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NEP 2020 And Digital Aspirations: A Case Study On Online Educational Resources In Rural Western Uttar Pradesh

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Abstract

The digital transformation of education in India, as envisioned by the National Education Policy 2020 (NEP 2020), strongly emphasizes integrating online resources to enhance equity, quality, and access in learning. Yet, rural regions continue to face challenges in infrastructure and digital inclusion. This study investigates the availability and demand for online educational resources in rural India through a case study of Western Uttar Pradesh, based on survey data from 252 respondents affiliated with higher education institutions. The analysis reveals that a significant proportion of respondents expressed strong demand for smart libraries/reading rooms (64.3%), smart classrooms (63.1%), free village Wi-Fi (61.1%), and online courses (59.9%), while more than half supported the establishment of technical institutes (54.0%). The relatively lower demand for Jan Suvidha Kendras (42.1%) indicates a preference for resources directly linked to learning enhancement. The findings support the NEP 2020's objectives of digital pedagogy, equitable access, and resilient education systems. The study highlights the urgent need to expand rural digital infrastructure, invest in teacher training for digital pedagogy, and ensure the availability of localized e-content. By bridging the digital divide, India can advance towards a futuristic education system that empowers rural learners with 21st-century skills and fulfills the policy vision of inclusive and technology-driven education.

Keywords: National Education Policy 2020, Digital Divide, Online Resources

Introduction.

India's National Education Policy (NEP) 2020 strongly emphasizes integrating digital technology into education. NEP explicitly calls for smart classrooms and digital pedagogy to "enrich the teaching–learning process with online resources and collaborations". It also envisions vast digital repositories, for example, a national database on the DIKSHA platform and digital libraries in villages to make learning content widely accessible. The policy underscores that technology must be leveraged to ensure quality education for all, even when in-person schooling is disrupted. In this context, online educational resources (like e-courses, virtual labs, and digital libraries) are critical, future-oriented tools. Indeed, UNESCO experts note that India has become a global leader in online learning – with the world's second-largest MOOC enrollment reflecting a "new phase of education" that places great importance on digital learning.

Despite this, rural areas often lag behind urban ones regarding digital infrastructure. According to the results of a comprehensive modular survey by the Ministry of Statistics and Program Implementation, data show that a large majority of rural youth do have smartphones and Internet access (over 92% of rural 15–29 year olds used the Internet recently, and about 85.5% of Indian households have a smartphone). However, only about 18.5% of rural schools have internet access, versus 47.3% of urban schools. Rural India faces a pronounced digital divide, with limited infrastructure and connectivity hindering access to online educational materials. This "digital divide" can limit the use of online learning tools in villages. In the coming years, addressing this gap is crucial as education becomes more digital (through MOOCs, interactive platforms, etc.). National Education Policy 2020 (NEP 2020) explicitly emphasizes leveraging technology to expand education access. The policy envisions "digital classrooms" and "online resources" to enhance quality and inclusivity. However, NEP 2020 also recognizes that these benefits cannot be realized without filling rural connectivity gaps.

Demand for Digital Resources

NEP 2020 frames digital education as central to India's future education system. It calls for creating open digital infrastructure, repositories of e-content, and affordable devices to ensure "equitable use of technology". To build a learning culture, the policy mandates establishing smart classrooms and digital libraries, especially in villages. It also proposes a National Educational Technology Forum (NETF) to innovate in ed-tech. These measures aim to transform pedagogy and overcome geographical barriers. As Maurya and Sharma (2023) note, NEP 2020 treats technology not merely as a support but as transformative, integrating digital tools, personalized online platforms, and blended learning to "redefine the future of education in India"

Data collected from the western UP indicate the demand for online learning infrastructure. Table 1 summarizes the proportion of respondents endorsing various digital resources. Most respondents supported smart libraries/reading rooms (64.3%), smart classrooms (63.1%), free Wi-Fi in villages (61.1%), and online

courses (59.9%). Over half also wanted new technical institutes (54.0%). By contrast, about 42.1% asked for Jan Suvidha centers. No resource had a majority "no" votes, indicating strong demand for all listed items.

Digital Resource	Respondents (n=252)	Percent
Online Courses	151	59.9%
Smart Classrooms	159	63.1%
Free Wi-Fi in Villages	154	61.1%
Jan Suvidha Service Centers	106	42.1%
Smart Libraries / Reading Rooms	162	64.3%
Technical Institutes	136	54.0%

Table 1: Demand for digital educational resources among survey respondents (Western UP, 2025).

The high percentages for smart classrooms and libraries reflect a desire for blended, tech-enhanced learning spaces. "Smart libraries and libraries in villages" are mentioned in NEP 2020 as a way to extend learning beyond school hours. The survey's result that 64.3% support smart libraries is consistent with NEP's goal of "extensive initiatives to ensure the availability and accessibility of books across geographies." Similarly, support for online courses (60%) and free village Wi-Fi (61%) aligns with NEP's emphasis on expanding digital platforms (e.g., SWAYAM, DIKSHA) and affordable connectivity. These findings suggest that rural students are becoming aware of and eager for the kinds of online resources required to develop villages.

Discussion.

The survey confirms a clear demand-supply gap: rural communities *want* online courses, connectivity, and smart learning facilities, but such resources are currently insufficient. For example, over 60% want Wi-Fi, yet internet access remains poor in many villages. National data show rural India is rapidly catching up in 2024, and rural internet users (488 million) exceed urban users (397 million), but this expansion remains uneven, especially in states like Uttar Pradesh (46%). The respondents' call for Wi-Fi and digital centers underscores the need to accelerate initiatives like Bharat Net and village Wi-Fi hotspots so that infrastructure matches learners' aspirations.

Meeting these demands is crucial for the futuristic education system envisioned by NEP 2020. As education trends globally, online and blended learning will be essential in the 21st century. NEP 2020 explicitly links online education to flexibility and resilience (e.g., in pandemics). By providing online courses and digital classrooms in rural areas, India can help rural students access high-quality content (e.g., virtual labs,

multilingual e-books) and bridge the urban-rural achievement gap. This study suggests that rural educators and learners recognize these benefits. However, Maurya and Sharma mentioned that technology alone is not enough without equitable access. Strategies such as teacher training (for digital pedagogy) and low-cost devices must accompany infrastructure expansion.

Conclusion.

Institutions that receive proper accreditation can offer Open Distance Learning (ODL) and online programs to expand their academic scope, improve accessibility, raise the Gross Enrollment Ratio (GER), and promote lifelong learning in line with SDG 4. All ODL courses and their components, whether leading to a diploma or degree, will maintain the same standards and quality as the best on-campus programs offered by Higher Education Institutions (HEIs). Leading institutions accredited for ODL will be encouraged and supported to design high-quality online courses, effectively integrated into HEI curricula, with a preference for blended learning approaches. Rural stakeholders in Western UP express strong demand for online educational resources – particularly connectivity (Wi-Fi), digital curricula (online courses), and smart infrastructure (libraries, classrooms, institutes). These results reinforce the urgency of NEP 2020's digital agenda. To create a future-ready education system, policymakers must expand rural digital infrastructure and content (as outlined in NEP) so that technology serves all learners. Closing the digital divide will fulfill NEP's vision of equitable quality education and empower rural youth with 21st-century skills. Tables and charts in this study illustrate one local perspective of that need; nationally, similar trends appear in data on rural internet access and online learning uptake. Ultimately, meeting supply with the demonstrated demand (Table 1) is essential if India's education system is to evolve as NEP 2020 intends into a flexible, tech-enabled, and inclusive model for the future.

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