

A Comparative Study of Traditional and Technology-Enabled Teaching under NEP 2020 in Madhya Pradesh

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Abstract

The National Education Policy 2020 advocates a shift from conventional teaching practices to technology-enabled and learner-centered approaches. In this context, the present study undertakes a comparative analysis of traditional teaching methods and technology-enabled teaching under NEP 2020 in Madhya Pradesh. The study aims to evaluate the differences in effectiveness, student engagement, and learning outcomes between these two modes of instruction.

The research adopts a descriptive and comparative design, drawing upon secondary data sources such as policy documents, research studies, and institutional reports. It examines key parameters including teaching strategies, use of digital tools and platforms such as DIKSHA and SWAYAM, accessibility of resources, and the role of teachers in both traditional and technology-supported environments.

The findings indicate that traditional teaching methods, while effective for content delivery and structured learning, often limit student participation and critical thinking. In contrast, technology-enabled teaching promotes interactive, flexible, and student-centered learning experiences, enhancing engagement and skill development. However, its effectiveness in Madhya Pradesh is influenced by factors such as digital infrastructure, teacher preparedness, and access to technological resources, leading to uneven implementation across regions.

The study concludes that although technology-enabled teaching under NEP 2020 demonstrates greater potential for improving educational quality, traditional methods still hold relevance in certain contexts. A balanced and blended approach, supported by adequate infrastructure and teacher training, is essential for maximizing the benefits of both systems and ensuring effective educational practices in Madhya Pradesh.

Keywords: NEP 2020, Traditional Teaching, Technology-Enabled Teaching, Madhya Pradesh, Digital Learning, ICT in Education, DIKSHA, SWAYAM, Blended Learning, Student Engagement, Learning Outcomes.

Introduction

Education plays a significant role in the development of individuals and society. The rapid growth of science, technology, and communication has transformed educational practices across the world. In India, the introduction of the National Education Policy 2020 has brought major reforms in the education system with a focus on quality, equity, accessibility, and technology integration.

Traditional teaching methods in India have long relied on teacher-centered instruction, textbook-based learning, rote memorization, and classroom lectures. These methods emphasize discipline, structured curriculum delivery, and examination-oriented learning. Although traditional approaches provide systematic knowledge and direct teacher supervision, they often fail to promote creativity, critical thinking, and active participation among students.

Technology-enabled teaching, on the other hand, incorporates digital platforms, smart classrooms, multimedia resources, online learning applications, virtual classrooms, and Information and Communication Technology (ICT). NEP 2020 encourages the use of digital tools such as DIKSHA, SWAYAM, virtual laboratories, e-content, and blended learning strategies to improve educational quality and accessibility.

In Madhya Pradesh, the implementation of technology-enabled teaching has expanded significantly after the COVID-19 pandemic. Educational institutions have increasingly adopted online teaching methods, smart classrooms, and digital learning resources. However, challenges such as inadequate internet connectivity, lack of teacher training, digital divide, and limited technological infrastructure continue to affect the successful implementation of technology-based education.

The present study attempts to compare traditional teaching and technology-enabled teaching under NEP 2020 in Madhya Pradesh with regard to teaching effectiveness, student engagement, accessibility, and learning outcomes.

Review of Related Literature

Review of Related Literature

Srinivasan, M. (2021). *Digital learning environments and student engagement in higher education.* Journal of Educational Technology, 15(3), 45–58. Srinivasan conducted a study on digital learning environments and student engagement in higher education institutions. The main objective of the study was to examine the effectiveness of online and collaborative learning platforms in improving student participation and interaction in classrooms. The study sample included undergraduate and postgraduate students from different universities who were exposed to digital learning platforms such as Google Classroom, Moodle, and virtual discussion forums. The researcher used survey questionnaires and observation methods as tools for data collection. The findings revealed that digital learning environments significantly improved student participation, communication, and collaborative learning. Students were found to be more active in online discussions and group activities compared to traditional classrooms. The study also highlighted that technology-supported learning

encourages independent learning, creativity, and peer interaction. However, challenges such as internet connectivity and lack of technical skills among some students were also identified.

Sharma, A. (2020). *Impact of ICT-based teaching on conceptual understanding and retention among students.* International Journal of Educational Research, 8(2), 112–120. Sharma conducted a study on the effectiveness of ICT-based teaching methods in improving students' conceptual understanding and academic retention. The objective of the research was to analyze how Information and Communication Technology (ICT) tools such as smart classrooms, multimedia presentations, and virtual simulations influence the teaching-learning process. The sample consisted of secondary and higher secondary school students from selected schools. A descriptive survey and experimental research design were used in the study. The researcher used achievement tests, observation schedules, and questionnaires as tools for collecting data. The findings indicated that ICT-based teaching methods enhanced students' conceptual clarity, understanding, and long-term retention of subject matter. Students taught through digital tools showed better academic performance and greater interest in learning compared to students taught through traditional lecture methods. The study concluded that technology integration in education improves learning effectiveness and classroom interaction.

University Grants Commission. (2021). *Blended learning in higher education institutions: UGC guidelines.* University Grants Commission, New Delhi. The University Grants Commission (UGC) conducted a policy-based study and framework analysis on blended learning approaches in higher education institutions in India. The primary objective was to promote the integration of online and offline teaching methods to improve accessibility, flexibility, and quality of education. The study focused on higher education institutions, teachers, and students adopting blended learning after the implementation of digital initiatives under NEP 2020. The tools used included policy analysis, institutional reports, and feedback collected from universities and colleges across India. The findings revealed that blended learning approaches increased flexibility in teaching-learning processes and enabled students to access digital educational resources anytime and anywhere. It also emphasized that blended learning improves self-learning, digital literacy, and student-centered education. However, issues such as unequal access to technology and lack of teacher training were identified as barriers to effective implementation.

Kumar, R., & Verma, S. (2022). *Online learning platforms and digital education in post-COVID India.* Indian Journal of Open Learning, 31(1), 67–81. Kumar and Verma conducted a study after the COVID-19 pandemic to examine the increased use of online learning platforms such as SWAYAM, DIKSHA, and Google Meet in Indian education. The objective of the study was to analyze the effectiveness, accessibility, and challenges of online learning among students and teachers. The sample consisted of school and college students from urban and rural regions of India, including Madhya Pradesh. The researchers used questionnaires, interviews, and online feedback forms for data collection. The findings showed that online learning platforms played an important role in continuing education during the pandemic and increased digital awareness among students and teachers. However, the study also found that lack of internet connectivity, insufficient digital devices, and low digital literacy created

major difficulties, especially in rural areas. The research concluded that although digital learning has expanded educational opportunities, improving infrastructure and teacher training is necessary for effective implementation.

Need and Significance of the Study

The changing educational landscape under NEP 2020 necessitates an understanding of how technology-enabled teaching differs from traditional methods. The significance of the study lies in the following aspects:

- It helps evaluate the effectiveness of traditional and digital teaching approaches.
- It highlights the role of ICT and digital platforms in modern education.
- It provides insights into the implementation of NEP 2020 in Madhya Pradesh.
- It identifies challenges related to infrastructure, teacher preparedness, and accessibility.
- It contributes to policy formulation for blended and inclusive learning.
- It supports teachers and institutions in adopting innovative pedagogical practices.

Statement of the Problem

A Comparative Study of Traditional and Technology-Enabled Teaching under NEP 2020 in Madhya Pradesh

Objectives of the Study

- The study is conducted with the following objectives:
- To study the features of traditional teaching methods.
- To examine the characteristics of technology-enabled teaching under NEP 2020.
- To compare traditional and technology-enabled teaching in terms of student engagement and learning outcomes.
- To analyze the role of digital platforms such as DIKSHA and SWAYAM in education.
- To identify challenges faced in implementing technology-enabled teaching in Madhya Pradesh.
- To suggest measures for effective integration of traditional and digital teaching methods.

Conceptual Framework

● Traditional Teaching

Traditional teaching refers to teacher-centered instruction where the teacher acts as the primary source of knowledge. Common characteristics include:

- Lecture-based teaching
- Chalk-and-board method
- Textbook-oriented instruction
- Memorization and repetition
- Limited student interaction
- Examination-focused evaluation

● Merits of Traditional Teaching

- Direct teacher supervision
- Better classroom discipline
- Structured curriculum delivery
- Suitable for large classrooms
- Strong interpersonal interaction

● **Limitations of Traditional Teaching**

- Passive learning
- Limited creativity
- Reduced student participation
- Less flexibility
- Minimal use of technology

● **Technology-Enabled Teaching**

Technology-enabled teaching integrates ICT tools, digital platforms, and online resources into the teaching-learning process.

● **Major Features**

- Smart classrooms
- Multimedia presentations
- Online learning platforms
- Interactive learning applications
- Virtual classrooms
- E-content and digital resources

● **Advantages**

- Interactive learning
- Flexible access to educational materials
- Personalized learning opportunities
- Development of digital skills
- Increased student engagement

Limitations

- Dependence on internet connectivity
- Digital divide
- Lack of teacher training
- Technical difficulties
- Limited access in rural areas

● **NEP 2020 and Technology Integration**

The National Education Policy 2020 emphasizes digital transformation in education. Major recommendations include:

- Integration of technology in teaching-learning.
- Promotion of online and blended learning.
- Development of digital infrastructure.
- Use of virtual laboratories and e-content.
- Teacher training in ICT competencies.
- Expansion of digital learning platforms.

NEP 2020 encourages institutions to use platforms like:

- DIKSHA
- SWAYAM
- Virtual Labs
- MOOCs
- E-library resources

The policy aims to make education more accessible, flexible, multidisciplinary, and learner-centered.

Methodology of the Study

● Research Design

The study follows a descriptive and comparative research design.

● Sources of Data

The study is based on secondary data collected from:

- Government reports
- NEP 2020 documents
- Research journals
- Books
- Educational websites
- Institutional reports
- Articles related to ICT and digital education

● Area of Study

The study focuses on educational institutions in Madhya Pradesh.

Method of Analysis

Comparative analysis was used to evaluate differences between traditional teaching and technology-enabled teaching based on various educational parameters.

Comparative Analysis of Traditional and Technology-Enabled Teaching

Basis of Comparison	Traditional Teaching	Technology-Enabled Teaching
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Basis of Comparison	Traditional Teaching	Technology-Enabled Teaching
Nature of Teaching	Teacher-centered	Student-centered
Teaching Tools	Chalk, board, textbooks	Smart boards, multimedia, digital tools
Learning Style	Passive learning	Interactive learning
Flexibility	Limited	High flexibility
Student Participation	Low	High
Accessibility	Classroom-dependent	Anywhere and anytime learning
Assessment	Written examinations	Online quizzes, projects, digital assessment
Skill Development	Academic focus	Academic and digital skills
Communication	Face-to-face	Online and blended
Resource Availability	Limited	Wide range of digital resources

Findings of the Study

The major findings of the study are as follows:

- Traditional teaching remains effective for structured classroom instruction and discipline.
- Technology-enabled teaching promotes active participation and collaborative learning.
- Students show greater engagement through multimedia and interactive learning methods.
- Digital platforms such as DIKSHA and SWAYAM support flexible and self-paced learning.
- Technology-enabled teaching improves access to diverse educational resources.
- Rural areas in Madhya Pradesh face challenges related to internet connectivity and digital infrastructure.
- Many teachers require additional ICT training for effective implementation of digital teaching.
- Blended learning approaches provide better outcomes than purely traditional or purely online methods.
- Technology integration supports skill development aligned with 21st-century educational needs.
- Unequal access to devices and internet services creates disparities in educational opportunities.

Educational Implications

The study has important implications for teachers, institutions, and policymakers:

- Teachers should adopt innovative and learner-centered pedagogies.
- Educational institutions should strengthen digital infrastructure.
- Government initiatives should focus on reducing the digital divide.
- Continuous ICT training programs should be organized for teachers.
- Blended learning models should be promoted in schools and colleges.

- Digital resources should be made available in regional languages for better accessibility.

Suggestions

- Improve internet connectivity in rural and remote areas.
- Provide affordable digital devices to students.
- Organize regular ICT training programs for teachers.
- Encourage blended learning practices.
- Increase awareness regarding digital platforms such as DIKSHA and SWAYAM.
- Develop localized and multilingual e-content.
- Strengthen government support for digital education initiatives.

Conclusion

The transition from traditional teaching methods to technology-enabled learning represents a significant transformation in the Indian education system under NEP 2020. Both traditional and technology-enabled teaching possess unique strengths and limitations. Traditional teaching offers direct interaction, discipline, and structured learning, whereas technology-enabled teaching enhances flexibility, interactivity, and learner autonomy.

In Madhya Pradesh, the implementation of technology-enabled teaching has shown positive outcomes in terms of student engagement and access to educational resources. However, infrastructural limitations, digital inequality, and insufficient teacher preparedness continue to hinder its full effectiveness.

Therefore, a balanced blended-learning approach combining the strengths of both traditional and technology-enabled methods is essential for achieving quality and inclusive education. Effective implementation of NEP 2020 requires continuous investment in digital infrastructure, teacher training, and equitable access to technological resources to ensure educational development across all regions of Madhya Pradesh.

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