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NEP and Research Orientation in Higher Education

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Abstract

The National Education Policy (NEP) 2020, implemented by the Indian government, underscores the necessity of fostering research inside higher education institutions to enhance creativity, critical thinking, and interdisciplinary learning. This study seeks to evaluate the influence of NEP on research orientation in higher education by analyzing views and preparedness among students and faculty in public and private institutions. This study assesses the efficacy of NEP measures in promoting a research-oriented culture through a survey of 125 respondents from public and commercial institutions, while also identifying the problems encountered by these institutions in executing the reforms. A combination of quantitative analysis and statistical testing is utilized to get conclusions from the primary data.

Keywords: National Education Policy (NEP), Higher Education, Research Orientation, Public Colleges, Private Colleges, Comparative Analysis, Statistical Testing, Innovation

Introduction

The National Education Policy (NEP) 2020 is seen as a transformative initiative aimed at overhauling India's education system, especially concerning higher education. NEP seeks to synchronize Indian education with international norms, promoting innovation, critical thinking, and interdisciplinary learning through its progressive agenda (A, S. K., et.al., 2020). One of the most crucial reforms made by NEP 2020 is the focus on fostering a research-oriented culture within higher education institutions (HEIs). This is regarded as essential for converting Indian higher education institutions into centers of knowledge creation rather than solely knowledge dissemination. By incorporating research into undergraduate and postgraduate curricula, the NEP aims to connect academic education with practical applications, thereby fostering societal progress and technological innovation. Research and innovation are essential to the policy's objective, especially as India aspires to become a knowledge-based economy in the 21st century. The NEP promotes the creation of National Research Foundations (NRFs) to furnish money and assistance for innovative research across multiple fields. These foundations seek to cultivate a cooperative environment in which academics, industry, and government collaborate to address significant societal and global issues, including healthcare, sustainability, and more. The NRF will significantly contribute to the advancement of interdisciplinary research, which is widely acknowledged as vital for tackling complex, diverse issues that transcend conventional academic borders. Nonetheless, whereas the NEP establishes an ambitious framework for research and innovation in higher education, the ability of Indian colleges and universities to execute these reforms differs significantly (Agrawal, B., 2022). The preparedness of institutions to adopt the NEP's research-centric vision relies on multiple elements, including as the accessibility of research infrastructure, the existence of sufficiently

trained professors, and the inclination of students to participate in research endeavors. Public and commercial institutions have significant disparities in their preparedness and capacity to embrace the research-oriented paradigm advocated by NEP.

Public colleges in India frequently contend with constrained financial resources, bureaucratic obstacles, and antiquated facilities. Numerous public institutions, despite their rich tradition and legacy, encounter considerable difficulties in conforming to contemporary research demands. Faculty at these universities frequently encounter excessive administrative duties, resulting in insufficient time for substantive research endeavors. Moreover, the absence of state-of-the-art equipment, laboratories, and access to international research networks might hinder research productivity and constrain the capacity for innovation. Student interest in research, although evident, is frequently insufficiently developed due to inadequate exposure, mentorship, and instruction in research procedures. Conversely, private colleges are frequently perceived as more adaptable and receptive to shifts in the educational environment. Institutions with substantial funds and resources have been more expedient in implementing the NEP's reforms (Singh, P., 2022). They attract academics with international experience, provide cutting-edge research facilities, and offer a flexible curriculum that promotes interdisciplinary studies. Nonetheless, even within private universities, there are apprehensions over the degree to which research is emphasized, as numerous colleges stress teaching and vocational programs above cultivating a robust research culture. Moreover, private universities may encounter difficulties in enticing students to research-focused programs, since numerous students continue to view higher education chiefly as a means to secure immediate employment rather than as a basis for enduring research careers.

In this context, it is essential to examine how both public and private organizations interpret and execute the NEP's research-oriented changes. Are they prepared to implement essential changes in their pedagogical approaches, infrastructure, and overall academic culture to prioritize research? What is the response of students and faculty to these changes, and what obstacles do they have in adjusting to a more research-oriented framework? These inquiries are crucial as the achievement of NEP's goal relies not only on policy development but also on the preparedness and responsiveness of institutions and their stakeholders at the grassroots level. This study seeks to examine the attitudes of students and professors in both public and private universities concerning the research-oriented reforms implemented by the NEP. By comprehending their perspectives, we can evaluate the institutional preparedness to adopt these changes and pinpoint the particular obstacles they encounter in the process. The research aims to compare the experiences of public and private institutions, elucidating the unique difficulties and opportunities inherent in these two sectors of Indian higher education (Rokade, E., 2022). This research aims to deliver practical insights that can guide the implementation of the NEP and ensure the achievement of its objectives in promoting a research-oriented higher education system nationwide, regardless of the type of institution.

This study is organized to initially delineate the existing literature on research orientation in higher education and the National Education Policy's objective for change. Subsequently, we outline the research methodology, encompassing the survey administered to 125 respondents, comprising students and teachers from both public and private universities. The research additionally examines the outcomes, concentrating on three primary objectives: Assessing awareness of NEP's research focus, evaluating the preparedness of public and commercial organizations, and identifying obstacles that hinder the efficient execution of these reforms. Statistical analysis is utilized to evaluate the hypotheses, and the results are examined thoroughly to offer an in-depth picture of the research orientation landscape in Indian higher education following the NEP.

Review Literature

The caliber of research in Indian institutions, enhancing its worldwide competitiveness while addressing societal concerns such as health, technology, and climate change. This focus on research is deemed essential for India to evolve from a knowledge-consuming to a knowledge-generating nation (Mohan, 2022). Bharucha (2021) contends that a research-oriented curriculum enables students to cultivate critical thinking abilities and apply theoretical knowledge to practical issues, promoting a more comprehensive educational approach. Moreover, Rao (2020) emphasizes that research enhances the quality of teaching in higher education, since educators involved in research are more adept at integrating contemporary information into the classroom. Mukherjee (2022) supports the notion that incorporating research into undergraduate programs, as advocated by NEP, will enhance academic standards and motivate students to seek research careers.

The NEP anticipates extensive research improvements; nonetheless, the difficulties encountered by higher education institutions, particularly public ones, must not be disregarded. Joshi and Pathak (2021) assert that public institutions frequently contend with insufficient research infrastructure, restricted funding, and bureaucratic impediments

that hinder innovation and research advancement. Sharma (2023) emphasizes the disproportionate allocation of research resources between public and private universities, contending that private institutions possess greater flexibility and are better positioned to implement the research-focused mandates of the NEP. Kaur and Gupta (2021) demonstrate that private institutions possess greater liberty in executing NEP reforms and are more expedient in adopting research-oriented programs. Their research indicates that private universities typically recruit superior staff, offer more adaptable courses, and excel in establishing partnerships with industry stakeholders, all of which enhance their research focus. Kumar et al. (2022) contend that public institutions, although their bureaucratic obstacles, has the capacity for significant long-term influence if the government enhances investment in infrastructure and faculty development.

For research orientation to flourish in higher education, faculty members must have proper training and motivation to participate in research endeavors. Sarkar and Ramaswamy (2022) assert that the efficacy of the NEP in cultivating a research culture is largely contingent upon faculty development initiatives that emphasize skill enhancement, research methodology, and partnerships with overseas scholars. Reddy (2023) underscores the necessity of ongoing professional development for teachers to conform to the research objectives of the NEP. Prasad (2021) warns that insufficient funds and time for research activities may hinder faculty members in public universities from fulfilling these goals. The NEP emphasizes the significance of engaging students in research activities beginning at the undergraduate level. Das (2021) examines how promoting undergraduate research not only increases student involvement but also establishes a robust platform for future academic endeavors. Narayan (2022) posits that student-led research efforts, bolstered by sufficient mentorship and resources, have the potential to transform students' academic pursuits, promoting a culture of inquiry and critical thinking.

A significant feature of NEP 2020 is its advocacy for multidisciplinary research, acknowledging that intricate global concerns necessitate solutions derived from various academic disciplines. Patel (2022) observes that the amalgamation of many fields, such as technology with the humanities or environmental science with economics, can yield creative research that is both intellectually enriching and socially pertinent. Ghosh (2023) emphasizes that interdisciplinary research, bolstered by the NEP, can facilitate cooperation among university departments, which is essential for producing innovative insights and advancements. The National Research Foundation (NRF), as recommended by the NEP, seeks to provide money for high-caliber research and establish collaborations among academia, industry, and governmental entities. Sinha (2023) examines how the NRF may connect university research with industry requirements, thereby fostering discoveries that are directly relevant to practical concerns. Chakrabarti (2024) posits that these funding arrangements can enhance the global competitiveness of Indian higher education institutions by promoting partnership with international research entities. The significance of technology in augmenting research capacities is a vital component of NEP 2020. Mehta (2022) examines how digital libraries, online research databases, and e-learning platforms provide students and instructors access to a plethora of previously inaccessible materials. Khan and Singh (2023) assert that technology will be instrumental in diminishing the rural-urban disparity in research possibilities by facilitating remote access to superior educational resources.

Numerous researchers have suggested measures to enhance the research focus of higher education institutions under the NEP. Sethi (2023) posits that governmental policies should prioritize the provision of stable support for research initiatives, especially in public colleges facing resource limitations. Pandey (2022) asserts that industrial collaborations should be promoted, as they offer financing and guarantee the practical applicability of academic research. The literature indicates that NEP 2020 has the capacity to revolutionize India's higher education system by promoting a strong research-oriented culture. Nonetheless, problems like as structural deficiencies, inconsistent funding, and faculty development must be resolved for these reforms to succeed. India's higher education institutions are endeavoring to conform to global norms, with research emphasis, bolstered by the NEP and the proposed National Research Foundation (NRF), being pivotal in determining the future of academics in the nation.

Research Methodology

This research utilized primary survey data gathered from 125 participants, comprising both students and teachers from public and private institutions. The study aimed to assess respondents' perspectives, awareness, and engagement in research activities, as well as their opinions on the NEP reforms.A total of 125 respondents were chosen through a convenience sampling method, comprising 65 individuals from public colleges and 60 from private colleges. The data was gathered using a standardized questionnaire comprising closed-ended questions on a Likert scale (1-5) addressing subjects such as awareness of NEP, present research procedures, infrastructure availability, faculty development, and problems in executing NEP reforms. The subsequent statistical tools were employed to test the hypotheses and examine the data. Descriptive Statistics: To summarize the demographic and background information of respondents. Independent Sample T-Test: To compare the means of research orientation and infrastructure between public and private institutions. Chi-Square

Test: To evaluate the correlation between faculty growth and the actual execution of research activities. Results Interpretation: The data interpretations are explained in relation to the significance level (p-value).

Objectives of the Study

1. To analyze the level of awareness and perception among students and faculty regarding the NEP's focus on research orientation in higher education.
2. To compare the research orientation of public and private colleges in terms of infrastructure, faculty development, and student participation in research.
3. To identify the challenges faced by public and private colleges in implementing NEP's research-oriented initiatives and propose recommendations for improvement.

Hypotheses of the study

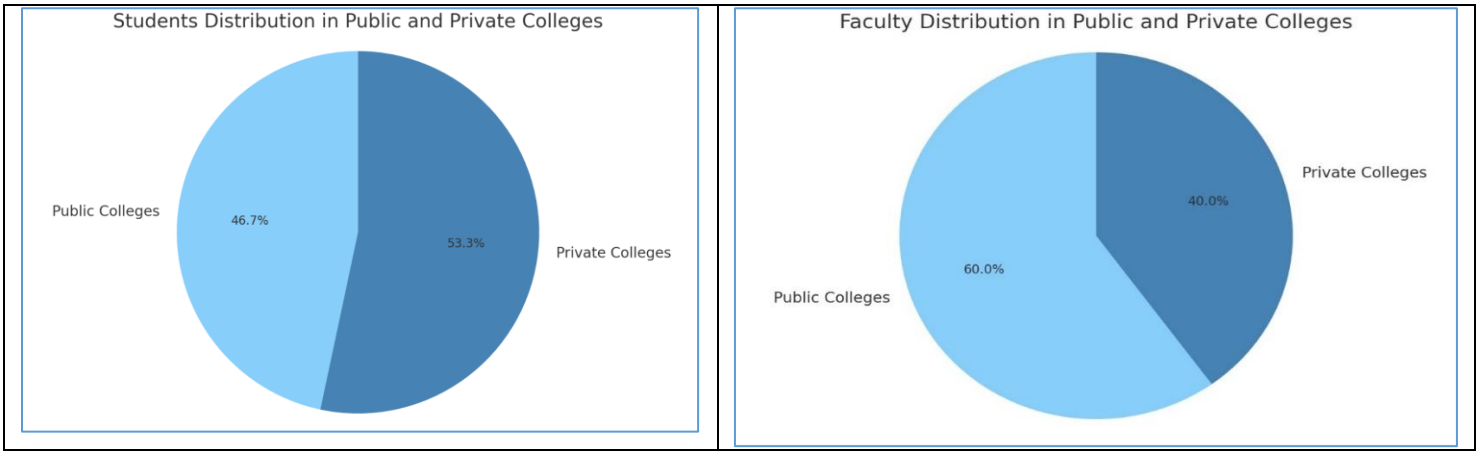
1. H1: There is a significant difference in the level of research orientation between public and private colleges.
2. H2: The infrastructure for research in private colleges is significantly better than in public colleges.
3. H3: There is a significant relationship between the perception of faculty development and the actual implementation of research activities in both public and private colleges.

Data Analysis and Results

Table 1: Demographic Profile of Respondents:

Category	Public Colleges	Private Colleges	Total
Students	35	40	75
Faculty	30	20	50
Total Respondents	65	60	125
Gender (Male/Female)	45/20	30/30	75/50

The demographic distribution indicates an equitable representation of students and teachers in both public and private institutions. A greater male representation was noted in public colleges, but private colleges exhibited gender parity.



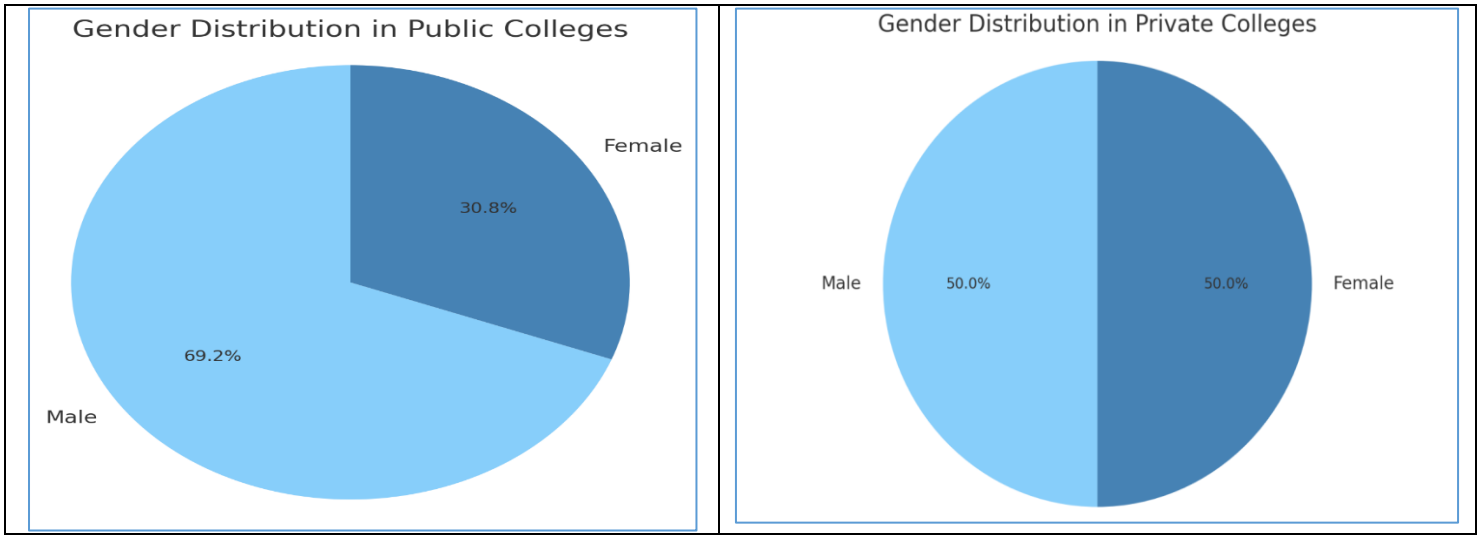


Figure 1: Pie-Charts for Demographic Profile of Respondents

Table 2: Awareness of NEP among Respondents:

Awareness Level	Public Colleges (n=65)	Private Colleges (n=60)
Highly Aware	28%	34%
Moderately Aware	44%	50%
Low Awareness	28%	16%

Private colleges shown a marginally greater awareness of NEP changes, with 50% fairly aware and 34% well aware, whereas public institutions showed a deficiency in high awareness. This signifies a necessity for enhanced communication of NEP policies among public institutions.

Table 3: T-Test Results - Research Orientation of Public and Private Colleges

Group	Mean Research Orientation Score	Standard Deviation	T-Value	P-Value
Public Colleges (n=65)	3.2	0.78	-2.45	0.016*
Private Colleges (n=60)	3.6	0.65		

The T-test results, with a p-value of 0.016, demonstrate a substantial disparity in the research orientation between public and private universities, with private colleges exhibiting a greater inclination towards research. This substantiates H1 that private universities have a greater orientation towards research than state institutions.

Table 4: T-Test Results for Infrastructure

Group	Mean Infrastructure Score	Standard Deviation	T-Value	P-Value
Public Colleges (n=65)	2.9	0.81	-3.10	0.002*
Private Colleges (n=60)	3.5	0.67		

The average infrastructure score was markedly superior in private colleges (mean = 3.5, p-value = 0.002), suggesting that private institutions generally had enhanced research infrastructure relative to public colleges. This endorses H2.

Table 5: Chi-Square Test - Faculty Development and Research Implementation:

Variable	Chi-Square Value	P-Value
Faculty Development vs. Research Implementation	6.81	0.012*

A substantial correlation exists between faculty development levels and the effective execution of research activities (p-value = 0.012). This substantiates H3, indicating that faculty development is essential in cultivating a research culture in both public and private institutions of higher education.

Findings and Discussion

- Private colleges exhibit a heightened emphasis on research endeavors, presumably attributable to superior infrastructure and more adaptable administrative procedures.
- Public colleges encounter considerable obstacles regarding funding, infrastructure, and bureaucratic impediments, which impede their capacity to advance research activities despite the encouragement from the NEP.
- Faculty development emerged as a vital element in the effective execution of research programs. Both public and private institutions must allocate resources for ongoing training, mentorship, and development initiatives for faculty members.
- Private schools demonstrated superior research infrastructure, hence corroborating hypothesis H2.
- Public institutions require increased financing and policy assistance to enhance their research facilities.

Conclusion and Recommendations

India's academic and scientific progress depends on the NEP's lofty goal of developing a research-focused higher education system. This study has emphasized the distinctions between research orientations at public and private institutions and has found significant obstacles to the implementation of NEP reforms.
The following suggestions are offered to guarantee the accomplishment of NEP's research objectives:

- In order to increase knowledge of NEP efforts and their advantages, public institutions must implement more effective communication tactics.
- Government policies should prioritize enhancing the infrastructure for research, particularly in public institutions.
- It is recommended that faculty members be equipped with regular training, workshops, and mentorship programs to enable them to effectively incorporate research into their teaching and academic duties.
- Collaborations on joint research initiatives and resource sharing could be made possible by partnerships between public and private universities and the lack of infrastructure.

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