



Why Indonesian education still inequitable and how the new strategy can solve it?

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Abstract. This study aims to design a new strategy to accelerate educational equity through local government. Using a qualitative-descriptive approach, it adopted data triangulation through document review, and in-depth semi-structured interviews with education office practitioners and education planning experts, which is selected purposively. The study lasted 79 days and used a thematic analysis to describe the data. The results: (1) Indonesian national education policy has long set principles for school siting to ensure accessibility; however, local governments still lack standardized procedural guidance for assessing and determining new school locations, resulting in implementation absurdities. (2) A new strategy to address educational inequity was formulated into 3 alternatives: (a) Establishing a local education policy as a standard operating procedure (SOP) for determining new school locations; (b) Multi-actor collaboration among local government, academics, and the community; (c) Creating a location selector

application to assess the feasibility of proposed new school sites. The third alternative is special urgency, and it is the most prominent practical implication, because it offers substantial benefits for addressing educational inequity. Although focused on Subang Regency, the study is globally relevant given persistent educational inequity and structural constraints in many countries. Further research is recommended to develop the location selector application.

Introduction

Educational equity is an imperative within development agendas worldwide. Without equitable education, a nation faces the risks of unequal human capital, low competitiveness, and widening socioeconomic divides (Chen, 2021; Mutambara & Bayaga, 2021; Preda & Toma, 2021). Over the long term, such inequity not only constrains social mobility but also sustains the intergenerational reproduction of poverty (Egalite & Wolf, 2016). These conditions generate compounded, cross-sector losses: economic, social, political, and health-related that reinforce one another and form a cycle of inequality that is so difficult (Hargreaves, 2017; Nordholm et al., 2022). So, a nation's success or failure in ensuring educational equity will shape the quality of its future civilization.

In Indonesia, efforts toward educational equity have been pursued since the 1980s, when access-expansion programs were implemented, yet persistent structural and spatial challenges remain (Ruhimat, 2025). Far from achieving equitable provision, the archipelagic country still has 4.1 million children who do not have school (ATS), 302 sub-districts without junior high schools, and 727 sub-districts without senior high schools (Undang-Undang Nomor 59 Tahun 2024 Tentang Rencana Pembangunan Jangka Panjang Nasional Tahun 2025-2045, 2024). These data indicate that millions of potential learners are geographically and socioeconomically constrained from continuing to secondary education.

This reality starkly contrasts with the equity mandate: it has not been fully realized in practice. Access disparities remain a visible feature of the national education system. This also represents a crucial threat to cross-sector development, because the quality and distribution of future human resources are heavily determined by who receives educational opportunities today. As a national reflection, the government has therefore "again" positioned educational equity as a priority target in Indonesian education policy. Nevertheless, how it can be achieved effectively and sustainably remains an open question that many studies continue to address.

In academic discourse, research on school mapping grounded in the spatial justice paradigm Han et al. (2023) and enabled by geographic information systems (GIS) has revived over the past decade. Across diverse settings, Azizah (2018), Lesnawati et al. (2025), Ruhimat (2025), Ruhimat et al. (2024), and Setyawan et al. (2023) have documented best practices through their studies. These works have played a pioneering scientific role by evaluating existing school distributions and guiding more credible, equitable, and safer approaches to determining future school locations. This approach offers "new hope" for educational equity agendas that have often been confined to administrative and political approaches (Ruhimat et al., 2024). By positioning school location as a key variable, spatial mapping has the potential to directly reduce the number of out-of-school children and to help ensure equal opportunities to obtain education Chen Yulong et al. (2023) for all school-age residents, both in advanced and disadvantaged regions.

Despite their inspiring contributions and their alignment with evidence of school mapping effectiveness in other countries. Such as Brazil Xavier et al. (2020) and Chile Amaya et al. (2016), the findings of Azizah (2018), Lesnawati et al. (2025), Ruhimat et al. (2024), and Setyawan et al. (2023) in Indonesia have so far received limited response from local governments. Local governments tend to remain passive toward these valuable recommendations and findings, such that the resulting maps and spatial analyses have not become the primary reference for determining new school locations or reorganizing existing school networks. Yet, within education decentralization, local government roles are among the main determinants of successful implementation of educational equity (Matete, 2022). Without strong local involvement and commitment, methodological innovations and scientific evidence risk remaining confined to the academic sphere.

As novelty, this study is expected to be directly useful for local governments by providing a more operational picture of the steps required to accelerate educational equity within their jurisdictions. The resulting recommendations are not intended as a rigid, one-size-fits-all recipe, but rather as strategic guidance that can be adapted to local contexts. At the same time, although grounded in Indonesia, the proposed strategy may also be relevant to other countries that continue to face challenges of educational inequity. Conversely, without this study, the gap between scientific advances in educational mapping and practical education management at the local level will likely continue to widen. Under such conditions, educational inequity not only risks persisting but may also be perpetuated through policies that are blind to evidence.

The hypothesis of this study, developed after reviewing these works, is that local government passivity is closely linked to their limited involvement throughout the research process. Local governments are more often positioned as recipients of recommendations rather than as partners engaged in shaping research questions, collecting data, interpreting results, and designing follow-up actions. Consequently, even when research offers high-significance results grounded in evidence, its potential benefits become constrained because governments were not deeply involved in those studies. As a result, the findings circulate mainly within scholarly publications and are not integrated into the everyday practices of local education policymakers. Strategic decisions are made without systematically referring to the latest scientific evidence, allowing the theory-practice gap to persist, and leaving multiple forms of educational injustice without a clear endpoint (Amaya et al., 2016; Widana et al., 2019).

Accordingly, the ways in which school-mapping research findings are utilized by local governments require in-depth examination. It is not enough to develop increasingly sophisticated mapping methods; what is far more urgent is to formulate strategies that ensure these findings truly "land" within local planning and decision-making processes. This urgency motivates the present study, which aims to formulate a new, practice-oriented strategy for local governments to accelerate educational equity. This study seeks to demonstrate how such a strategy can be developed through a multi-perspective approach: from the perspective of education planning experts, based on relevant and applicable national education policy frameworks, and from the perspective of local government stakeholders responsible for school siting decisions. To achieve this aim, two research questions were established: (1) How does Indonesia's national educational equity policy operate, and what implementation barriers exist at the local level? and (2) What strategies can enable local governments to accelerate educational equity?

Method

Research Design and Location

A descriptive qualitative approach was employed by Bingham (2023) to explore, understand, and report how Indonesia's educational equity policy operates. The weaknesses identified in this policy were subsequently used as the basis for argument in the interviews to inform the design of a new strategy to accelerate educational equity. This methodological choice was grounded in the assumption that qualitative inquiry is particularly effective for capturing contextual phenomena within a specific locality, enabling the formulation of locally relevant strategies while still allowing the reported findings to be interpreted in comparable contexts (Bingham, 2021; Charli et al., 2022). The study was conducted at the Subang Regency Education Office, which was selected because Subang has one of the lowest average years of schooling (RLS) in West Java (Badan Pusat Statistik Kabupaten Subang, 2025; Disdik Jabar, 2024) and has demonstrated a commitment to addressing this challenge.

Instruments and Data Compilation

The data in this study consisted of (1) education policy documents governing educational equity and (2) the perspectives of education office officials and education planning experts. Given these two data forms, documents and accounts, a triangulation approach was adopted as the data collection technique (Bingham, 2021, 2023). Two instruments were developed to guide data collection. First, a document identification sheet to categorize relevant documents, and second, a semi-structured in-depth interview guide Bingham (2023) to support interviews with purposively selected participants (Demirci, 2024).

Using the criterion of junior high school-level policy implementers in Subang Regency, seven representatives from the Subang Regency Education Office participated, along with four education

planning experts, yielding a total of 11 participants. The document identification sheet was intentionally simple to organize interrelated documents. The interview guide was developed from equity-related problems observed in Indonesia, and included reflective prompts designed to elicit innovative strategic ideas from participants. Data compilation and analysis were conducted in an integrated, iterative manner until data saturation was reached (Belina, 2023), taking 57 days, followed by 22 days of report writing. Accordingly, the total study duration was 79 days, conducted from 21 September to 7 December 2025.

Data Analysis

From the data compilation, two forms of data were produced: interview transcripts and annotated education policy documents related to educational equity. Both data types were analyzed using thematic analysis, given its suitability for examining empirical conditions within a specific context (Bingham, 2023; Demirci, 2024). Operationally, the thematic analysis was conducted in six stages as described by Ahmed et al. (2025), which is internationally provided, namely: (1) Familiarization with the data; (2) Generating Initial Codes; (3) Searching for Themes; (4) Reviewing Themes; (5) Defining and Naming Themes; and (6) Writing the Report. This process is supported by NVivo version 12, which is widely regarded as a reliable tool for qualitative data analysis (Allsop et al., 2022).

Ethical Consideration

Strict adherence to internationally accepted research ethics was maintained throughout the study (Bredal et al., 2024). Participants were selected not only for their roles in educational equity practice and their relevant academic expertise, but also for their willingness to participate; accordingly, their involvement was voluntary rather than compelled. Interviews were conducted only by prior appointment based on mutually agreed schedules (Belina, 2023; Demirci, 2024). To ensure the principle of anonymous, each participant's real name was anonymized and replaced with a subject code, using "P1" for participant 1, "P2" for participant 2, and so forth. Participants P1–P7 were junior-high-school-level implementers of education policy in Subang Regency, whereas participants P8–P11 were lecturers with expertise in education planning.

Results and Discussion

Educational Equity in Indonesia's National Education Policy and Barriers to Local Implementation

During the fieldwork in Subang Regency, the issue of school location emerged not merely as a technical matter of spatial planning, but as an entry point for assessing the state's consistency in guaranteeing the right to education. At the highest legal level, every citizen is affirmed to have the right to education (Perubahan Keempat Undang Dasar Negara Republik Indonesia Tahun 1945, 2002). When translated into operational terms, this principle carries clear geographic implications: schools, including junior high schools (SMP), should be located within a reasonable reach of school-age residents so that the right can be realized in practice, not merely acknowledged as a norm. A district SMP technical officer described this tension as follows: "If we read Article 31 as it is, it means the state is obliged to make education reachable. On the ground, 'reachable' is about distance, roads, cost, and children's safety" (Interview P2, 23 September 2025).

This legal framework does not stand alone. It is complemented by more operational policy instruments, including Peraturan Menteri Pendidikan Nasional Nomor 24 Tahun 2007, which specifies land requirements for SMP: lawful land tenure, an average slope below 15%, exclusion from river buffer zones and railway corridors, protection from pollution and excessive noise, alignment with spatial plans, and possession of a land-use permit. Field observations indicate that education office implementers understand these provisions, yet they tend to treat them as an

administrative checklist rather than as an access-planning instrument. As one staff member noted, "We know the land requirements by heart: land status, slope, not in a river buffer zone. But it often stops at document checks and a brief site visit, and does not reach an analysis of whether children can truly access the school easily" (Interview P5, 29 September 2025).

This tendency becomes more visible when later regulations emphasize safety and health principles. Peraturan Pemerintah Nomor 57 Tahun 2021 states that infrastructure standards must be guided by principles of security, health, and safety (Presiden Republik Indonesia, 2021). Substantively, this requires site-based risk assessment; road access, disaster potential, exposure to noise and air pollution, and evacuation readiness. A district-level implementer observed that safety tends to become salient only after problems occur: "If nothing has happened yet, the location is considered safe. But the national standard talks about safety as a principle from the outset, not only after an incident" (Interview P6, 7 October 2025).

Accessibility requirements are articulated even more explicitly in Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Pendidikan Tinggi Number 22 of 2023. Article 8, paragraph 2 stipulates that school land must be in a comfortable environment, free from potential hazards, equipped with emergency rescue access; appropriately designated and licensed; hold undisputed land tenure; and provide proper road access while meeting accessibility standards for persons with disabilities. Interviewees viewed this regulation as a strong "roadmap," yet highlighted the absence of procedural translation at the local level. A verification officer explained: "The 2023 regulation clearly mentions proper road access and disability access. But when we receive applications, there is no local guideline that compels that assessment to become a mandatory step. In the end, it goes back to each team's interpretation" (Interview P3, 2 October 2025).

At this point, the most salient finding emerges: Subang Regency does not yet have a relevant local policy framework, consistent with regional autonomy, to respond to national standards on school location. This gap creates a blind policy space for implementers. In licensing new private SMPs, the lack of guidance makes it difficult for the education office to determine ideal sites, let alone recommend locations that strengthen equitable access for junior-high-age communities. One decision-maker stated: "When an institution submits a proposed site point, we only assess whether what they bring is 'feasible or not.' We do not yet have a needs map, which areas actually lack SMPs and which areas are already dense" (Interview P1, 21 September 2025). Consequently, school distribution may shift uncontrollably, following land availability or providers' market strategies rather than projecting educational equity at the district scale.

Several cases illustrate new schools being proposed too close to existing ones, while others are located far from junior-high-age residential clusters. A technical staff member explained: "There are applications where the site already meets the land requirements, but the position is extremely close to another SMP. From an equity perspective, it does not expand access; it only increases competition in the same spot" (Interview P4, 30 September 2025). In districts with limited public transport, distance becomes a layered burden: travel time, cost, and safety risks. A field implementer noted: "In sub-districts with minimal public transport facilities, children have to walk long distances or take motorcycle taxis. If families cannot afford it, children start by being frequently absent, and over time they drop out" (Interview P7, 14 October 2025).

Education planning lecturers emphasized that the core problem is not the absence of national norms, but the absence of local mechanisms grounded in spatial and demographic data. One lecturer stated: "National policy already provides principles and minimum thresholds. The region should translate that into a service map: service radius, projected primary school graduates, transport access, and disaster potential. Only after those aspects are analyzed should a new school

location be determined" (Interview P8, 20 October 2025). Another argued that licensing should not stop at land legality, but must assess impacts on equitable access: "A school establishment permit is an instrument for distributing public services. If there is no spatial guideline, what happens is that the 'market' determines where schools are distributed, not the needs of educational equity" (Interview P9, 28 October 2025).

In practical terms, one lecturer suggested an SOP that integrates regulatory requirements with access indicators: "Just create a simple matrix: safety, distance from settlements, transport availability, proximity to existing schools at the same level, and disability access. That is enough to close the blind policy space" (Interview P10, 4 November 2025). Another added that social data, such as children who do not have school (ATS), should be treated as a location-policy indicator: "Location is a dropout-prevention policy. When children must cover long distances and incur high costs, we create structural barriers. Conversely, where ATS is concentrated, a new school should be built near them" (Interview P11, 9 November 2025).

In summary, in response to the first research question, the investigation indicates that Indonesia's national education policy has long-established principles and standards for school locations to ensure accessibility. If these policies were implemented in detail with attention to spatial and demographic parameters, they would project educational equity. However, at the local government level, the absence of relevant local education policy and standardized procedural guidance creates a blind policy space and encourages implementation absurdities.

A New Strategy to Address Educational Inequity

A strategic approach to addressing educational inequity in Subang Regency, both accurately and rapidly, emerged from participants' accounts and reflections. Although their emphases varied because each highlighted different drivers of inequity, three strategic alternatives were identified from the interviews, all articulated with a shared determination to improve the situation promptly and effectively.

The first and most frequently raised alternative was the development of a local education policy in the form of a standard operating procedure (SOP) for determining new school locations. For education office actors, the SOP was not merely an administrative document but a practical "work guide" that narrows overly flexible interpretation when responding to licensing applications. One implementer stated, "We need a clear SOP: what are the steps, who assesses what, and what are the indicators? Otherwise, the assessment of new school locations will continue to depend on each officer's habits and assumptions" (Interview P1, 21 September 2025). This view reflects an awareness that local education management requires procedural authority aligned with national policy mandates. Another staff member added, "National policy already provides principles on the right to education and standards for facilities and infrastructure, but without local derivative regulations, we struggle to translate them into consistent location decisions" (Interview P4, 30 September 2025). From the academics' perspective, the SOP was framed as an instrument to make equity more measurable and accountable: "If the region develops a school-location SOP based on access and safety principles, that is not adding bureaucracy; it actually speeds up decisions because the criteria are clear and standardized," noted an education planning lecturer (Interview P8, 20 October 2025).

The second alternative emphasized multi-actor collaboration among local government, academics, and the community to avoid one-sided reforms to school distribution. Education office implementers stressed that school-mapping research becomes more effective when it involves those who process permits daily, verify documents, and understand field realities. As one technical verifier stated, "Academics are welcome to do research, but do not come with a finished product.

We need to be involved from the beginning so that the maps and recommendations connect with work procedures and the realities of the area" (Interview P3, 2 October 2025). In a similar tone, another participant highlighted the importance of "knowledge transfer" so that research does not remain a report: "Often the study results are good, but the language and format are not operational. If we are involved in the process, it becomes easier for us to adopt them into work steps" (Interview P6, 7 October 2025).

Meanwhile, education planning experts argued that collaboration must also preserve evidence discipline: "Local implementers must have the professional courage to say: this location is not feasible, even if there is pressure to 'approve quickly.' Equity must be evidence-based, not pressure-based," asserted a lecturer (Interview P10, 4 November 2025). They also argued that community actors, especially private school providers, must be guided not to pursue prestige through expansion without equity considerations: "If providers only pursue 'a new building' without considering distance to student settlements and the area's educational development capacity, distribution disorder will not stop," said another expert (Interview P11, 9 November 2025).

The third alternative was to develop a location feasibility selector tool capable of accurately assessing proposed sites. This idea resonated strongly among experts with cross-disciplinary research experience, as they perceived a competence gap: many education managers are not trained in spatial, disaster-risk, or demographic analysis, even though location decisions require such capacities. One lecturer explained, "It is not the implementers' fault if they are not accustomed to reading flood-risk maps, population density, or road access. Those are specialized skills, so they need to be supported by an assessment tool that can guide them" (Interview P9, 28 October 2025). They proposed that the selector tool be technology-based, integrating GIS with digital application development, so decisions can become both faster and more transparent. As one expert described, "In this situation, a location selector tool is needed. Locations far from settlements or at disaster risk can receive a low score. If it is built into a digital platform, the education office is assisted, and the public can understand the basis of the decision" (Interview P9, 2 October 2025). Notably, education office actors also welcomed this approach as long as it does not burden daily operations: "If there is a tool where we just input coordinates and it outputs basic indicators like access, risk, and proximity to other schools, that is very helpful. We would no longer be forced to guess," stated an implementer (Interview P2, 23 September 2025).



Image 1. The New Strategy to Accelerate Educational Equity through Local Government
Source: Data Analysis

Image 1 shows that three alternatives are proposed to address educational inequity accurately and rapidly. First, developing a local education policy as a standard operating procedure for determining

new school locations. Second, establishing multi-actor collaboration involving local government, academics, and the community. Third, developing a location selector application capable of assessing the feasibility of proposed new school sites submitted by school providers. Implementation of the first alternative is expected to eliminate blind policy, an institutional gap arising from local governments' lack of standardized procedures for determining new school locations. Implementation of the second alternative is expected to strengthen the usability of equity-oriented research, because studies are conducted collaboratively by academics and local education practitioners, while also educating community actors that new school establishment must align with a region's equity agenda and therefore cannot be pursued in locations lacking analysis. The third alternative, developing a new-school location selector application, promises automated spatial-analytic support that is highly valuable for both local governments and school founders, because it offers systematic and transparent assessment.

Across these three alternatives, a common thread emerges: accelerating educational equity in Subang Regency requires an integrated combination of a local SOP umbrella, binding collaboration that mutually reinforces academic knowledge and bureaucratic practice, and a technology-based selector tool that shifts location assessment from a purely administrative check into an evidence-based decision grounded in credible and reliable spatial analysis. Within this approach, spatial and demographic data, such as distance to roads and rivers, disaster potential, slope, the radius to residential settlements, and distance to the distribution of children without schools (ATS), can be analyzed in an integrated manner.

Synthesis and Discussion

The three alternatives proposed in this study converge on a single core claim: accelerating educational equity in Subang Regency requires an institutionalized, collaborative public decision architecture grounded in spatial-demographic evidence, rather than routine administrative checks. The findings, therefore, frame equity not simply as expanding the number of schools, but as governing "how locations are decided" so that decisions are consistent, transparent, and auditable. *First*, a local SOP is positioned to close the blind policy gap, the procedural vacuum that makes school siting vulnerable to discretion and inconsistency. This logic is consistent with arguments that equity policy must be coherent and operational at the system level, not merely rhetorical (Bishop & Noguera, 2019; Campbell, 2021). *Second*, collaboration among local government, academics, and the community strengthens both research usability and public literacy by reinforcing that new school establishment should align with a region's equity agenda. This aligns with perspectives that foreground trust and agency through cross-sector work rather than individualistic burdens (Germain, 2022; Purnadewi et al., 2023). *Third*, a location selector application promises systematic and transparent automation of spatial analysis, shifting siting decisions from administrative verification toward evidence-based judgment; this resonates with the emphasis on data monitoring and research practice partnerships in equity work Wilcox & Lawson (2022), while our findings is more concrete technical mechanism.

Compared with prior studies, this research is more distinctive because it operationalizes educational equity into decision procedures and instruments (SOP and a selector application), enabling competing interpretations of "equity" to be debated through criteria and data rather than opinion, consistent with critiques that equity is often used ambiguously and with multiple meanings (Levinson et al., 2022). In the Indonesian context, these results also complement decentralization analyses that highlight legitimacy-authority tensions by proposing an institutional solution that reduces discretion through system design (Sumintono et al., 2023). The study further extends macro-diagnostic work on access, transition, and quality by providing micro-level tools that local governments can use directly to improve the distribution of educational opportunities (Kawuryan et al., 2021). Finally, it reinforces concerns about weak data synchronization and accountability in

equity programs, while challenging the assumption that equity can be achieved primarily through financial assistance alone; the more pressing need is accountable spatial planning through verifiable, data-based location decisions (Ninghardjanti et al., 2023).

Research Limitations and Implications

The main limitation of our study is that the results are not relevant to education in the context of centralization. Theoretically, the study implies a shift from "equity as a target" to "equity as a decision process": combining an SOP umbrella, multi-actor collaboration, and a technology-based selector to transform school siting from administrative checking to transparent, auditable, spatial-demographic evidence-based decision-making. This approach helps "lock in" the meaning of equity within operational procedures and indicators, preventing equity debates from remaining at the level of slogans and instead anchoring them in traceable criteria, again echoing Levinson et al. (2022) on the risks of competing equity meanings. It also strengthens an ecological lens; inequity cannot be addressed through fragmented policy, but requires implementation devices that integrate spatial and social context, consistent with critiques of weak integration and implementation in equity policy (Bishop & Noguera, 2019). In addition, the study translates evidence-guided decision-making into concrete decision infrastructure at the local government level, aligning with Wilcox & Lawson's (2022) emphasis on data systems and research-practice partnerships.

In practice, the study suggests that local governments in developing contexts should begin by establishing an SOP for new school locations to close the policy gap and reduce discretionary variance, because stable, implementable policy tools are a prerequisite for consistent equity work (Campbell, 2021). Then, collaboration among government, academics, and communities should be designed as a binding mechanism: academics strengthen analytic validity, bureaucracy integrates it into regulation and budgeting, and communities internalize that the establishment of schools must serve equity goals. Finally, implementing a location selector application standardizes assessment, accelerates proposal review, enables audit trails, and increases acceptance of decisions because approvals or rejections can be justified objectively.

Conclusion

Indonesia's national education policy has long-established principles for school siting to ensure accessibility for all communities. However, at the local government level, relevant local education policies and standardized procedural guidance for assessing and determining new school locations are absent, creating a policy black hole and leading to implementation absurdities. This condition weakens local governments' capacity to deliver implementation that is coherent with the national educational equity agenda. Therefore, this study proposed 3 alternatives to address educational inequity: 1) Develop a local education policy as a standard operating procedure (SOP) for determining new school locations; 2) Establish multi-actor collaboration involving local government, academics, and the community; 3) Develop a location selector application capable of assessing the feasibility of proposed new school sites submitted by school providers. The alternatives become the most prominent practical implications because of their potential significance for all stakeholders in projecting educational equity within a given region. Although the study is centered in Subang Regency, the findings remain valuable in the global landscape, as many countries continue to face educational inequity and structural constraints. The practical implications suggest that local governments begin to create an SOP for new school locations. Further research is recommended to develop the new-school location selector application.

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