



“Socio-Economic Status and Attitude of B.Ed. Students towards Hybrid Teacher Education Systems: A Study in Santal Parganas”.

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Abstract: The National Education Policy 2020 India, which places a strong emphasis on integrating technology and cutting-edge pedagogical approaches, has significantly accelerated the development of teacher education in India. The new hybrid teacher education methods that blend online and in-person learning modalities are critically examined in this study. The purpose of the study is to examine the obstacles, accessibility, and efficacy of hybrid models in Indian teacher training schools. Using a qualitative and analytical research methodology, the study examines current literature, institutional practices, and policy documents to assess how hybrid systems fit with NEP 2020's goals. It examines important aspects like inclusion, learner engagement, teacher readiness, and digital infrastructure. The results show that whereas hybrid models provide flexibility, greater reach, and chances for individualized learning, they also have drawbacks including the digital divide, a lack of technical expertise, and inconsistent regional implementation. The study comes to the conclusion that, with strong infrastructure, ongoing professional development, and policy-level oversight, hybrid teacher education has the potential to be revolutionary. In line with national education reforms, it suggests tactical actions to fortify digital ecosystems, guarantee equity, and improve pedagogical efficacy.

Keywords: *Hybrid Teacher Education, Blended Learning, Teacher Training, Digital Education, Educational Technology, Teacher Competency, Pedagogical Innovation, Digital Divide.*

Introduction: In recent decades, India's teacher education system has changed significantly due to legislative changes, technology breakthroughs, and shifting societal demands. The National Education Policy 2020 India's implementation signifies a paradigm shift in the way teacher education is organized, taught, and delivered. The policy places a strong emphasis on adaptability, interdisciplinary methods, and the use of technology in teaching and learning. Adoption of hybrid teacher education methods is one of the major new trends in line with this aim. Traditional in-person instruction is combined with online and digital learning settings in hybrid education, also known as blended learning. Hybrid methods in teacher education seek to increase accessibility, pedagogical efficacy, analysis of institutional procedures and literature. It emphasizes important elements including equity in access, teacher competency, student involvement, curriculum design, and digital preparation. The results show that hybrid teacher education has many benefits, such as increased access to resources, flexibility, and chances for creative teaching. But it also draws attention to important



problems like gaps in infrastructure, the digital divide, inadequate training for teachers, and regional variations in implementation.

The study comes to the conclusion that although hybrid systems are in line with NEP 2020's goal, their success hinges on capacity building, efficient policy execution, and fair access to digital resources. To improve hybrid teacher education in India, strategic suggestions are put forth. Traditional in-person instruction is combined with online and digital learning settings in hybrid education, also known as blended learning. In the context of teacher education, hybrid models seek to increase accessibility, improve pedagogical efficacy, and provide aspiring educators with the digital skills required for today's classrooms. The introduction of hybrid models was further accelerated by the COVID-19 pandemic, which brought attention to both their advantages and disadvantages. In light of NEP 2020, this paper critically evaluates hybrid teacher education systems in India, emphasizing their application, advantages, difficulties, and implications for teacher preparation going forward.

CONCEPTUAL FRAMEWORK OF HYBRID TEACHER EDUCATION

By combining traditional face-to-face methods with digital tools, the conceptual framework of hybrid teacher education offers an orderly knowledge of how teaching and learning processes are structured. This framework represents a change from traditional teacher training methods to more adaptable, learner-cantered, and technology-enabled systems within the framework of the National Education Policy 2020 India. Blended learning, another name for hybrid teacher education, is a pedagogical approach that blends online and traditional classroom instruction. It is intended to build a more productive and inclusive learning environment by utilizing the advantages of both modes—direct human connection and digital flexibility.

with teacher education, hybrid models train future teachers with digital literacy and technology integration, which are crucial in today's classrooms, in addition to subject knowledge and pedagogy. The following educational theories serve as the foundation for the conceptual framework: Constructivism: Places a strong emphasis on active learning in which students build their knowledge via experience, reflection, and interaction. This is facilitated by conversations, initiatives, and digital collaboration tools in hybrid environments. Connectivism: Emphasizes learning via digital links and networks. Students can access a variety of communities and resources through online platforms. Adult Learning Theory (Andragogy): The self-directed and adaptable learning opportunities offered by hybrid systems are advantageous to teacher candidates as adult learners. Experiential Learning: Online and offline real-world applications, simulations, and teaching practice are all incorporated into hybrid models.

NEP 2020 AND ITS VISION FOR TEACHER EDUCATION

A revolutionary approach to teacher education is the goal of India's National Education Policy 2020. It suggests: The minimum requirement is a four-year integrated B.Ed. program. A focus on interdisciplinary education Technology integration in the teaching-learning process Teachers' ongoing professional development bolstering of institutes for teacher training Additionally, the policy promotes teacher education through the use of digital platforms like DIKSHA and SWAYAM. By making education more adaptable, inclusive, and effective, hybrid learning models are seen to be a way to accomplish these objectives. With the growth of digital infrastructure and online learning platforms, the idea of hybrid education gained traction in India. Even prior to the epidemic, institutions started experimenting with hybrid techniques. But the COVID-19 pandemic served as a trigger, compelling institutions to quickly transition to online and hybrid modalities. Several hybrid approaches were implemented by teacher education institutions, such as: In-person workshops mixed with online lectures Practice sessions for virtual instruction Utilizing Learning Management Systems (LMS) Digital evaluations and feedback systems The long-term integration of hybrid models in teacher education has been made possible by these advancements.



ADVANTAGES OF HYBRID TEACHER EDUCATION SYSTEMS

In keeping with the goals of the National Education Policy 2020 India, hybrid teacher education systems—which blend in-person instruction with online learning—have become a successful strategy for changing teacher training. These systems provide a number of benefits that improve teacher education's accessibility and quality. Flexibility is one of the biggest benefits of hybrid teacher education. Assignments, videotaped lectures, and learning resources are all available to student-teachers at their own convenience. Students who might have geographical, professional, or personal limitations can especially benefit from this. Students in remote and rural locations can more easily obtain teacher education thanks to hybrid methods. By eliminating the requirement for students to be physically present all the time, online components lower transportation and distance-related obstacles.

The learning process is enhanced by the incorporation of multimedia resources including discussion boards, interactive modules, simulations, and movies. It enhances comprehension and retention by enabling student-teachers to interact with the material in a variety of ways. Future educators can acquire critical digital skills with the use of hybrid education. They learn about digital resources, online teaching tools, and educational technology that are essential for contemporary classrooms and support NEP 2020 objectives. Learners are encouraged to take ownership of their education using hybrid approaches. Time management, independent study, and critical thinking are among the abilities that student-teachers acquire. Students can communicate with teachers and peers more regularly thanks to online discussion boards, virtual classrooms, and collaborative technologies. Participation and group learning are improved by this ongoing involvement.

CHALLENGES IN IMPLEMENTING HYBRID TEACHER EDUCATION

Although hybrid teacher education programs have many advantages, there are a number of significant obstacles to their adoption in India. These issues need to be resolved in the framework of India's National Education Policy 2020 in order to guarantee efficient and fair teacher preparation.

Unequal access to digital gadgets and dependable internet connectivity is one of the biggest obstacles. Inequality in learning possibilities results from students from rural and economically disadvantaged areas frequently finding it difficult to participate in online components. The required infrastructure, including computer laboratories, high-speed internet, and digital platforms, is lacking in many teacher education institutes. Hybrid model deployment is inadequate in the absence of adequate facilities.

It's possible that student-teachers and teacher educators don't have enough digital literacy. The efficacy of hybrid teaching may be hampered by a lack of familiarity with online resources, platforms, and educational technologies. Inadequate training in creating and delivering hybrid courses is frequently provided to teacher educators. Continuous professional development is necessary as traditional teaching approaches give way to technology-integrated ones. Creating a successful hybrid curriculum is difficult. It necessitates meaningful student interaction, proper educational methodologies, and a careful balance between online and offline components. Learning experiences might become fragmented as a result of poor planning. It is difficult to conduct impartial and trustworthy evaluations in hybrid settings. Assessment credibility may be impacted by problems like cheating, inadequate supervision, and challenges in assessing practical teaching abilities.

CRITICAL ANALYSIS OF HYBRID TEACHER EDUCATION

A crucial element of the change envisioned by the National Education Policy 2020 India is hybrid teacher education, which combines online and in-person instruction. Despite the policy's strong support for flexible learning and technological integration, a careful examination highlights both its advantages and disadvantages in the Indian setting.



Beyond rote learning, hybrid models promote the utilization of digital content, interactive technologies, and collaborative learning techniques. The policy's objective of inclusive education is supported by online components, which enable broader involvement, particularly for students in rural places. In order to prepare them for today's classrooms and technology-driven learning settings, aspiring educators are exposed to digital tools. In line with NEP 2020's emphasis on ongoing learning and professional growth, hybrid education enables students to study at their own speed. As a result, a critical evaluation of hybrid teacher education is required to look at both its possible advantages and intrinsic drawbacks. Such an analysis aids in determining if this approach actually improves teacher preparation or merely represents a change motivated more by convenience and technology advancements than by pedagogical efficacy.

As educational systems adjust to new technologies and evolving student requirements, hybrid teacher education—which combines in-person instruction with online learning—has become increasingly popular. It is frequently regarded as a forward-thinking approach that blends the flexibility of digital platforms with the advantages of conventional classroom interaction. Frameworks like TPACK, which stress the integration of technology, pedagogy, and content in teacher development, are strongly related to this method. Hybrid teacher education is becoming more and more common, but it is not without its difficulties. Its efficacy in fostering critical teaching qualities, especially those that depend on firsthand classroom experience and interpersonal contact, is still up for debate. It raises issues with equality, quality control, and learner engagement even while it offers accessibility and creativity.

STRATEGIES FOR EFFECTIVE IMPLEMENTATION

Hybrid teacher education system installation is a complicated process that calls for careful planning, resource allocation, and ongoing oversight. Although the National Education Policy 2020 India offers a forward-thinking plan for using technology and adaptability in teacher preparation, putting this plan into reality presents a number of difficulties. For student-teachers to have a meaningful learning experience, institutions must make sure that pedagogy, infrastructure, and digital tools all function together harmoniously. To close the gap between policy goals and practical realities, effective implementation strategies are crucial. These tactics centre on enhancing technology infrastructure, increasing teacher capacity, revamping courses, encouraging diversity, and guaranteeing quality control. Hybrid teacher education can improve learning results, increase accessibility, and prepare teachers for the challenges of classrooms in the twenty-first century by implementing methodical, evidence-based techniques.

The link between planning and outcomes is effective implementation. The effectiveness of a strategy ultimately rests on how effectively and methodically it is carried out, regardless of how well it is designed. Many organizations and individuals fail because of poor execution strategies, such as unclear goals, a lack of cooperation, or inadequate monitoring, rather than bad ideas. A robust implementation strategy guarantees that plans are converted into concrete actions, resources are utilized effectively, and progress is regularly monitored. While models like the PDCA Cycle encourage continuous review and development, frameworks like SMART goals aid in the definition of specific targets. These methodical approaches offer a basis for converting intentions into quantifiable results. A flexible and adaptable method of preparing teachers is hybrid teacher education, which combines in-person instruction with online learning. Although it has obvious benefits in terms of accessibility and creativity, design, infrastructure, and pedagogical alignment play a major role in its efficacy. Its limitations as well as its transformative potential are revealed by a critical investigation.

CONCLUSION By fusing the advantages of traditional classroom instruction with online and digital learning settings, hybrid teacher education offers a revolutionary method to training future educators. Hybrid models support digital literacy, pedagogical innovation, and lifelong learning in accordance with the National Education Policy 2020 India's aim of flexible, inclusive, and technologically enabled teacher education. While hybrid systems have many benefits, such as improved accessibility, tailored learning, higher engagement, and



the development of digital capabilities, a careful review shows that they also have major drawbacks. These include deficiencies in infrastructure, the digital divide, inadequate training for instructors, difficulties with assessments, and reluctance to change. The full potential of hybrid teacher education may not be achieved without careful planning and methodical execution.

Institutions must concentrate on enhancing digital infrastructure, increasing faculty capacity, revamping courses, promoting equitable access, and putting in place reliable monitoring and evaluation systems in order to guarantee successful adoption. To close current gaps and establish a long-lasting, superior teacher education system, cooperation between legislators, teacher education institutions, and technology suppliers is crucial. In conclusion, hybrid teacher education has the potential to completely transform teacher preparation in India if it is applied successfully. By producing effective, tech-savvy teachers who can handle the demands of contemporary classrooms, it can further the objectives of NEP 2020 and enhance the country's educational system as a whole.

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