

International Journal of Statistics and Applied Mathematics

ISSN: 2456-1452

Maths 2024; SP-9(2): 163-167

© 2024 Stats & Maths

www.mathsjournal.com

Received: 06-01-2024

Accepted: 09-02-2024

Dr. Manoj Kumar L Mishra

Associate Professor, Department
of Mathematics and Statistics,
GN Khalsa College of Arts,
Science and Commerce,
Matunga, Mumbai, Maharashtra,
India

Dr. Mithu Bhattacharya

Associate Professor, Department
of Mathematics and Statistics,
GN Khalsa College of Arts,
Science and Commerce,
Matunga, Mumbai, Maharashtra,
India

Corresponding Author:

Dr. Manoj Kumar L Mishra

Associate Professor, Department
of Mathematics and Statistics,
GN Khalsa College of Arts,
Science and Commerce,
Matunga, Mumbai, Maharashtra,
India

Strength, weakness, opportunity and threat of implementation of NEP 2020 in Indian Education: A review with a statistical analysis on the opinion of teaching community

Dr. Manoj Kumar L Mishra and Dr. Mithu Bhattacharya

DOI: <https://doi.org/10.22271/math.2024.v9.i2Sc.1698>

Abstract

The National Education Policy (NEP) 2020 is a comprehensive framework that aims to transform the education system in India. This was implemented from the academic year 2023-2024. So this is the high time to study about the Strength, Weakness, Opportunity and Threat (SWOT) of it. In this paper we have considered all most every factor of NEP 2020, given our view by studying the policy and also taken the views of many teachers. The main aim of this study is to analyze those opinions statistically.

Keywords: National Education policy, SWOT analysis, statistical representation, SPSS software, chi-square test.

Introduction

The new education policy, NEP 2020 talked about major transformational reforms in the Indian academic sector which were appreciated by many. Along with appreciation, there was also criticism which focused on the drawbacks of this policy. In this paper first we had discussed a SWOT analysis by studying the NEP 2020 and then analyse the same by observing the views of under graduate and post graduate teachers.

Strengths

NEP 2020 aims to ensure universal access to education, reducing disparities based on gender, socioeconomic background, or location. It introduces a flexible and multidisciplinary approach to curricula, allowing students to choose subjects based on their interests and aptitudes. It promotes critical thinking, creativity, and problem-solving skills, focusing on 21st-century skills to prepare students for the future. The policy emphasises the integration of technology in education. It recognises the potential of digital tools and platforms to enhance learning outcomes and promote innovative teaching methods. It encourages the use of technology for teacher training, online resources, and personalised learning. The policy brings significant reforms to the higher education sector by promoting multidisciplinary education, flexible course structures, and research-based learning. The NEP 2020 also emphasises the integration of vocational education, promoting industry-relevant skills and entrepreneurship. Multiple entries and exits from any course are flexible moves that will enable students to complete the course at their own pace without losing of years. The introduction of greater flexibility in the choice of subjects and removing the barriers between arts and sciences, curricular, co-curricular, and extra-curricular activities, sports, and vocational crafts would enable students to study and progress according to their interest.

Weaknesses

The NEP 2020 proposes ambitious changes and reforms in the education system, but it does not provide a clear roadmap for financing and resource allocation. While it emphasises the importance of quality education, it does not outline a comprehensive framework for ensuring quality assurance and monitoring mechanisms. Also the role of the private sector in education is not very clear. NEP had given the same weightage of various online courses but internet service is still very poor in rural India. More than 40% of the villages are yet to be connected to the internet grid, which creates a disadvantageous situation for rural students. So there will be a significance disparity between urban and rural students.

Opportunities

NEP 2020 presents several opportunities for students, teachers, and educational institutions. As it encourages a multidisciplinary approach to education, students will have the opportunity to learn a wide range of subjects and develop a broad set of skills. This will help them become well-rounded individuals and prepare them for the complex challenges. NEP 2020 emphasizes the development of skills such as critical thinking, problem-solving, creativity, and communication. This would help students become more employable and better equipped to succeed in a rapidly changing world. The policy gives an adequate opportunity for teachers to choose from the multiple course structure and flexible learning options to develop themselves. Proposed National Research Foundation would develop a strong research culture in India.

Threats

One of the biggest challenges of NEP-2020 is that, as it covers a wide range of areas, it requires significant investment and infrastructure to implement and also to maintain it for a long run. The successful implementation of the policy requires huge funding. The policy mentions the establishment of the National Research Foundation, but the details on how it will be funded are not clear. The policy emphasizes the involvement of the private sector in education, but there is a concern that this may lead to the commercialization of education.

Review of the Literature

Bele (2023) analysed the potentials and problems that India's National Education Policy 2020 presents for higher education. Soni (2022) discussed the essential areas that are still lacking, the complexity, and problems associated with implementing the numerous policies outlined in NEP. With regard to paradigm shifts in terms of opportunities and challenges in the teacher's education sector, Smitha (2020) [9] discussed very nicely. According to Reddy (2020), the creation of the Higher Education Commission of India, which will eventually take the role of the current regulatory agencies like the UGC or AICTE, is one of the NEP 2020's greatest selling points. It will create a single set of regulations for higher education institutions. The policy's long-term goal is to abolish the current structure of colleges that are linked with universities and merge numerous small, financially burdensome institutions with larger higher education institutes. Pankaj, et al. (2023) concluded that to achieve the overall objectives of NEP there is an immediate need to increase the funding so that the education system can be restructured and can be of global standards.

Research Methodology

A survey was conducted through a Google form to analyse the strengths, weaknesses, opportunities and threats (SWOT) of implementation of New Education Policy 2020 in Indian Education System on the basis of teacher's opinion. 142 teachers participated in this survey. SPSS software is used to analyse the primary data. Descriptive statistics and chi-square tests are used to find if there is any significant association between various factors on study.

Statistical Analysis and Finding

Following are the finding of the survey after analysing the data by SPSS software.

Table 1: Gender wise distribution of Teachers

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Female	74	52.1	52.1	52.1
Male	68	47.9	47.9	100.0
Total	142	100.0	100.0	

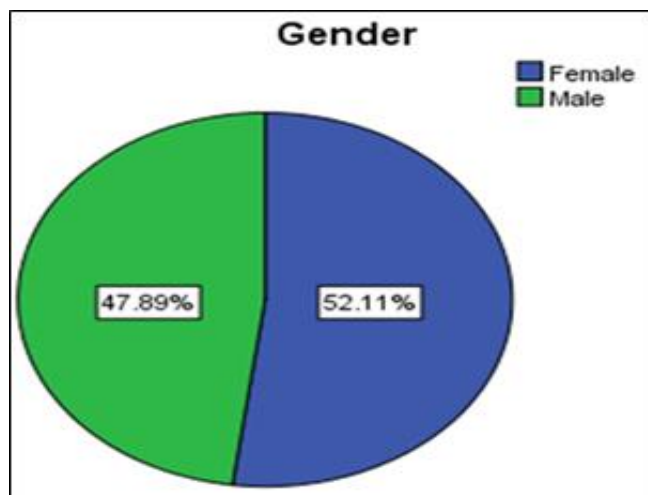


Fig 1: Show Female and male

Table 2: Stream wise distribution of Teacher

Stream	Frequency	Percent	Valid Percent	Cumulative Percent
Arts	28	19.7	19.7	19.7
Commerce	20	14.1	14.1	33.8
Science	94	66.2	66.2	100.0
Total	142	100.0	100.0	

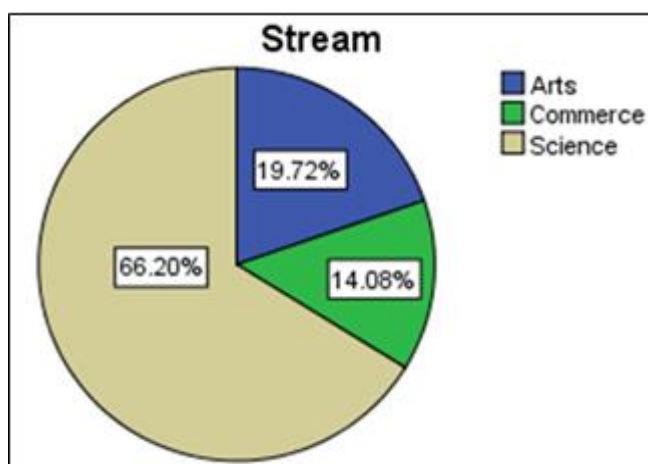


Fig 2: Show arts, commerce and science

Table 3: Your department is grant in aid or self-finance?

Status of the department	Frequency	Percent	Valid Percent	Cumulative Percent
Grant in aid	116	81.7	81.7	81.7
Self-finance	26	18.3	18.3	100.0
Total	142	100.0	100.0	

Is your college autonomous?

60% teachers are saying that their colleges are autonomous. These colleges have been implemented New Education Policy 2020 at first year level of Under Graduate and Post Graduate Courses from academic year 2023-24.

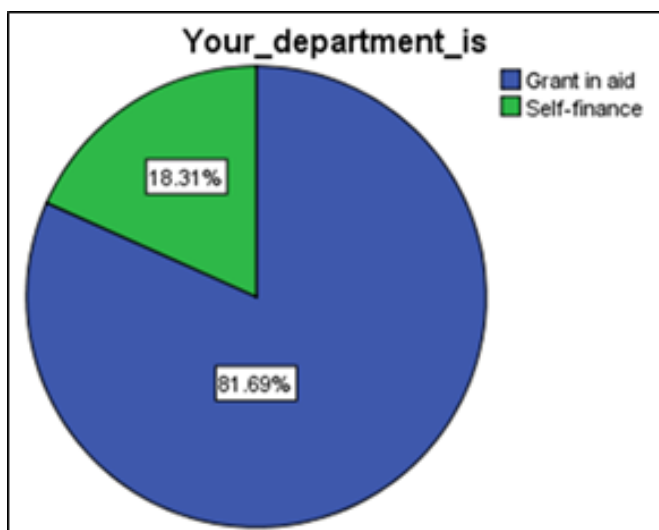


Fig 3: Show your department is grant aid and self-finance

Has your college implemented NEP 2020 at First Year level in UG?

88% teachers are saying that their colleges have implemented New Education Policy 2020 at first year level of Under Graduate and Post Graduate Courses.

Have your college or university trained teachers for implementation of NEP 2020?

68% teachers are accepting that their college trained them for implementation of NEP 2020.

Are you comfortable with implementation of NEP 2020 in your college?

56% teachers feel that they are comfortable with implementation of NEP 2020 in their colleges.

Is there any effect on workload after implementation of NEP 2020?

47% teachers feel that the workload is increased, 30% feel that workload is decreased, 10% feel that there is no effect on workload and 13% don't know about it after implementation of NEP 2020 in their colleges.

Is there any effect of NEP 2020 on the admission of students in your department?

42% teachers feel that admission at first year level in their department is decreased after implementation of NEP 2020, 6% feel that admission is increased, 18% feel that there is no effect on admission and 34% don't know about it. This is the **threat** of implementation of NEP 2020.

How do you feel the implementation of NEP 2020 would be useful for the students' future?

Maximum 35% teachers feel that their students will have multidimensional career opportunities after implementation of NEP 2020 while 25% teachers feel that students will be skill oriented, 18% feel that Indian education will be global. These are the Opportunities of implementation of NEP 2020.

What is/are drawback(s) (Weakness) of NEP 2020?

Maximum 26% teachers feel that quality of education will be declined after implementation of NEP 2020 in Indian education system while 14% feel that pursuing higher education will be very difficult for the students from financially weaker background in future, 10% feel that quality of education will be

declined as well as pursuing higher education will be very difficult for the financially poor students, 9% feel that work load of aided course will be reduced and 9% feel that aided courses will be closed in future. These are the **Weaknesses** of implementation of NEP 2020.

What are opportunities in future after implementation of NEP 2020?

Maximum 31% teachers feel that Indian Education will be global after implementation of NEP 2020 in Indian education system while 18% feel that students will be self-employed, 17% feel that teachers will become more skilled and 10% feel that Indian Education will be global, students will be self-employed and teachers will become more skilled. These are the Opportunities of implementation of NEP 2020.

Do you feel four years Honors degree in UG offers a more comprehensive education to bring international parity?

Maximum 69% teachers feel that Four Years Honors Degree will offer more comprehensive education to bring international parity while 31% are not agreeing. This is the strength of implementation of NEP 2020 in higher education.

Do you feel that four years Honors degree in UG has expanded the prospects for Indian students seeking higher education in abroad?

73% teachers feel that four years Honors degree in UG will expand the prospects for Indian students seeking higher education in abroad as for admission on MS degree in abroad four years course is required. This is the strength of implementation of NEP 2020 in higher education.

Do you feel that Multiple Entry and Exit System (MEES) System would reduce dropout rates by allowing students to leave a program temporarily without losing their credits?

74% teachers feel that Multiple Entry and Multiple Exist System under New Education Policy 2020 for students without losing their credit points will reduce dropout rate of students from Undergraduate Courses. Students completing one year of Under Graduate Course will get the degree of Certificate course, after two years they will get degree of Diploma course, after three years they will be awarded by Degree Course and after four years, students will get Honors Degree. Students with Honors Degree will be eligible to do Ph. D in respective subject without completing Post Graduate Degree. This is the strength of implementation of NEP 2020 in higher education.

Do you feel that Multiple Entry and Exit System (MEES) could lead to disruption in the student-teacher ratio as it would be difficult to predict how many students would exit or join in a course?

86% teachers feel that due to Multiple Entry and Multiple Exit (MEME) System under New Education Policy 2020 for students without losing their credit points, there will be disturbance in the student-teacher's ratio as it would be difficult to predict how many students would exit or join in a particular course. This is the threat of implementation of NEP 2020 in higher education.

Do you feel that promoting interdisciplinary education through Open Elective (OE) courses is required for the students to explore to the domains other than their core discipline?

68% teachers feel that promoting interdisciplinary education through Open Elective (OE) courses is required for the students

to explore to the domains other than their core discipline. As Open Elective course prepared by Science Stream will be opted by Commerce and Arts students, Open Elective course prepared by Commerce Stream will be opted by Science and Arts students and Open Elective course prepared by Arts Stream will be opted by Science and Commerce students. So a student of a particular discipline will be aware about other discipline also. This is the strength of implementation of NEP 2020 in higher education.

NEP offers students to earn credits by any online/offline courses approved by UGC to acquire the degree. Do you feel that this would lead to the dilution of degree and ignore the quality of education?

As under New Education Policy 2020, students can earn 40% credits by any online/offline courses approved by UGC to acquire the degree, so 79% teachers feel that this would lead to the dilution of degree and ignore the quality of education. This is the weakness of implementation of NEP 2020 in higher education.

Do you feel that by introducing IKS into higher education, institutions can aid students in developing a sense of social accountability, compassion, and ethical decision-making?

73% teachers feel that by introducing Indian Knowledge System (IKS) into higher education under New Education Policy 2020, institutions can aid students in developing a sense of social accountability, compassion, and ethical decision-making. This is the strength of NEP 2020.

Do you feel that NEP 2020 is a tool to privatize the higher education institute?

72% teachers feel that implementation of New Education Policy 2020 in Indian Education System is a tool to privatize the higher education institute. This is the threat of implementation of NEP 2020 in higher education.

Chi-Square tests to test the significant of association between various factors at 5% Level of Significance:

Chi-Square Test 1: To test the null hypothesis

H_{01} : There is no significant association between stream of discipline and Effect of implementation of NEP 2020 on the workload of department.

p value = 0.055 Which is not less than 0.05, so null hypothesis H_{01} is not rejected at 5% level of significance and conclude that there is no significant association between stream of discipline and Effect of implementation of NEP 2020 on the workload of department.

Chi-Square Test 2: To test the null hypothesis

H_{02} : There is no significant association between stream of discipline and Effect of implementation of NEP 2020 on the admission of students in the department.

p value = 0.0000 Which is very less than 0.05, so null hypothesis H_{02} is rejected strongly at 5% level of significance and conclude that there is a significant strong association between stream of discipline and Effect of implementation of NEP 2020 on the admission of students in the department.

Chi-Square Test 3: To test the null hypothesis

H_{03} : There is no significant association between stream of

discipline and comfort of teachers on implementation of NEP 2020 in their colleges.

p value = 0.293 Which is not less than 0.05, so null hypothesis H_{03} is not rejected at 5% level of significance and conclude that there is no significant association between stream of discipline and comfort of teachers on implementation of NEP 2020 in their colleges.

Chi-Square Test 4: To test the null hypothesis

H_{04} : There is no significant association between stream of discipline and usefulness of implementation of NEP 2020 for the students in future.

p value = 0.0000 Which is very less than 0.05, so null hypothesis H_{04} is rejected strongly at 5% level of significance and conclude that there is a significant strong association between stream of discipline and usefulness of implementation of NEP 2020 for the students in future.

Chi-Square Test 5: To test the null hypothesis

H_{05} : There is no significant association between stream of discipline and career opportunity to the students in future after implementation of NEP 2020 in higher education.

p value = 0.0000 Which is very less than 0.05, so null hypothesis H_{05} is rejected strongly at 5% level of significance and conclude that there is a significant strong association between stream of discipline and career opportunity to the students in future after implementation of NEP 2020 in higher education.

Chi-Square Test 6: To test the null hypothesis

H_{06} : There is no significant association between the teachers trained for implementation of NEP 2020 by their colleges and their comfort on implementation of NEP 2020 in their colleges.

p value = 0.004 Which is very less than 0.05, so null hypothesis H_{06} is rejected strongly at 5% level of significance and conclude that there is a significant strong association between the teachers trained for implementation of NEP 2020 by their colleges and their comfort on implementation of NEP 2020 in their colleges.

Conclusions

Following are conclusions of the analysis:

Strengths

- Four Years Honors Degree will offer more comprehensive education to bring international parity.
- Four years Honors degree in UG will expand the prospects for Indian students seeking higher education in abroad as for admission on MS degree in abroad four years course is required.
- Multiple Entry and Multiple Exit System under New Education Policy 2020 for students without losing their credit points will reduce dropout rate of students from Undergraduate Courses.
- Promoting interdisciplinary education through Open Elective (OE) courses is required for the students to explore to the domains other than their core discipline.
- Introducing Indian Knowledge System (IKS) into higher education under New Education Policy 2020, institutions

can aid students in developing a sense of social accountability, compassion, and ethical decision-making.

Weaknesses

- Quality of education will be declined after implementation of NEP 2020 in Indian education system.
- Any online/offline courses approved by UGC to acquire the degree would lead to the dilution of degree and ignore the quality of education.

Opportunities

- Students will have multidimensional career opportunities after implementation of NEP.
- Students will be skill oriented.
- Indian education will be global.
- Students will be self-employed.
- Teachers will become more skilled.

Threats

- Admission at first year level in the department is decreased after implementation of NEP 2020,
- Multiple Entry and Exit System (MEES) under New Education Policy 2020 for students without losing their credit points will bring disturbance in the student-teacher's ratio.
- Implementation of New Education Policy 2020 in Indian Education System is a tool to privatize the higher education institute. Then higher education will be very difficult for the students from economically poor background.

There is

- No significant association between stream of discipline and Effect of implementation of NEP 2020 on the workload of department.
- A strong significant association between stream of discipline and Effect of implementation of NEP 2020 on the admission of students in the department.
- No significant association between stream of discipline and comfort of teachers on implementation of NEP 2020 in their colleges.
- A strong significant association between stream of discipline and usefulness of implementation of NEP 2020 for the students in future.
- A strong significant association between stream of discipline and career opportunity to the students in future after implementation of NEP 2020 in higher education.
- A strong significant association between the teachers training for implementation of NEP 2020 by their colleges and their comfort on implementation of NEP 2020 in their colleges.

References

1. Bele DM. National Education Policy 2020: Challenges & Opportunities in Higher Education in India. *Int J Humanit Soc. Sci. Manag.* 2023 Jan-Feb;3(1):205-207. Available from: www.ijhssm.org
2. Chakraborty DB. The Role of ICT in Achieving goals of national education policy - 2020. *Research Gate.* 2022 Jan 13. ISBN: 978-81-952651-0-7; 9-21.
3. Mahanta B. Recommendations and Challenges of Teacher Education in NEP-2020. *J Emerg Technol Innov Res.* 2023;10(5):88-92. Available from: www.jetir.org
4. Thakur P, Devi L, Patiyal D. Nep 2020 of India Opportunities And Challenges Ahead. *Research Gate.* 2023 Feb 23;68-76.
5. Rani DR. National Education Policy-2020: Issues and Challenges. *J Res Humanit Soc Sci.* 2022;10(2):06-09. ISSN(Online):2321-9467.
6. Reddy PN. National Education Policy 2020-Challenges and Opportunities on the Educational System. *Int J Sci Res.* 2021 Nov;10(11):927-930. Available from: www.ijsr.net
7. Sharma S, Kumar T. Problems and Opportunities in Teacher Education in context of National Education Policy, 2020. *Int J Res Trends Innov.* 2022;7(7):1504-1508. Available from: www.ijrti.org
8. Soni R. Challenges and issues in national education Policy 2020. *Int Res J Modern Eng Technol Sci.* 2022 Mar;4(03):2026-2031. e-ISSN: 2582-5208. Available from: www.irjmets.com
9. Smitha S. National Education Policy (NEP) 2020-Opportunities and challenges in teacher education. *Int J Manage.* 2020 Nov;11(11):1881-1886. Available from: <http://iaeme.com>
10. Sonwa P. National Education Policy-2020 and Higher Education. *Int J Educ Mod Manag Appl Sci Soc Sci.* 2021;3(1):55-59. ISSN: 2581-9925