so that they could be global citizens in reality. In NEP 2020, school education is reorganised in a new system of 5+3+3+4. Equal and inclusive education is an essential goal of this education policy. For teachers' education, there will be a four years B.Ed. degree programme. Teacher eligibility test will be conducted at foundational, preparatory, middle and secondary stage in school education. The goal is to decrease the dropout rate at each level. When dropout rate lowers, the gross enrolment ratio will increase in higher education. National Research Foundation (NRF) will be established to boost the research works in India.

At present, Science and Technology has changed enough the life style of humans. Science has made us able to cure the incurable diseases. Science and

Technology has transformed the whole world in a family. Internet, computers have made easy our lives. Today artificial intelligence (AI) has made possible to do those works which humans can not do. It is clear that the country which will not pay attention on progress of their Science and Technology, that country will not progress in modern time. At present ISRO, DRDO, Indian IT sector, pharmaceutical sector etc. are the illuminating examples of the progress of Indian Science and Technology. National Research Foundation (NRF) is established to boost the progress of Indian science and technology. New National Education Policy 2020 has powers to illuminate the future of Indian science and technology.

Our new generation will get education independently according to one's interest and level. In students, there will be encouraged to understand the topics instead of rote. Indian values will be included in education. NEP 2020 will produce good citizens, good teachers who will carry India on the way of progress very fast. It is possible only then when NEP 2020 is implemented properly.

**New Generation-** Progress, development of any country means the upgradation of the people of generation and this upgraded generation is called as New generation.

Generation of any country is the backbone of that country. When generation will be more educated, backbone will also be more strong. Every generation of every society, country wishes that their upcoming generation will better than that generation. People of present generation wish that upcoming generation should not face those problems which are faced by them. So that generation tries to remove those problems and makes such policies that will make upcoming generations to able to fight and solve the problems as India's new National Education Policy 2020. This policy will decide what will the future of India be in education.

**New Education Policy 2020-** Complete development of humans is possible only by education. There is no difference in animal and human in lack of education because the development of human values in humans are possible by education.

The goal of new National Education Policy 2020 is to fulfil the compulsory necessities for the development of India. This policy introduces the reorganisation and

reform of all sides with education system, its regulation and governance maintaining the basis of Indian traditional and cultural values. NEP 2020 emphasizes on the development of constructional abilities of each person. This policy is based on this theory that the education develops not only basic abilities like literacy and number knowledge but also develop the cognitive abilities related to higher level's reasoning and problem solving. Besides these abilities it is also necessary to development of a person at moral, social and emotional level.

The fundamental principles which are the basis of this education policy are written below-

1. Recognizing, identifying the special abilities of every child and do efforts for their development
2. Flexibility- students may choose the way according their individual abilities and interests
3. Development of multi-disciplinary and integrated education
4. Emphasize on the conceptual understanding
5. Constructive approach to learning
6. Moral, human and constitutional values
7. Promoting multilingualism
8. Emphasize on continuous assessment
9. Use of technology
10. Education for the development and quality education
11. Education as public service

Vision of this education policy is an education system developed from Indian values which will contribute in transforming India directly in a live and happy knowledgeable society by making India a global knowledge power and providing all quality education.

#### **The Major Impacts Of New Education Policy For**

**The New Generation-** The major impacts of new education policy which will be seen in future, are pointed below-

1. **Development of educated humans-** NEP 2020 has made Indian values an integral part of Indian education so that Indian values could become the part of Indians automatically. They will conserve Indian culture. Where the citizens of country are honest, generous, helpful, a noble society takes birth there. Basic art, games, fitness, languages, literature, culture and values besides science and math has included in curriculum for the balanced

development of all sides and abilities of lives of students. India will get the people sensitive to their works, society and nation's future according to NEP 2020.

- 2. High quality education-** This new education policy has paid more attention on quality education. This policy will speed up the access of education to each and every child in India. Quality of education tells us about the real development of citizens. Quality of education carries the students to attain the real goals of education.

School education in new education policy has reorganised in a new education system of 5+3+3+4. In old education policy, there was not system for the education from 3 to 6 years' child. In new 5+3+3+4 system, a strong base of early childhood and care education has included by participating 3 to 6 years old child. According to psychology, 85% development of minds completes before the age of 6 years of child. So early childhood and care education makes a strong base for the upper education.

The quality of education depends upon the teachers who educate the students. So NEP 2020 has paid attention on teachers' education and their selection. For school education, teacher eligibility test (TET) will be conducted at every level so that India would get eligible teachers for quality education. Teachers will also be assessed by the society.

- 3. Enriched generation with scientific and technological knowledge-** Science is an important subject in NEP 2020. Coding related activities will be begun from middle school level. Artificial intelligence (AI), machine learning, data science etc. will be the part of curriculum in NEP 2020. National research foundation is established for boosting researches in the areas of science and technology in higher education.

Experimental learning will be encouraged so that students understand the topic instead of rote learning. Such knowledge is stable. Students will learn by doing. In this process learner observes, analyses, thinks and reaches at a conclusion. From these activities, a quality of thinking with deep understanding will develop in themselves. They will work with constructive approach. They

will use these skills in developing new technology, new inventions. In future, India will get scientifically and technologically enriched and aware generation which will India make a happy country. India will be one of the leading countries in science and technology in the world.

- 4. Economically strong nation (boost in vocational education)-** The economy of any country will decide the happiness, prosperity, development of that country. The nation which are economically strong, crowns over the world.

Economic condition depends on industries, agriculture, natural resources etc. China is going to become stronger economically day by day cause of a giant manufacturing industries. To speed up Indian economy, NEP 2020 has emphasized from agriculture to vocational education. In future, we will see a large number of students with B.Voc. degree. From it, India will get a highly skilled man force to capable to work properly. Vocational knowledge will be provided from the 6<sup>th</sup> class. They will get 10 days' internship. Modern technology will be used in agriculture on a large scale. In our country, NEP 2020 will produce skilled labour, big industrialists. The impact of NEP 2020 on Indian economy will be of great importance.

- 5. Internationalization-** At present, the whole world is like a family. The level of Indian education will equal to international education so that students studying in India can study in foreign countries and the students from outside our country can study in India. Top institutes of India will be encouraged to establish their colleges in foreign countries. Selective universities of world's top 100 universities will be allowed to function their institutes in India. From this, Indians will study in foreign institute living here in India. NEP 2020 has tried to decrease the space between Indian education and international education. By internationalization, Indians will illuminate the name of India.

- 6. Increase in the number of highly educated citizens (aim to increase the gross enrolment ratio 50% till 2035 in higher education)-** In new education policy 2020, at least one multidisciplinary higher education institute will be present in each district or in near of this

district till 2030 which goal is to increase the gross enrolment ratio to 50% till 2035. New education policy encourages for higher education so that a society of highly educated people could be constructed. Highly educated people will transform in India in aware nation. Highly educated people do not believe in superstitions. They will give priority to scientific thoughts. India will get free from those traditions and culture which are based on superstitious beliefs. Generally, we see that a society with educated people is peaceful. On the other side, a society with uneducated people is violent. NEP 2020 will develop India in highly educated country.

**7. To speed up the development of science and technology by boosting researches (establishing the National Research Foundation)-**

In the field of Science, new inventions, discoveries occur every day. The development of science and technology depends on research works. NEP 2020 says about the foundation of National Research Foundation (NRF) to boost the research works. NRF will fund the reviewed research proposals in all and different areas. NRF will create an environment for doing researches so that more and more students should come in the field of researches and innovations. Researches and innovation will boost the speed of development of Indian science and technology. The development of Indian science and technology will make India a self reliant and powerful country which will serve the world for humanitarian work.

**8. Adult education-** Such people who are illiterate, faces so many problems in their life. They get information orally. They are not able to enjoy the books. They do not know about their rights. If they know about their rights, they are unable to take their rights. Educated people see illiterate persons as hurdles in the progress of nation. They can not do written work. They can only do work as an unskilled labour. So they do not get money as they work. Some wrong people make them fool and make them do illegal works. For good society, it is essential to literate them. By educating, they will able to see the world with new dimensions. They will also be able to understand the thing by reading. They can enjoy

the books. They will be able to learn by themselves.

NEP 2020 has focussed on adult education so that India would get 100% literacy. Adult educated person will educate his upcoming generation by understanding the importance of education. If NEP 2020 is implemented properly all over the country, India will have 100% literacy rate in near future.

**9. India is moving forward to be a developed country-**

Developed nations are those which are able to fulfil their necessities by self. Such countries which are industries, technologies centred, are economical powerful. They have enough money to fulfil their necessities. NEP 2020 has drawn a roadmap how India can be made economically powerful. New national education policy has focussed on the development of science and technologies. NEP has focussed on vocational education so that India could be made economically powerful. NEP has focussed on quality education. In future, India will produce a large number of skilled workers. NEP has focussed on how India be a manufacturing hub. When India gets money by production, India will construct a world class infrastructure for itself. The income of people will increase by industries. The rate of unemployment will be decreased. Farmers will get enough money to live a happy life by using new technologies in agriculture. So this futuristic approach of new education policy will increase the GDP. Thus India will be going forward on the way of being a developed country.

**10. How to avoid digital world's problems-**

Today world is transforming in a digital world. Digital technology has both bright and ugly side. In modern age, people are doing online shopping, online chatting, online banking etc. by using digital technology. Smartphones serve these digital services which are readily available to most of the people. People are doing office work from home on digital platforms. Email has taken the place of mail. Books are stored in chips in the form of ebooks. The information is stored in electronic chips digitally. People have meetings on digital platforms like google meet, zoom, jio meet etc. Social networking applications like

facebook, Instagram etc. has created societies on these digital platforms. Movies are released on the digital OTT platforms. NEP 2020 will guide new generation how to use digital technology in a right way.

At present, we see the ugly side of misuse of digital technology. The number of cyber frauds and cyber crimes are increasing day by day. Countries are doing cyber attacks on other countries to spy. Avoid from the ugly side of digital technology, we will have to educate our generations how to fight will these problems. National Education Policy 2020(NEP 2020) has focussed on the education of digital technology. Coding related activities will be done from the 6<sup>th</sup> class. NEP 2020 will help India in transforming in a Digital India.

### CONCLUSION

New Education Policy 2020 is based on the logical facts- why education, what education and how education. In NEP 2020, attention is paid on each side for the healthy development of humans. This NEP is written keeping in mind the necessities and environment of human. NEP 2020 is based on psychology so it gives attention from individual human development to the whole society. NEP 2020 will provide quality education at every level for the development of science and technology. NEP 2020 will produce highly educated and valued citizens.

New education policy will develop a society where peace and prosperity exist at all time. If it is implemented properly, its result will be fruitful to our new generation.

New Education Policy 2020 will bind Indians in a thread of unity and integrity. It will fulfil new generation with power, intelligence and knowledge besides the illuminating future of Indian Science and Technology.

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