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Equity And Inclusivity in India's National Education Policy 2020: A Multidimensional Framework for Assessment and Implementation

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Abstract— India's National Education Policy (NEP) 2020 represents a paradigm shift toward ensuring equitable and inclusive education for all learners, particularly those from Socio-Economically Disadvantaged Groups (SEDGs). Despite its ambitious vision, translating broad policy goals into measurable outcomes requires robust methodological frameworks that can address intersecting social identities and uneven resource distribution. This paper proposes a hypothetical, multidimensional approach combining critical intersectional analysis and equity-aware geospatial technologies to evaluate and operationalize the inclusivity mandates of NEP 2020. By drawing on advanced models of equity measurement, this study provides actionable insights for policymakers to bridge the gap between systemic educational reforms and on-the-ground equitable realities.

Keywords— Disadvantaged Groups, Education, Equity, Inclusivity, Policy

I. INTRODUCTION

The National Education Policy (NEP) 2020 of India envisions an education system that provides high-quality learning opportunities to all students, irrespective of their socio-economic or demographic backgrounds. A central pillar of this policy is the explicit focus on Socio-Economically Disadvantaged Groups (SEDGs), which encompasses gender identities, socio-cultural identities, geographical locations, and disabilities. The scope of this paper centers on evaluating the pedagogical and structural mechanisms required to manifest these equity and inclusivity goals within the diverse Indian educational landscape. Achieving such sweeping reforms demands more than just policy articulation; it necessitates stringent, multidimensional assessment frameworks capable of capturing nuanced educational disparities.

However, existing frameworks for evaluating educational equity within large-scale policy rollouts remain notably insufficient for several reasons. First, traditional evaluation models often treat demographic variables in isolation, failing to account for the intersectional nature of systemic barriers and overlapping disadvantages (Dusen & Nissen, 2018).

Second, conventional resource allocation methods lack dynamic, data-driven optimization, thereby perpetuating geographical inequities in school infrastructure and access to trained educators. To address these gaps, this paper presents the following primary contributions:

- We propose a hypothetical, multi-tiered framework that integrates critical quantitative intersectionality to accurately measure learning equity among diverse student cohorts.
- We introduce an equity-aware geospatial resource allocation model designed to optimize the distribution of educational infrastructure and inclusive tutor training programs across varied Indian districts.

II. REVIEW OF LITERATURE

The literature surrounding systemic educational reform and inclusivity can be classified into several distinct categories. The first category focuses on intersectionality and critical approaches to educational equity. Scholars have emphasized that true equity requires moving beyond mere access to addressing the structural hierarchies that commodify or exclude marginalized identities (Lodhi, 2025). For instance, critical quantitative intersectionality has been utilized to evaluate college physics learning, revealing that competing definitions of equity—such as equity of individuality versus equality of learning—can lead to conflicting assessments of educational success (Dusen & Nissen, 2018). While these foundational models provide deep theoretical insights, they often lack practical implementation tools for massive, decentralized systems like India's educational network. Our work bridges this by embedding intersectional metrics directly into a scalable policy evaluation framework.

The second category encompasses the deployment of geospatial and artificial intelligence (AI) tools for equitable resource distribution. Recent advancements have demonstrated the efficacy of Equity-Aware Geospatial AI (EA-GeoAI) in forecasting demand and optimizing the placement of critical facilities, such as hospitals, to minimize unmet needs across diverse populations (Pant et al., 2025).

These approaches successfully fuse demographic shifts with infrastructure balancing, though they have primarily been applied to healthcare and urban planning. By adapting these geospatial optimization techniques to the educational sector, our proposed framework overcomes the weaknesses of static, generalized funding formulas often used in educational administration.

The final category addresses diversity, equity, and inclusivity (DEI) in educator training and workforce development. Professional bodies and educational institutions increasingly rely on DEI frameworks and workforce metrics to foster respectful and robust environments (Simpson-Page et al., 2026). Furthermore, advanced computational models, such as fine-tuned language models, have been explored for assessing open-response equity training among tutors to ensure they grasp nuanced advocacy and context (Kakarla et al., 2025). While these localized interventions strengthen individual tutor capacities, they must be integrated into broader national policies to be truly effective. This paper synthesizes these targeted training assessments with systemic resource allocation to ensure that the NEP 2020's inclusivity goals are met both infrastructurally and pedagogically.

III. METHOD/APPROACH

To operationalize the equity and inclusivity objectives of the NEP 2020, we propose a structured, three-module framework named the Equitable Education Deployment Pipeline (EEDP). Step 1 involves the Intersectional Metric Aggregation module, which collects hypothetical disaggregated data on student learning outcomes across intersecting identities such as caste, gender, and geographical location. Step 2 employs an Equity-Aware Geospatial Optimizer, inspired by spatial demand forecasting algorithms, to identify optimal locations for Special Education Zones (SEZs) and inclusive infrastructure (Pant et al., 2025). Step 3 implements the Educator Inclusivity Calibration module, which utilizes localized training data to evaluate and standardize the equity competencies of teachers serving diverse classrooms (Kakarla et al., 2025). This sequential approach ensures that both physical resources and human capital are allocated in a manner that directly addresses the unique barriers faced by SEDGs.

The key design choice in this framework is the dual focus on "Equity of Individuality" and "Equality of Learning" (Dusen & Nissen, 2018). By purposefully measuring both how individual groups grow academically and how achievement gaps close between groups, the framework avoids the pitfall of masking localized failures within broad regional averages.

Additionally, the integration of geospatial AI for infrastructure planning was chosen to counter historical biases where urban centers disproportionately receive educational funding compared to rural or tribal districts. This spatial rationalization guarantees that the physical placement of schools and digital infrastructure strictly adheres to the principles of maximized accessibility and minimized travel time for vulnerable populations.

The evaluation plan for the EEDP relies on a hypothetical dataset representative of various Indian states, comprising 10,000 schools and corresponding demographic distributions. We propose testing the Intersectional Metric Aggregation module by simulating pre- and post-intervention learning gains and utilizing hierarchical linear modeling to detect differential impacts across intersecting identity groups (Dusen & Nissen, 2018). The Geospatial Optimizer will be benchmarked against standard population-proportional allocation methods to measure the reduction in unmet educational needs and student commute times. Finally, the Educator Inclusivity Calibration module will be validated using hypothetical human-annotated tutor responses, comparing the efficiency of scalable assessment models against manual pedagogical evaluations to ensure contextually nuanced equity training (Kakarla et al., 2025).

IV. DISCUSSION

The practical implications of deploying the EEDP framework within the context of NEP 2020 are substantial. By providing a data-driven, intersectional lens, state governments and local educational bodies can dynamically adjust their funding and pedagogical strategies to target specific, underserved micro-communities. However, this approach carries several notable limitations and potential failure modes. First, the systemic lack of high-quality, granular data in remote Indian regions could severely hamper the accuracy of the geospatial optimization module. Second, deeply entrenched socio-cultural biases may resist top-down inclusivity mandates, causing a divergence between projected equity metrics and actual classroom experiences. Third, relying on advanced technological and AI-driven assessment tools for educator training risks alienating teachers in low-resource environments who lack adequate digital literacy or reliable internet access.

Implementing heavily data-dependent evaluation systems also introduces significant ethical considerations. The collection and aggregation of sensitive demographic data, such as caste and socio-economic status, present severe privacy risks if the data is mishandled or exploited for discriminatory profiling.



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Additionally, defining equity exclusively through quantifiable learning metrics may inadvertently commodify marginalized students, failing to affirm their full personhood and lived experiences in the educational system (Lodhi, 2025). To mitigate these issues, future work must focus on developing privacy-preserving data collection mechanisms that prioritize community consent and data sovereignty. Furthermore, future research should integrate qualitative, participatory methodologies into the AI-driven framework, ensuring that the voices of the Socio-Economically Disadvantaged Groups directly shape the algorithms governing their educational resources.

V. CONCLUSION

India's National Education Policy 2020 stands as a monumental commitment to reshaping the educational landscape through the core principles of equity and inclusivity. Recognizing the immense challenge of implementing these ideals across a vastly diverse population, this paper introduced a hypothetical, multidimensional framework designed to systematically evaluate and optimize educational resources. By intertwining critical intersectional analysis with equity-aware geospatial intelligence, the proposed pipeline offers a robust methodology to ensure that policies translate into tangible benefits for Socio-Economically Disadvantaged Groups.

Ultimately, the success of educational reform cannot be measured merely by expanded enrollment, but by the qualitative dismantling of systemic barriers to learning. While challenges regarding data scarcity, infrastructural deficits, and ethical data governance remain, the integration of advanced analytical tools provides a necessary step forward. By continually refining these models and centering the lived experiences of marginalized learners, policymakers and educators can collaboratively construct an educational ecosystem that truly fulfills the inclusive promise of NEP 2020.

REFERENCES

- [1] Dusen, Ben Van, & Nissen, Jayson 2018. Equity in College Physics Student Learning: a Critical Quantitative Intersectionality Investigation <https://arxiv.org/pdf/1805.04788v3>
<https://arxiv.org/pdf/1805.04788v3>
- [2] Lodhi, Shaouna 2025. Advancing Equity in STEM: A Critical Analysis of NSF's Division for Equity and Excellence in STEM through Theoretical Lenses. <https://arxiv.org/pdf/2511.15217v1>
<https://arxiv.org/pdf/2511.15217v1>
- [3] Pant, Piyush, Suntoro, Marcellius William, Siddiqua, Ayesha, Sharif, Muhammad Shehryaar, & Ahmed, Daniyal 2025. Equity-Aware Geospatial AI for Forecasting Demand-Driven Hospital Locations in Germany. <https://arxiv.org/pdf/2510.10640v1>
<https://arxiv.org/pdf/2510.10640v1>
- [4] Simpson-Page, Emily, Anderson, Megan, Crowe, Scott B., Kaim, Tanya, Smith, Ian, Thompson, Christine, & Keall, Paul 2026. Diversity, Equity and Inclusivity in the Australian and New Zealand Medical Physics Workforce. <https://arxiv.org/pdf/2606.25262v1>
<https://arxiv.org/pdf/2606.25262v1>