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Education in a Marginalized Rural Community in The Age of AI and Human Potential: A Sociological Study of Walespur Village in The Context of NEP-2020

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Abstract: The ongoing research examines the sociological aspects of the educational framework and educational experiences in Walespur, a village situated in Ghogha taluka of Bhavnagar district, in the state of Gujarat. Walespur village stands out in the rural landscape of Gujarat due to its complete Christian population. Despite the initial establishment of education in the village by Christian missionaries, current formal schooling is limited to the fourth standard. The research utilizes interviews and a case study methodology, focusing on five villagers, to gather initial data. Data secondary to census records, newspapers, and documents pertaining to the National Education Policy–2020 have been gathered.

The study's results indicate that although there is a generally supportive community attitude towards education, the lack of access to higher education persists owing to economic barriers, geographical disparities, and gender-based disparities. The state of education in Walespur village is analyzed within the framework of NEP-2020 and the increasing impact of AI on the education sector. Despite the absence of formal AI-based educational systems in the village, there are growing opportunities for informal learning through mobile devices and digital media. Nevertheless, the digital divide, which includes insufficient internet access, low digital skills, and unequal technology availability, hampers the attainment of fair educational results. The study indicates that if AI-based educational interventions are incorporated into the NEP-2020 framework, with a focus on human-cantered methods and consideration of local socio-cultural nuances, they can substantially enhance educational access and the growth of human capabilities in rural areas.

Keywords: Rural Education, Marginalized Communities, Artificial Intelligence in Education, NEP-2020, Digital Divide, Human Potential.

I. INTRODUCTION

Education plays a critical role in shaping social mobility, human development, and collective well-being. However, in rural India, education continues to be marked by structural inequalities arising from historical marginalization, limited institutional infrastructure, and socio-economic constraints (Beteille, 2006). The introduction of the National Education Policy-2020 (NEP-2020) marks a significant shift toward equity, flexibility, digital integration, and human-centred learning. Simultaneously, Artificial Intelligence (AI) has emerged as a transformative force in global educational discourse, promising personalized learning, adaptive assessment, and expanded access.

Despite these policy and technological advancements, marginalized rural communities often remain excluded from their benefits. Walespur village, located in Ghogha Taluka of Bhavnagar district, Gujarat, represents a distinctive case. As the only village in Saurashtra inhabited entirely by a Christian population, Walespur provides a unique sociological setting to examine how education, religion, policy, and technology intersect. This paper seeks to explore how NEP-2020 and AI-based educational possibilities can address existing educational limitations while fostering human potential in such a marginalized rural context.

II. HISTORICAL BACKGROUND OF WALESPUR VILLAGE

Walespur village, located in Ghogha Taluka of Bhavnagar district in the Saurashtra region of Gujarat, represents a historically distinctive rural settlement

shaped by missionary intervention during the colonial period. The establishment of Walespur dates back to the mid-nineteenth century, around 1871, when Christian missionaries affiliated with Protestant missions arrived in the Ghogha coastal belt under the then Baroda State. These missionaries aimed to provide religious instruction along with basic education, healthcare, and social reform among marginalized rural populations. The village was founded initially with a small cluster of Christian convert families, reportedly fewer than ten households, who were settled systematically with institutional support from the mission.

The village derives its name from Reverend James Wallace, a missionary who played a significant role in organizing the settlement, establishing a church, and initiating early educational activities. Over time, Walespur evolved into a fully Christian village, a rare phenomenon not only in Gujarat but across the Saurashtra region. Unlike surrounding villages characterized by religious heterogeneity, Walespur developed a strong collective religious identity, which significantly influenced its social structure, cultural practices, and educational orientation.

Missionary institutions contributed substantially to the early spread of literacy in Walespur by establishing informal schools and promoting education as a moral and social upliftment tool. However, despite this historical emphasis on education, the contemporary educational infrastructure of the village remains limited. At present, formal schooling facilities are available only up to the primary level (up to Grade IV), compelling students to travel to nearby villages or towns for further education. This structural limitation has had long-term implications for educational continuity, especially among economically vulnerable households and female students. According to Census of India data, Walespur falls under Ghogha Taluka, which is predominantly Hindu, making Walespur's complete Christian demographic composition sociologically exceptional. The village population is approximately 500 residents, with livelihoods primarily dependent on agriculture, agricultural labour, and animal husbandry. While the missionary legacy fostered positive attitudes toward education and social discipline, the withdrawal of direct missionary educational institutions and reliance on government schooling have contributed to stagnation in educational expansion.

III. STATEMENT OF THE PROBLEM

Despite a strong community orientation toward education, Walespur village continues to face structural educational limitations. Formal schooling is available only up to Grade 4, compelling students to travel long distances for higher education. Economic constraints, gender norms, and limited transport facilities contribute to school dropouts, particularly among girls. Furthermore, while NEP-2020 and AI-based educational reforms promise inclusive and technology-enabled learning, their implementation remains minimal in Walespur due to infrastructural deficits and digital exclusion. This gap between policy intent and ground-level reality constitutes the core problem addressed in this study.

IV. . OBJECTIVES OF THE STUDY

- To examine the educational structure and experiences in Walespur village.
- To analyse the impact of limited educational infrastructure on human potential.
- To explore community perceptions of education, technology, and AI-based learning.
- To situate Walespur educational context within the framework of NEP-2020.
- To assess the possibilities and challenges of AI integration in marginalized rural education.

V. RESEARCH METHODOLOGY

The study adopts a qualitative case study methodology. Both primary and secondary data sources were used. Primary data were collected through in-depth interviews with residents of Walespur village, including educators and community members. Case study has been empirically documented, while additional contextual insights were drawn from community interactions. Secondary data were sourced from Census of India 2011 data, regional newspaper reports, academic literature, and official policy documents related to NEP-2020. This combination of data sources enables a sociological understanding of educational realities at the micro

level while situating them within macro-level policy frameworks.

VI. THEORETICAL PERSPECTIVE

The study draws upon theories of social stratification, cultural capital (Bourdieu, 1977), and human capability (Sen, 1999). Education is viewed not merely as institutional schooling but as a process shaped by social structures, cultural values, and access to resources. The concept of human potential emphasizes the development of skills, confidence, and agency, which AI-enabled education can enhance if implemented inclusively.

VII. CASE STUDY ANALYSIS: WALESPUR VILLAGE

The first case study, based on a respondent from Walespur village (aged 50, a trained teacher with a PTC qualification), demonstrates that despite a positive attitude towards education in rural areas, structural limitations within the educational framework hinder its expansion and effectiveness. According to the respondent's experience, the availability of schooling only up to the primary level within the village compels students to travel to distant locations for higher education. This situation results in economic constraints, transportation difficulties, and social challenges, which collectively contribute to high dropout rates among students. Nevertheless, the respondent clearly articulates the positive impact of education on his own life, emphasizing its role in securing employment, enhancing self-confidence, and improving social status. He holds a favourable view of the National Education Policy (NEP-2020) and believes that such policies can be beneficial for rural areas if implemented effectively. The study further reveals that digital tools such as mobile phones, internet access, and YouTube are primarily used to understand complex academic concepts, indicating the presence of informal digital learning practices within the community. The respondent expresses a positive attitude towards AI-based education; however, challenges such as limited internet connectivity, financial constraints, language barriers, and a lack of technological literacy restrict the wider adoption of digital education. With regard to girls' education, technology and AI are considered potentially useful, although gender-based inequalities continue to pose significant challenges. Overall, this case study underscores that the development of human potential in Walespur village requires an integrated approach combining education, technology, and skill development. If AI-based educational interventions are implemented within the human-centred and inclusive framework of NEP-2020, qualitative transformation in rural education can become achievable.

The second case study involves Elmiraben Ivanbhai Vyas (aged 65, educated up to Grade 7, homemaker), a female resident of Walespur village, who highlights the structural barriers associated with women's education in rural society. Her educational experience reveals that schooling limited to the fourth standard within the village, combined with poor economic conditions and inadequate transportation facilities, restricted her educational attainment. As a result, she has been unable to experience the benefits of education in terms of employment opportunities, self-confidence, and social mobility. Apart from basic literacy skills, education has not brought any significant transformation in her life, reflecting the instrumental limitations of education for rural women. Her lack of awareness regarding NEP-2020 and complete disengagement from digital learning tools indicate that recent educational policies and technology-driven initiatives have not effectively reached rural realities. Nevertheless, her positive attitude towards AI-based education suggests that technological acceptance can be fostered if adequate infrastructural support and awareness are provided. Limited internet access, financial constraints, and a lack of technological understanding emerge as major obstacles to digital education. Elmiraben recognizes the potential of AI and technology in enhancing women's and girls' education and emphasizes the need for stress-free, free education and financial support as essential conditions for the development of human potential. This case study brings to light the interconnections between education, gender, economic inequality, and the digital divide in Walespur village, and demonstrates that if AI-based educational facilities are implemented in an accessible, home-based, and human-centred manner, educational

inclusion and capacity building for rural women can become achievable.

The third case study of Noel Arvindbhai Parmar from Walespur village clearly reflects the structural limitations of the rural education system. The availability of educational facilities only up to the fourth standard has compelled the respondent and his family to seek higher education outside the village, resulting in a lack of educational continuity. His perception that education has not led to significant changes in employment opportunities, self-confidence, or social status indicates that incomplete and limited schooling is insufficient for the effective development of human potential. The indifferent attitude towards NEP-2020 highlights the gap between educational policy frameworks and rural realities. Although digital tools such as mobile phones and YouTube are used to a limited extent, the lack of technological awareness restricts the effective utilization of AI-based educational resources. Furthermore, the necessity for girls to travel outside the village for education exposes gender-based educational inequalities prevalent in rural society. Overall, this case study suggests that the development of digital classrooms and accessible higher education facilities could transform education into a meaningful instrument for human potential development in villages like Walespur.

VIII. EDUCATIONAL CHALLENGES IN RURAL AND MARGINALIZED VILLAGES

Despite the progressive vision of the National Education Policy 2020 and the emphasis on Artificial Intelligence and digital learning, several structural and social challenges persist in rural and marginalized villages. These challenges significantly limit the effective implementation of educational reforms and technological interventions. One of the most critical challenges is the absolute absence of basic digital infrastructure. Many villages included in this study lack a stable electricity supply, which is the foundational requirement for any technology-driven education. Furthermore, the lack of consistent internet connectivity or broadband access means that AI-based learning platforms, online classes, and digital content envisioned under NEP 2020 remain largely inaccessible. The absence of hardware, such as computers, tablets, or smart boards, creates a physical barrier that prevents students in these remote areas from engaging with modern pedagogical tools.

The poor physical state of government schools in these villages further exacerbates the situation. Field observations and case study responses indicate that inadequate school facilities, such as insufficient classrooms and poor sanitation especially for girls negatively affect student attendance and retention. The lack of functional libraries, laboratories, and dedicated ICT rooms means that even if digital content were available, there is no institutional space to facilitate its use. This is compounded by a severe shortage of qualified and technologically trained teachers. Many existing educators are not trained in digital pedagogy and lack exposure to AI-based teaching tools. They often face significant difficulties in adapting to the multilingual and experiential learning approaches suggested by NEP 2020, creating a wide gap between policy vision and ground-level teaching capacity, which ultimately widens the educational inequality between rural and urban sectors.

Socio-economic constraints remain a dominant factor influencing educational participation in these marginalized contexts. Families coming from agricultural and daily wage labour backgrounds often prioritize immediate livelihood over long-term education. This results in child labour during peak agricultural seasons and contributes to the early marriage of girls as a means of reducing economic burden. For many, the inability to afford digital devices or private coaching creates a barrier that academic merit alone cannot overcome. These socio-economic realities restrict a student's academic continuity and overall performance. Gender-based educational barriers are also multi-layered; girls face limited mobility, heavy household responsibilities, and significant safety concerns while commuting to schools in distant towns. Although NEP 2020 emphasizes gender inclusion, the practical implementation at the village level remains weak due to these deep-seated social norms.

Furthermore, language and learning barriers create confusion rather than clarity. While NEP 2020 promotes mother-tongue-based education, the absence of high-quality digital learning material and trained teachers in local languages makes it difficult for

students to transition from local language instruction to higher education, which is often conducted in English or Gujarati. Finally, the digital divide and AI exclusion remain significant theoretical hurdles. In the studied villages, the concept of Artificial Intelligence in education is largely unknown. Students and parents often associate technology only with basic mobile phone usage and do not perceive digital education as a long-term opportunity for skill development or employment. This lack of awareness risks excluding rural students from future skill-based and employment-oriented education, making the vision of an AI-enabled educational landscape a distant reality for villages like Walespur.

IX. DISCUSSION

The findings of this study demonstrate that the educational challenges in Walespur village are rooted in systemic neglect rather than community resistance. The village's unique historical trajectory marked by missionary intervention has created a "cultural capital" that inherently values education. However, this potential is currently stifled by a "structural bottleneck" where schooling ends at Grade 4. The positive educational orientation of the community provides fertile ground for the modernization envisioned by NEP-2020. Yet, for these policies to succeed, they must transition from urban-centric models to localized, culturally responsive approaches. The informal digital practices observed, such as students using YouTube to clarify academic concepts, indicate a latent readiness for technology-enabled learning. Here, Artificial Intelligence (AI) can act as a powerful catalyst. By providing personalized and adaptive learning experiences, AI-based tools could effectively bypass the physical limitations of distance and the lack of higher-grade facilities in the village. This is particularly significant for female students, for whom "anytime-anywhere" digital learning could mitigate the challenges of limited mobility and safety concerns during long commutes. However, the discussion emphasizes that technology should be an "equalizer" and not a "divider." AI integration must be human-cantered, complementing the role of educators and aligning with the socio-religious values of the community to ensure sustainable human development.

X. CONCLUSION

In conclusion, Walespur village serves as a representative case of both the structural limitations and the transformative possibilities of rural education in the digital age. While historical marginalization and infrastructural deficits continue to pose significant hurdles, the community's resilient attitude toward education offers a strong foundation for future interventions. The study confirms that the successful implementation of NEP-2020 and AI-based learning is not merely a technical challenge but a social one.

To bridge the gap between policy intent and ground-level reality, it is essential to prioritize digital inclusion and social justice. Aligning technological advancements with the human potential of marginalized rural populations can foster an inclusive educational landscape. Ultimately, the transformation of Walespur educational reality depends on creating a synergy between state-led reforms, community agency, and innovative AI tools. This research underscores that only by addressing the digital divide and providing localized higher education facilities can we ensure that villages like Walespur are not left behind in India's journey toward becoming a knowledge-driven society.

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