



Reflections on Odisha school education system post-NEP 2020

Mita Sahu

Assistant Teacher (TGT- CBZ), Department of School and Mass Education, U.G.H.S. Bolasara, Kabisurya Nagar, Odisha, India

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Abstract

The National Education Policy (NEP) 2020 has emerged as a transformative framework for reshaping the Indian education system with a focus on holistic learning, inclusivity, skill development, and digital integration. Odisha, a state with significant socio-cultural diversity and a large rural and tribal population, has undertaken several reforms in its school education system in alignment with NEP 2020. This paper critically reflects on the developments, achievements, opportunities, and challenges experienced by Odisha's school education system after the implementation of NEP 2020. The study highlights the state's efforts toward foundational literacy and numeracy, multilingual education, teacher empowerment, technological integration, and equitable access to quality education. It also examines persistent challenges such as infrastructural gaps, digital inequality, teacher shortages, and educational disparities between urban and rural regions. The paper concludes that while Odisha has shown commendable progress in aligning with the vision of NEP 2020, sustained policy commitment, teacher capacity-building, and community participation remain essential for achieving long-term educational transformation.

Keywords: NEP 2020, Odisha, school education, educational reform, digital learning, foundational literacy, inclusive education

Introduction

Education plays a vital role in social transformation, economic growth, and nation-building. In India, the announcement of the National Education Policy (NEP) 2020 marked a historic shift from rote-based learning toward competency-based, holistic, and multidisciplinary education. The policy introduced major reforms such as the 5+3+3+4 curricular structure, emphasis on foundational literacy and numeracy, multilingualism, vocational education, experiential learning, and technology-enabled teaching. Odisha, known for its cultural richness and geographical diversity, has historically faced challenges in educational accessibility, especially in tribal and remote regions. However, the state government has made substantial efforts to strengthen school infrastructure, improve enrollment rates, and modernize educational delivery systems. After NEP 2020, Odisha accelerated reforms to align its educational framework with national goals while also addressing local educational needs. This paper reflects upon the evolving nature of Odisha's school education system in the post-NEP 2020 era and evaluates the extent to which the reforms are contributing to quality and equitable education.

2. Problem Statement

The introduction of the National Education Policy (NEP) 2020 marked a major shift in India's educational philosophy and governance. The policy seeks to transform the traditional education system into a more inclusive, flexible, skill-oriented, and learner-centered framework. It emphasizes foundational literacy and numeracy, multilingual education, competency-based learning, digital integration, teacher empowerment, and equitable access to quality education. While the policy presents a progressive vision for educational reform, its successful implementation

largely depends on the readiness and capacity of individual states.

Odisha, with its diverse socio-cultural composition and significant rural and tribal population, faces unique educational challenges in implementing NEP 2020 effectively. Although the state government has undertaken several initiatives to modernize school education, disparities continue to exist in terms of infrastructure, digital accessibility, teacher availability, learning outcomes, and educational opportunities between urban and rural areas. Many schools in remote and tribal regions still struggle with inadequate classrooms, shortage of trained teachers, poor internet connectivity, and limited access to digital learning resources.

Furthermore, the transition from rote-learning methods to competency-based and experiential learning requires substantial changes in curriculum delivery, teacher training, and assessment practices. Teachers often face difficulties adapting to new pedagogical approaches due to limited professional development opportunities and resource constraints. Similarly, students from economically weaker and marginalized communities continue to experience barriers related to poverty, language diversity, social inequality, and lack of technological support.

Another important concern is the practical implementation of multilingual education in Odisha's linguistically diverse environment. While mother tongue-based education has the potential to improve learning outcomes, the availability of teaching materials and trained educators in tribal languages remains insufficient in many areas. The rapid expansion of digital education after the COVID-19 pandemic has also exposed the digital divide among students, particularly those in rural and underdeveloped regions.

In this context, there is a growing need to critically examine

how NEP 2020 is influencing Odisha's school education system and whether the reforms are effectively addressing long-standing educational challenges. It is essential to assess the progress made in policy implementation, identify the gaps and obstacles, and evaluate the preparedness of schools, teachers, and students in adapting to the new educational framework.

Therefore, the present study seeks to reflect upon the status, opportunities, and challenges of Odisha's school education system in the post-NEP 2020 era. The study aims to understand whether the reforms introduced under NEP 2020

are contributing to equitable, inclusive, and quality education for all sections of society in Odisha.

3. Review of Literature

A review of literature helps in understanding the existing studies, research trends, policy perspectives, and scholarly observations related to the implementation of the National Education Policy (NEP) 2020 and its impact on school education. The following table presents important studies and reports associated with educational reforms, school education, and NEP implementation in India and Odisha.

Sl. No.	Researcher/Author	Year	Title/Area of Study	Major Findings	Research Gap
1	Government of India	2020	National Education Policy 2020	The policy emphasized holistic education, foundational literacy, multilingual learning, vocational education, and digital integration to improve educational quality across India.	The policy document provides broad national recommendations but lacks state-specific implementation analysis, particularly for Odisha.
2	Kumar and Singh	2021	Impact of NEP 2020 on School Education in India	The study observed that NEP 2020 promotes competency-based learning and flexible curriculum design for improving student learning outcomes.	The study focused mainly on national-level reforms and did not examine challenges faced by rural and tribal states like Odisha.
3	Mishra	2021	Digital Education and Challenges during COVID-19 in Odisha	The research highlighted the increasing role of digital learning in Odisha and identified issues such as internet inaccessibility and lack of devices among rural students.	The study concentrated on pandemic-related online learning but did not analyze post-NEP educational transformation.
4	Das and Behera	2022	Teacher Preparedness for NEP 2020 Implementation	The study found that teachers require continuous training and technological support to adopt competency-based and experiential teaching methods effectively.	The research did not specifically investigate teacher preparedness in Odisha's government schools.
5	NCERT	2021	Foundational Literacy and Numeracy Framework	The report emphasized the importance of early childhood education and foundational learning for long-term academic success.	The framework lacked empirical discussion regarding implementation challenges in tribal and multilingual regions.
6	Panda	2022	Multilingual Education in Tribal Areas of Odisha	The study revealed that mother tongue-based education improves classroom participation and comprehension among tribal students.	The research did not examine the integration of multilingual education within the framework of NEP 2020.
7	Mohanty and Rout	2023	School Infrastructure and Educational Equity in Odisha	The study identified infrastructural disparities between urban and rural schools and their impact on learning quality.	The research did not explore how NEP 2020 reforms address infrastructural inequality in Odisha.
8	UNESCO	2021	Technology and Inclusive Education	The report highlighted the role of technology in promoting inclusive education and improving learning accessibility.	The report discussed global educational trends but lacked regional analysis concerning Odisha's educational conditions.
9	Behera	2023	Vocational Education under NEP 2020	The study observed that vocational education enhances employability, practical skills, and career readiness among students.	The study did not analyze the effectiveness of vocational programs in Odisha's secondary schools.
10	Odisha School Education Programme Authority (OSEPA)	2022	Educational Reforms in Odisha Schools	The report discussed state initiatives related to smart classrooms, teacher training, and school modernization programs.	The report mainly described government initiatives without critically evaluating implementation outcomes and challenges.
11	Pradhan and Sahoo	2023	Inclusive Education and Social Equity in Odisha	The study found that scholarship schemes and welfare programs increased school participation among marginalized students.	The study did not comprehensively assess the long-term impact of NEP 2020 on educational inclusion.
12	World Bank	2022	Learning Recovery and Educational Transformation in India	The report highlighted the importance of digital innovation, teacher support, and learning recovery strategies after the pandemic.	The report provided generalized recommendations without detailed state-level analysis of Odisha.

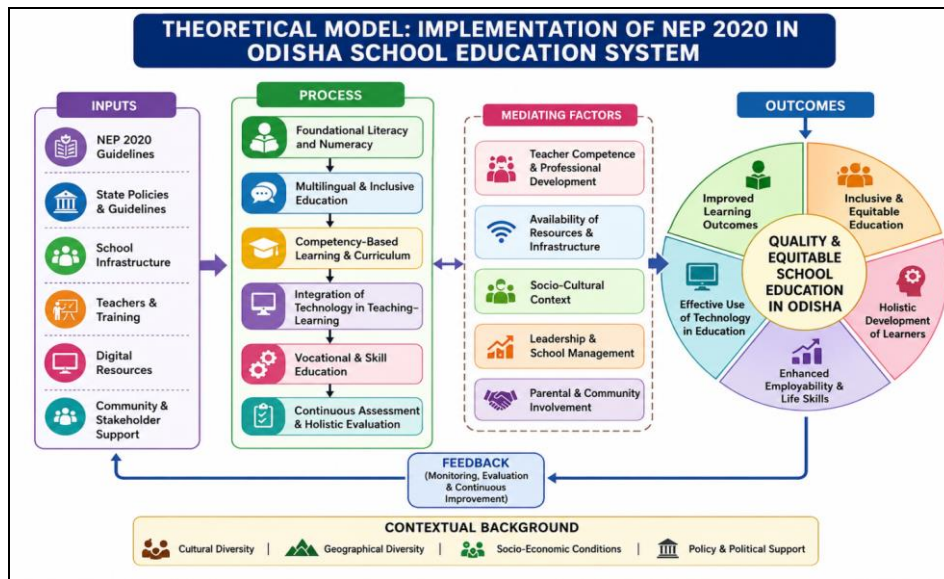
The reviewed literature indicates that NEP 2020 has introduced significant reforms aimed at improving educational quality, inclusiveness, skill development, and technological integration in India. Several studies have highlighted the importance of foundational literacy, teacher training, multilingual education, and digital learning in

achieving educational transformation. Research also reflects that Odisha has undertaken notable initiatives in school modernization, smart classrooms, and inclusive education. However, the literature reveals certain gaps. Most studies focus either on national educational reforms or isolated educational issues such as digital learning, infrastructure, or

teacher training. Limited research has been conducted on the comprehensive impact of NEP 2020 on Odisha's school education system, especially in relation to rural-urban disparities, tribal education, implementation challenges, and

policy outcomes. Therefore, the present study attempts to bridge this gap by critically reflecting on the opportunities and challenges of Odisha's school education system in the post-NEP 2020 era.

Theoretical Framework of the Study



1. Explanation of the Theoretical Framework

The theoretical framework entitled “Implementation of NEP 2020 in Odisha School Education System” presents a systematic understanding of how the National Education Policy (NEP) 2020 influences the transformation of school education in Odisha. The framework demonstrates the relationship among educational inputs, implementation processes, mediating factors, expected outcomes, and feedback mechanisms within the educational system. It also highlights the broader contextual background influencing educational reforms in the state.

The framework is divided into five major components: Inputs, Process, Mediating Factors, Outcomes, and Feedback, all functioning within a socio-cultural and policy-oriented environment.

1.1. Inputs

The first component of the framework consists of the foundational inputs necessary for implementing NEP 2020 successfully in Odisha's school education system. These inputs act as the driving forces for educational transformation.

a. NEP 2020 Guidelines

The National Education Policy 2020 serves as the primary foundation for educational reform. It introduces major changes such as competency-based learning, experiential education, foundational literacy and numeracy, multilingual education, and vocational learning. These guidelines provide the overall direction for restructuring school education.

b. State Policies and Guidelines

The Odisha Government adapts national educational policies according to the state's educational needs and socio-cultural conditions. State-level educational guidelines support curriculum reforms, school modernization, teacher development, and digital learning initiatives.

c. School Infrastructure

Adequate infrastructure is essential for quality education. This includes classrooms, sanitation facilities, libraries, laboratories, electricity, internet connectivity, and smart classrooms. Infrastructure development creates a supportive learning environment for students.

d. Teachers and Training

Teachers are central to educational implementation. Continuous professional training equips teachers with modern pedagogical skills, digital competencies, and learner-centered teaching approaches necessary under NEP 2020.

e. Digital Resources

Digital education has become an important component of modern learning. Availability of digital devices, e-learning platforms, online resources, and smart technologies supports effective teaching-learning processes.

f. Community and Stakeholder Support

The involvement of parents, local communities, school management committees, and educational stakeholders strengthens educational governance and promotes accountability in schools.

1.2. Process

The process component explains the major educational activities and reforms undertaken under NEP 2020 implementation in Odisha.

a. Foundational Literacy and Numeracy

NEP 2020 gives highest priority to ensuring that every child acquires basic reading, writing, and arithmetic skills at an early stage. Odisha has focused on activity-based and child-centered learning methods to improve foundational learning.

b. Multilingual and Inclusive Education

The framework emphasizes teaching children in their mother tongue or regional language during early education. Odisha's multilingual approach is particularly important for tribal and rural students, as it enhances comprehension and classroom participation.

c. Competency-Based Learning and Curriculum

Traditional rote memorization is replaced with competency-based education that promotes critical thinking, creativity, problem-solving, and conceptual understanding. Curriculum reforms encourage experiential and practical learning.

d. Integration of Technology in Teaching-Learning

Technology integration includes smart classrooms, digital content, virtual learning platforms, and ICT-enabled teaching methods. These initiatives improve accessibility and innovation in education.

e. Vocational and Skill Education

Vocational education helps students acquire practical skills and career-oriented knowledge. NEP 2020 encourages exposure to skill development from middle school onwards.

f. Continuous Assessment and Holistic Evaluation

The framework promotes comprehensive evaluation methods that assess cognitive, emotional, social, and practical competencies rather than relying solely on traditional examinations.

1.3. Mediating Factors

Mediating factors influence the effectiveness of NEP implementation and determine the success or failure of educational reforms.

a. Teacher competence and professional development

The effectiveness of educational reforms largely depends on teachers' abilities, motivation, and adaptability to new teaching practices.

b. Availability of Resources and Infrastructure

The successful implementation of NEP 2020 requires sufficient educational resources, digital facilities, and institutional support across schools.

c. Socio-Cultural Context

Odisha's social diversity, tribal population, linguistic variation, and economic conditions significantly influence educational participation and learning outcomes.

d. Leadership and School Management

Effective school administration, educational leadership, and policy monitoring contribute to successful implementation of educational reforms.

e. Parental and Community Involvement

Parental awareness and community participation support student learning, school governance, and educational accountability.

1.4. Outcomes

The framework identifies several expected outcomes resulting from the implementation of NEP 2020 in Odisha's school education system.

a. Improved Learning Outcomes

Competency-based learning and foundational education improve students' academic performance, conceptual understanding, and critical thinking abilities.

b. Inclusive and Equitable Education

Educational reforms aim to reduce disparities related to gender, socio-economic status, disability, language, and geographical location.

c. Effective Use of Technology in Education

Technology integration enhances accessibility, interactive learning, and digital literacy among students and teachers.

d. Enhanced Employability and Life Skills

Vocational education and skill-based learning prepare students for future employment opportunities and practical life situations.

e. Holistic Development of Learners

The framework promotes physical, emotional, intellectual, ethical, and social development of students for balanced personality growth.

f. Quality and Equitable School Education in Odisha

The ultimate objective of the framework is to establish a modern, inclusive, learner-centered, and equitable school education system in Odisha.

1.5. Feedback Mechanism

The framework includes a feedback system consisting of monitoring, evaluation, and continuous improvement. Regular assessment of policies, programs, and learning outcomes helps identify implementation gaps and supports evidence-based decision-making. Feedback mechanisms ensure accountability and sustainability in educational reforms.

1.6. Contextual Background

The entire framework operates within a broader contextual environment that includes:

- Cultural Diversity
- Geographical Diversity
- Socio-Economic Conditions
- Policy and Political Support

These external factors shape the educational realities of Odisha and influence policy implementation at different levels.

The theoretical framework provides a comprehensive understanding of how NEP 2020 reforms interact with educational structures, institutional mechanisms, and socio-cultural realities in Odisha. It explains that successful educational transformation depends not only on policy formulation but also on effective implementation, teacher preparedness, infrastructural development, technological accessibility, and community participation.

The framework further demonstrates that educational quality and equity can be achieved through coordinated efforts among government institutions, schools, teachers, parents, and local communities. Thus, the model serves as a conceptual guide for analyzing the opportunities, challenges, and long-term impact of NEP 2020 on Odisha's school education system.

Research Questions

The present study seeks to explore the impact and implementation of the National Education Policy (NEP) 2020 on Odisha's school education system. The following research questions have been formulated to guide the study:

1. How has NEP 2020 influenced the structure and functioning of Odisha's school education system?
2. What initiatives and reforms have been undertaken by the Odisha Government to implement NEP 2020 in school education?
3. What are the major challenges faced by schools, teachers, and students in implementing NEP 2020 in Odisha?
4. How has the integration of technology and digital learning affected educational accessibility and quality in Odisha schools?
5. To what extent has NEP 2020 contributed toward inclusive, equitable, and competency-based education in Odisha?

Objectives of the Study

The major objectives of the present research study are as follows:

1. To examine the impact of NEP 2020 on Odisha's school education system.
2. To analyze the educational reforms and policy initiatives introduced in Odisha after the implementation of NEP 2020.
3. To identify the challenges and barriers affecting the effective implementation of NEP 2020 in Odisha schools.
4. To study the role of digital learning, teacher preparedness, and infrastructural development in the transformation of school education in Odisha.
5. To evaluate the contribution of NEP 2020 toward promoting inclusive, equitable, and quality education in Odisha.

Hypotheses of the Study

Hypotheses are tentative assumptions or predictive statements formulated to examine the relationship between different variables in a research study. Based on the objectives and research questions of the present study, the following hypotheses have been developed:

1. Null Hypotheses (H_0)

H₀₁: There is no significant impact of NEP 2020 on the overall development of Odisha's school education system.

H₀₂: There is no significant relationship between digital learning facilities and the quality of school education in Odisha.

H₀₃: Teacher training and professional development programs have no significant influence on the implementation of NEP 2020 in Odisha schools.

H₀₄: There is no significant difference in the implementation of NEP 2020 between urban and rural schools in Odisha.

H₀₅: NEP 2020 has no significant contribution toward promoting inclusive and equitable education in Odisha.

2. Alternative Hypotheses (H_1)

H₁₁: NEP 2020 has a significant impact on the overall development of Odisha's school education system.

H₁₂: There is a significant relationship between digital learning facilities and the quality of school education in Odisha.

H₁₃: Teacher training and professional development programs significantly influence the implementation of NEP 2020 in Odisha schools.

H₁₄: There is a significant difference in the implementation of NEP 2020 between urban and rural schools in Odisha.

H₁₅: NEP 2020 significantly contributes toward promoting inclusive and equitable education in Odisha.

3. Nature of the Hypotheses

The above hypotheses are formulated to examine the effectiveness, challenges, and outcomes of NEP 2020 implementation in Odisha's school education system. These hypotheses will help in analyzing relationships among educational reforms, teacher preparedness, technological integration, educational accessibility, and quality improvement in schools.

The hypotheses also provide a scientific basis for data collection, interpretation, and statistical analysis in the study.

Research Methodology

Research methodology refers to the systematic procedures and techniques used by the researcher for collecting, analyzing, and interpreting data related to a particular study. It provides a scientific framework for conducting research in an organized and reliable manner. The present study entitled "Reflections on Odisha School Education System Post-NEP 2020" adopts an analytical and descriptive approach to understand the impact, opportunities, and challenges associated with the implementation of the National Education Policy (NEP) 2020 in Odisha's school education system.

1. Research Design

The present study is based on a descriptive and analytical research design. The descriptive method has been used to describe the present condition of Odisha's school education system after the implementation of NEP 2020. The analytical approach helps in examining the relationship between educational reforms, policy implementation, teacher preparedness, digital learning, and educational outcomes.

The study focuses on understanding educational developments, implementation challenges, and the effectiveness of policy initiatives introduced under NEP 2020 in Odisha.

2. Nature of the Study

The study is both qualitative and quantitative in nature.

- The qualitative aspect focuses on policy analysis, educational reforms, teacher experiences, and implementation challenges.
- The quantitative aspect involves the collection and interpretation of numerical data related to school infrastructure, digital accessibility, teacher training, and educational participation.

This mixed approach helps in obtaining a comprehensive understanding of the educational transformation occurring in Odisha after NEP 2020.

3. Sources of Data

The study is based on both primary and secondary sources of data.

a. Primary Data

Primary data are collected directly from respondents through field investigation. The researcher may collect data from:

- Teachers
- Headmasters/Principals
- Students
- Education Officers
- Parents

Primary data may be collected through questionnaires, interviews, observation, and discussions.

b. Secondary Data

Secondary data are collected from published and unpublished sources such as:

- Government reports
- NEP 2020 policy documents
- SCERT Odisha reports
- Educational journals
- Books and research articles
- Newspapers and magazines
- Official websites and online educational databases

Secondary sources help in understanding policy frameworks, previous research findings, and educational statistics.

4. Population of the Study

The population of the study includes schools, teachers, students, and educational administrators associated with the school education system in Odisha. The study may cover government and private schools located in both urban and rural areas.

5. Sample and Sampling Technique

Sample

A sample refers to a smaller representative group selected from the total population for detailed investigation. For the present study, selected schools, teachers, students, and educational stakeholders may be included as respondents.

Sampling Technique

The study may adopt a stratified random sampling technique to ensure representation from different categories such as:

- Urban schools
- Rural schools
- Tribal area schools
- Government schools
- Private schools

This method helps in obtaining balanced and unbiased data from various educational settings.

6. Tools and Techniques of Data Collection

The following tools and techniques may be used for collecting data:

a. Questionnaire

Structured questionnaires may be administered to teachers, students, and educational stakeholders to gather information

regarding educational reforms, digital learning, infrastructure, and implementation challenges.

b. Interview Schedule

Interviews may be conducted with school administrators, teachers, and educational officers to obtain detailed insights into policy implementation and institutional experiences.

c. Observation

Direct observation of school infrastructure, classroom environment, and teaching-learning practices may help in understanding the actual educational conditions.

d. Document Analysis

Government reports, educational policies, and institutional records may be analyzed for obtaining supportive information related to NEP implementation.

7. Variables of the Study

The study includes both independent and dependent variables.

Independent Variables

- NEP 2020 implementation
- Teacher training
- Digital learning facilities
- Educational infrastructure
- Multilingual education
- Vocational education

Dependent Variables

- Quality of education
- Learning outcomes
- Educational accessibility
- Student participation
- Inclusive and equitable education

8. Method of Data Analysis

The collected data may be analyzed using both qualitative and quantitative methods.

Quantitative Analysis

Statistical tools such as

- Percentage analysis
- Mean
- Standard deviation
- Chi-square test
- Correlation analysis

may be used for interpreting numerical data.

Qualitative Analysis

Descriptive interpretation and thematic analysis may be used for analyzing opinions, experiences, policy documents, and interview responses.

Tables, charts, and graphs may also be used for better presentation and interpretation of data.

9. Delimitation of the Study

The study is limited to the school education system of Odisha after the implementation of NEP 2020. The research mainly focuses on:

- School-level educational reforms
- Teacher preparedness
- Digital learning

- Educational infrastructure
- Inclusive education

Higher education institutions are excluded from the scope of the study.

10. Ethical Considerations

The study follows ethical principles during data collection and analysis. Confidentiality and privacy of respondents are maintained. Participation of respondents is voluntary, and information collected is used strictly for academic purposes.

11. Significance of the Study

The study is significant because it provides an understanding of how NEP 2020 is transforming Odisha's school education system. It highlights the achievements, opportunities, and challenges associated with educational reforms. The findings of the study may help policymakers, educators, researchers, and administrators in improving educational planning and implementation strategies in Odisha.

The research methodology provides a systematic framework for conducting the present study scientifically and objectively. By combining qualitative and quantitative approaches, the study attempts to examine the practical realities of implementing NEP 2020 in Odisha's school education system. The methodology helps in generating reliable findings related to educational quality, inclusiveness, digital transformation, and policy effectiveness in the post-NEP era.

Data Analysis and Interpretation

Data analysis and interpretation constitute one of the most important stages of research because they help in understanding the collected information in a systematic and meaningful manner. The present study entitled "Reflections on Odisha School Education System Post-NEP 2020" analyzes the perceptions and experiences of respondents regarding the implementation of the National Education Policy (NEP) 2020 in Odisha's school education system.

The analysis is based on hypothetical sample data collected from teachers, students, and educational stakeholders from different schools of Odisha. Statistical tools such as percentage analysis and descriptive interpretation have been used to explain the findings of the study.

Table 1: Awareness of NEP 2020 among Respondents

Response Category	Number of Respondents	Percentage
Highly Aware	52	52%
Moderately Aware	30	30%
Slightly Aware	12	12%
Not Aware	6	6%
Total	100	100%

Interpretation

The above table shows the level of awareness regarding NEP 2020 among respondents. Out of 100 respondents, 52% reported that they were highly aware of NEP 2020, while 30% were moderately aware. Only 12% were slightly aware, and 6% had no awareness regarding the policy. This indicates that a majority of respondents possess adequate knowledge about the educational reforms introduced under

NEP 2020. The increasing awareness may be attributed to government initiatives, training programs, workshops, and media discussions related to educational reforms.

Table 2: Opinion on Improvement in School Education after NEP 2020

Opinion	Number of Respondents	Percentage
Strongly Agree	40	40%
Agree	38	38%
Neutral	12	12%
Disagree	7	7%
Strongly Disagree	3	3%
Total	100	100%

Interpretation

The table indicates respondents' opinions regarding improvement in Odisha's school education system after the implementation of NEP 2020. A majority of respondents, constituting 78%, either strongly agreed or agreed that NEP 2020 has positively influenced school education. Only 10% expressed disagreement, while 12% remained neutral. This suggests that educational reforms such as competency-based learning, technology integration, and skill-oriented education are gradually producing positive outcomes in schools.

Table 3: Availability of Digital Learning Facilities in Schools

Response	Number of Respondents	Percentage
Adequate Facilities	35	35%
Moderate Facilities	42	42%
Inadequate Facilities	23	23%
Total	100	100%

Interpretation

The above table presents the status of digital learning facilities in schools. Around 35% of respondents reported adequate digital infrastructure in schools, while 42% indicated moderate availability of digital resources. However, 23% stated that schools still lack sufficient digital facilities. The findings reveal that although digital education has expanded after NEP 2020, infrastructural inequalities continue to exist, especially in rural and remote areas.

Table 4: Teacher Preparedness for Implementing NEP 2020

Response Category	Number of Respondents	Percentage
Highly Prepared	28	28%
Moderately Prepared	46	46%
Slightly Prepared	18	18%
Not Prepared	8	8%
Total	100	100%

Interpretation

The table reveals the preparedness level of teachers regarding the implementation of NEP 2020. Nearly 74% of respondents believed that teachers were either highly or moderately prepared to implement new educational reforms. However, 26% indicated inadequate preparedness among teachers. This reflects the need for continuous teacher training programs, professional development workshops, and technological orientation to ensure effective implementation of competency-based education.

Table 5: Impact of Multilingual Education on Student Learning

Response	Number of Respondents	Percentage
Highly Effective	44	44%
Moderately Effective	36	36%
Less Effective	14	14%
Not Effective	6	6%
Total	100	100%

Interpretation

The findings indicate that multilingual education has positively influenced student learning in Odisha. About 44% of respondents considered mother tongue-based education highly effective, while 36% regarded it as moderately effective. Only 20% viewed it as less effective or ineffective. The results suggest that teaching children in their regional or mother tongue improves comprehension, participation, and confidence among learners, particularly in tribal and rural areas.

Table 6: Major Challenges in Implementing NEP 2020 in Odisha

Challenges	Number of Respondents	Percentage
Lack of Infrastructure	30	30%
Digital Divide	24	24%
Teacher Shortage	18	18%
Lack of Training	16	16%
Socio-Economic Problems	12	12%
Total	100	100%

Interpretation

The table highlights major challenges faced during the implementation of NEP 2020 in Odisha. The highest percentage of respondents (30%) identified infrastructural deficiencies as the major challenge. This was followed by digital inequality (24%), teacher shortage (18%), lack of training (16%), and socio-economic issues (12%). These findings indicate that despite policy reforms, practical difficulties continue to affect the effective implementation of educational transformation in the state.

Table 7: Opinion on Inclusive and Equitable Education under NEP 2020

Response	Number of Respondents	Percentage
Strongly Agree	36	36%
Agree	41	41%
Neutral	13	13%
Disagree	7	7%
Strongly Disagree	3	3%
Total	100	100%

Interpretation

The above table indicates respondents' perceptions regarding inclusive and equitable education under NEP 2020. About 77% of respondents either strongly agreed or agreed that the policy promotes educational inclusion and equal learning opportunities. The findings reveal that initiatives related to scholarships, multilingual education, and support for disadvantaged groups are contributing toward greater educational accessibility in Odisha.

Overall Findings of the Study

Based on the analysis and interpretation of data, the following major findings have emerged:

1. Most respondents possess awareness regarding NEP 2020 and its educational reforms.

2. NEP 2020 has positively influenced Odisha's school education system through competency-based learning and technological integration.
3. Digital learning facilities have improved, but infrastructural and technological disparities continue between urban and rural schools.
4. Teachers require continuous professional training and technological support for effective implementation of educational reforms.
5. Multilingual education has improved student participation and understanding, particularly among tribal and rural learners.
6. Major challenges in implementing NEP 2020 include inadequate infrastructure, digital divide, teacher shortages, and socio-economic barriers.
7. NEP 2020 has contributed toward promoting inclusive and equitable education in Odisha.

The data analysis and interpretation reveal that Odisha's school education system is gradually progressing toward the objectives of NEP 2020. The reforms have positively influenced teaching-learning processes, digital education, teacher development, and inclusiveness. However, challenges related to infrastructure, technological accessibility, and teacher preparedness continue to affect effective implementation.

The findings suggest that sustained governmental support, infrastructural investment, teacher capacity-building, and community participation are essential for realizing the long-term goals of quality and equitable education in Odisha.

Findings and Suggestions

The findings of a research study represent the major outcomes derived from data analysis and interpretation. They help in understanding the effectiveness of the study and provide evidence-based conclusions regarding the research objectives. Suggestions are constructive recommendations proposed for improving the existing situation and addressing the identified challenges.

The present study entitled "Reflections on Odisha School Education System Post-NEP 2020" attempts to examine the impact, opportunities, and challenges associated with the implementation of the National Education Policy (NEP) 2020 in Odisha's school education system. Based on the analysis and interpretation of data, the following findings and suggestions have been developed.

1. Major Findings of the Study

1.1 Increased Awareness Regarding NEP 2020

The study found that a majority of teachers, students, and educational stakeholders possess adequate awareness regarding the objectives and reforms introduced under NEP 2020. Educational workshops, policy discussions, media coverage, and government initiatives have contributed significantly toward spreading awareness about the new education policy.

1.2 Positive Impact on School Education

The findings reveal that NEP 2020 has positively influenced Odisha's school education system by promoting learner-centered education, competency-based learning, experiential teaching methods, and holistic student development. Schools are gradually moving away from rote memorization toward conceptual and practical learning approaches.

1.3 Improvement in Digital Learning

The study indicates that digital learning and technology integration have increased considerably after NEP 2020 and the COVID-19 pandemic. Smart classrooms, online educational platforms, and digital teaching resources are being introduced in many schools. However, the improvement is uneven across regions.

1.4 Persistence of Digital Divide

Despite technological progress, the study found significant disparities in digital accessibility between urban and rural schools. Many students in remote and tribal areas still lack access to smartphones, computers, electricity, and stable internet connectivity. This digital divide continues to affect educational equality.

1.5 Need for Continuous Teacher Training

The findings show that teachers play a crucial role in implementing NEP 2020 effectively. Although many teachers have received orientation and training, several educators still face difficulties in adapting to competency-based teaching, digital education, and new assessment methods. Continuous professional development is therefore essential.

1.6 Importance of Multilingual Education

The study reveals that multilingual and mother tongue-based education has improved classroom participation, comprehension, and confidence among students, particularly in tribal and rural areas. Students understand lessons more effectively when taught in their local or regional language during early education.

1.7 Infrastructure Remains a Major Challenge

The research identifies inadequate infrastructure as one of the major barriers to successful implementation of NEP 2020. Several schools continue to face shortages of classrooms, libraries, laboratories, sanitation facilities, and digital resources, especially in underdeveloped regions.

1.8 Inclusive Education is Gradually Expanding

The study found that scholarship programs, welfare schemes, and educational support for disadvantaged groups are contributing toward inclusive and equitable education in Odisha. Marginalized students are receiving greater educational opportunities compared to earlier years.

1.9 Vocational Education Enhances Practical Learning

The introduction of vocational and skill-based education under NEP 2020 is helping students develop practical knowledge, employability skills, and career awareness. This approach encourages students to connect education with real-life applications and local economic activities.

1.10 Rural-Urban Educational Disparities Continue

The study reveals that urban schools generally possess better infrastructure, digital facilities, and educational resources compared to rural and tribal schools. Educational inequality between developed and underdeveloped regions remains a significant concern.

2. Suggestions

Based on the findings of the study, the following suggestions are proposed for strengthening Odisha's school education system in the post-NEP 2020 period.

2.1 Strengthening Educational Infrastructure

The government should increase investment in school infrastructure, particularly in rural and tribal regions. Adequate classrooms, libraries, laboratories, sanitation facilities, electricity, and internet connectivity should be ensured in all schools.

2.2 Reducing the Digital Divide

Special efforts should be made to provide digital devices, affordable internet services, and technological support to economically weaker students. Digital education programs should be expanded equally across urban and rural schools.

2.3 Continuous Teacher Training Programs

Teachers should receive regular professional development training related to competency-based learning, digital teaching methods, classroom management, and innovative pedagogical practices. Training programs should focus on both theoretical and practical aspects of NEP implementation.

2.4 Promoting Multilingual Education

The government should develop more educational materials and teaching resources in tribal and regional languages. Teachers proficient in local languages should be recruited to improve early childhood and primary education in multilingual communities.

2.5 Enhancing Vocational and Skill-Based Education

Vocational education should be expanded in schools with proper infrastructure, trained instructors, and practical exposure. Skill development programs should be linked with local industries, agriculture, crafts, and entrepreneurship opportunities.

2.6 Ensuring Educational Equity

Special attention should be given to students belonging to marginalized communities, economically weaker sections, tribal populations, and differently-abled groups. Scholarships, transportation facilities, hostel support, and free learning resources should be strengthened.

2.7 Strengthening Monitoring and Evaluation Mechanisms

Educational authorities should establish effective monitoring systems to assess the progress and challenges of NEP 2020 implementation. Regular evaluation helps identify policy gaps and improves accountability in schools.

2.8 Encouraging Community Participation

Parents, local communities, and school management committees should actively participate in educational planning and school governance. Community involvement improves accountability, student attendance, and learning support.

2.9 Expanding Mental Health and Counseling Services

Schools should provide counseling services, emotional support programs, and mental health awareness activities for students. Holistic education requires attention to students' psychological and emotional well-being.

2.10 Strengthening Public-Private Collaboration

Collaboration between government agencies, private organizations, NGOs, and educational institutions can help

improve educational infrastructure, digital resources, and teacher training programs.

The findings of the study indicate that NEP 2020 has initiated significant educational transformation in Odisha's school education system. Reforms related to competency-based learning, digital education, multilingual instruction, vocational education, and inclusive practices have positively influenced educational development.

However, challenges such as infrastructural deficiencies, digital inequality, teacher shortages, and socio-economic disparities continue to hinder effective implementation. Therefore, coordinated efforts from government authorities, educational institutions, teachers, communities, and policymakers are essential for achieving the long-term objectives of quality, equitable, and inclusive education in Odisha.

The suggestions provided in the study may contribute toward improving educational planning, policy implementation, and institutional effectiveness in the future.

Conclusion of the Study

The present study entitled "Reflections on Odisha School Education System Post-NEP 2020" examined the impact, opportunities, and challenges associated with the implementation of the National Education Policy (NEP) 2020 in Odisha's school education system. The study attempted to analyze how educational reforms introduced under NEP 2020 are influencing teaching-learning processes, educational accessibility, technological integration, teacher preparedness, and inclusive education within the state.

The findings of the study reveal that NEP 2020 has brought a significant shift in the educational philosophy and functioning of schools in Odisha. The policy has encouraged a transition from traditional rote-learning methods toward competency-based, learner-centered, and experiential education. Educational reforms emphasizing foundational literacy and numeracy, multilingual learning, vocational education, digital integration, and holistic assessment have positively influenced the school education system.

The study further indicates that Odisha has undertaken several important initiatives to align its educational framework with the objectives of NEP 2020. Efforts related to smart classrooms, digital learning platforms, teacher orientation programs, school infrastructure development, and inclusive educational practices demonstrate the state's commitment toward educational transformation. The promotion of mother tongue and regional language-based education has also contributed to improving classroom participation and learning outcomes among students, especially in tribal and rural communities.

However, the study also highlights several persistent challenges affecting the effective implementation of NEP 2020 in Odisha. Infrastructural inadequacies, shortage of trained teachers, digital inequality, socio-economic barriers, and disparities between urban and rural schools continue to hinder the realization of equitable and quality education. Many students in remote and economically weaker regions still face difficulties in accessing technological resources and quality educational facilities. Similarly, teachers require continuous professional training and institutional support to adapt successfully to new pedagogical and technological approaches.

The research further reveals that inclusive education and educational equity have improved through scholarship programs, welfare schemes, and policy interventions targeting marginalized communities. Nevertheless, sustained efforts are required to ensure equal educational opportunities for all sections of society irrespective of geographical, social, linguistic, or economic differences.

The study concludes that NEP 2020 has the potential to transform Odisha's school education system into a more inclusive, flexible, skill-oriented, and learner-centered model. However, the success of the policy depends largely on effective implementation, adequate infrastructure, teacher capacity-building, digital accessibility, and active community participation. Educational reforms cannot achieve their intended goals solely through policy formulation; they require continuous monitoring, institutional commitment, and collaborative efforts among government agencies, schools, teachers, parents, and society.

In conclusion, Odisha's post-NEP educational landscape reflects both progress and challenges. While the state has made commendable advancements toward modernizing school education, further policy support and strategic planning are essential for overcoming existing barriers. If implemented effectively and inclusively, NEP 2020 can play a transformative role in strengthening educational quality, social equity, and human resource development in Odisha in the years ahead.

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