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MORALITY BEFORE KNOWLEDGE

Cultural mapping of teachers' spatial agency and social practices

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ABSTRACT

Background: Fluctuating policy changes, the demand for rapid adaptation, and high socio-cultural expectations for producing ideal students generate systemic pressure among Indonesian teachers. Such pressure requires analysis beyond administrative or psychological metrics toward the spatial contexts in which teaching is actually lived. **Methods:** This study analyzes how teachers' social practices shape and are shaped by the spatial dynamics of their daily lives and workplaces, positioning them as active agents in the production of educational space. A qualitative, intensive contrastive case study was conducted with three active teachers (N = 3) across diverse spatial contexts. Complementary spatial analysis using ArcGIS slope mapping was applied to contextualize topographical risk, enriching interpretation of teachers' lived geographies. Data were gathered through participatory mapping workshops that produced story maps, complemented by map-based interviews, and analyzed through cross-case thematic analysis. **Findings:** Findings indicate that professional stress materializes into risk-prone geographies, countered by three primary spatial tactics: symbolic deviation, social-informational capital, and hedonic compensation or role integration. Topographical slope analysis further corroborates teachers' narratives of risk-prone mobility, revealing how physical gradients materially condition professional stress and spatial inequity. **Conclusion:** These results suggest that teacher resilience is an active, spatially produced phenomenon contingent upon the symbolic transformation of ordinary materiality. Recognizing the material and emotional dimensions of educational space provides a foundation for designing spatially responsive well-being programs and geographically equitable teacher policies. **Novelty/Originality of this article:** This study introduces a spatial lens on teacher resilience within Indonesia's educational geography, advancing the methodological integration of cultural mapping and topographical analysis in understanding lived pedagogical space.

KEYWORDS: cultural mapping; spatial dynamics; teacher resilience; lived space; social practices.

1. Introduction

Fluctuating policy changes, the demand for rapid adaptation, and high socio-cultural expectations for producing ideal students generate systemic pressure among Indonesian teachers. They operate within a constant cycle of educational reform, such as the shift from previous curricula to the current independent curriculum, which requires rapid adjustment and sustained administrative effort (Supianto et al., 2024). This recurring reform dynamic often intensifies teachers' bureaucratic workload, drawing attention away from the core of teaching and student guidance toward compliance and documentation (Aulia, 2025; Nurhattati et al., 2020). At the same time, the declining number of prospective geography educators threatens the transmission of essential environmental and spatial knowledge to

students, revealing another layer of structural fragility within the education system (Utami & Angelita, 2025). Teachers also struggle with differentiated instruction, as they must continually adapt their approaches to meet diverse student needs and learning preferences (Astuti et al., 2024). The accumulation of these demands produces a sustained condition of what has been called reform fatigue, where teachers are compelled to adjust to ever-changing mandates while lacking structural stability and adequate recognition. Understanding how these policies are experienced in everyday practice requires moving beyond curriculum content or pedagogical theory and into the spatial environments where teaching is enacted, endured, and reimagined.

One might argue that nothing about a teacher's daily movement—walking to class, rearranging desks, waiting for a bus—belongs in the realm of educational theory. Such things appear too ordinary, too embodied, too trivial to matter. Yet it is precisely in these gestures that teaching acquires its spatial life. A teacher's work is not performed in abstraction but in rooms that echo, corridors that narrow, and routes that flood. The school is not a neutral building; it is a lived environment saturated with tension, fatigue, affection, and memory. And still, in most research, space remains invisible as if the profession existed nowhere in particular, an invisibility that mirrors how broader educational discourses have reduced teacher experience to questions of measurable "quality" detached from the spatial and affective realities that sustain or erode it (Towers et al., 2025; Ofsted, 2021). In the context of the pandemic, this reduction became even more apparent, as official evaluations emphasized procedural competence over lived environment, reinforcing a view of teaching as something that could be fully known without attending to where and how it actually occurs.

Educational studies, with rare exceptions, tend to focus on curriculum, motivation, or policy performance. They speak of teaching as if it unfolded on an even surface, untouched by the grain of geography or the feel of distance. But teachers do not simply work in schools; they inhabit them. They move through them like inhabitants of small worlds, creating rhythms and shortcuts, carving out spaces of quiet within systems that are rarely quiet. Their daily negotiations—how they arrange chairs, how they find a moment of stillness between classes, how they choose a route home—constitute a geography of adaptation that is both personal and social (Pedrazzini et al., 2005).

The point is not to romanticize the everyday but to recognize that the everyday has structure. Space organizes stress and power as surely as policy does. The school building is not only a workplace but also an instrument of control, a container of visibility and silence. Teachers read and respond to these constraints constantly, though rarely with the luxury of theorizing them. Their expertise is practical, bodily, and immediate, a form of spatial intelligence that emerges through movement, perception, and adaptation. Contemporary cognitive research reinforces this idea: the brain itself is spatially organized, its neural activity patterned in ways that mirror mental structures (Northoff et al., 2025). This topographic organization connects perception and thought, showing that spatial understanding is not an abstract capacity but a fundamental mode of human cognition. Humans, unlike other species, can communicate flexibly about people, objects, and places, suggesting that spatial reasoning underlies the very evolution of language and social meaning.

The capacity to think and speak spatially is therefore not peripheral to teaching but central to how teachers inhabit and interpret their environments. Studies of peripersonal space show that spatial systems integrate motor, perceptual, emotional, and social processes within a single neural framework (Basile et al., 2024), while research in cognitive linguistics argues that spatial communication systems are foundational to language development and conceptual organization (Coventry & Diessel, 2025). Seeing space as a structuring tool for thought disrupts the assumption that spatial concepts are universal; they are learned, practiced, and negotiated within specific cultural and physical landscapes (Coventry & Diessel, 2025). In rural contexts, these landscapes are not metaphorical but material the slopes, gradients, and access barriers that shape how teachers move, endure, and make sense of their professional world. Recognizing this, the present study integrates

qualitative cultural mapping with topographical analysis to reveal how physical landscapes shape educational endurance.

Rural schools provide a sharp lens for seeing how space works. There, distance becomes a daily condition rather than a metaphor. Long roads, broken bridges, low population density, and limited access to new instruments turn the simple act of arriving at school into a labor in itself (Cavalieri et al., 2024; Schmied, 2022). Yet these same spaces hold immense social and cultural density: local histories, landscapes, and forms of care that cannot be replicated elsewhere. Teaching in such conditions requires a continual negotiation between exhaustion and belonging. The teacher's route to school, and their way back home, becomes both a spatial and emotional journey, one that reflects the broader reality of working within peripheral geographies.

Understanding teachers as spatial actors is to see their work not as an administrative function but as a lived practice. Teachers' actions—changing routes, improvising resources, rearranging classrooms—are spatial statements. Through them, teachers produce what can be called micro-geographies of resilience and care. They transform rigid institutional space into lived space: space that bears their imprint, their rhythm, their endurance (Lefebvre, 1974; de Certeau, 2025; Massey, 2005). This study draws from such an understanding but keeps its method simple. It does not deploy elaborate digital mapping or sensor data. Instead, it listens and observes. Teachers are interviewed about their routines and asked to draw simple maps of their journeys to and from school. These hand-drawn routes—uneven, subjective, and full of side notes—reveal how teachers perceive their spatial world. A bend in the road, a bridge, a corner where they rest or wait, becomes an index of experience. Mapping, here, is not cartography but storytelling. It is a way of letting teachers represent their own geography in their own hand.

The method borrows the sensibility of Cultural Mapping (Duxbury & Redaelli, 2020) but pares it down to its essentials. The aim is not to produce a public atlas of education, but to understand how meaning is made through space. Cultural Mapping, in its spirit, is about revealing the link between place and practice how people's stories and habits construct the sense of where they are. In this research, that link is traced through two modest tools: conversation and drawing. Both allow teachers to express how space shapes their labor and how, in turn, their labor shapes space. Through these narratives and maps, the study explores how teachers make sense of their surroundings, how they navigate distance, and how they turn constraint into rhythm. The focus is not only on hardship but also on the quiet intelligence that sustains work under pressure. Every small adaptation—a desk moved, a shortcut discovered, a resting spot remembered—tells a story of spatial agency. Teachers' practices thus become texts of survival, modest yet deeply revealing.

By positioning teachers as spatial producers, this study seeks to bridge two domains often kept apart: spatial theory and everyday educational experience. Space, as theorized by Lefebvre (1974) and others, is not a background but a product of social life. To teach, therefore, is also to produce space to give form to a world of relations and routines. When teachers describe the spaces they inhabit, they reveal education not as a set of policies but as a lived geography, dense with emotion, memory, and adaptation. In doing so, the research also reopens a philosophical question: what does it mean to work in space? Every teacher's day is a negotiation with the material and the invisible, the physical classroom, the journey through weather, the unspoken rules of the institution. These layers of space shape how teachers endure, how they care, and how they find moments of stability within systemic turbulence. The school, far from a neutral stage, becomes a terrain of moral and emotional labor, one constantly remade by those who inhabit it.

The intention of this inquiry, then, is not to describe teachers from a distance, but to read their spatial life from within—to see how education breathes through space. The hope is that by attending to the routes, corners, and rooms teachers occupy, we can begin to understand educational resilience not as an abstract virtue, but as something grounded: built step by step, classroom by classroom, along the roads they walk each day. Teaching, as both profession and vocation, has long been haunted by the contradictions of modernity. The modern state builds systems to standardize learning, yet depends upon the teacher's

improvisation to make those systems livable. In Indonesia, this contradiction is sharpened by geography. The distances between policy and practice are not only metaphorical; they are measured in kilometers, river crossings, and hours spent on damaged roads. The curriculum may circulate through documents and training sessions, but its embodiment takes place in rooms of varying acoustics, climates, and infrastructures. Teachers must inhabit this uneven terrain as both civil servants and moral figures, accountable to state reforms yet bound by local rhythms of care and survival.

Educational discourse often presumes mobility as progress: reform is imagined as movement forward, toward a more effective system. Yet for many teachers, movement is the very form of endurance. To go to school is to traverse instability. Reform travels faster than infrastructure. The spatial lag between policy intention and physical reality accumulates as emotional fatigue, a condition that blurs the line between exhaustion and persistence. To speak of reform fatigue, therefore, is to describe not only a psychological state but a geographical experience, one in which teachers constantly translate institutional time into lived distance.

Within this context, the teacher's labor cannot be read solely as instruction or curriculum delivery. It is also an act of navigation: finding ways through flooded roads, reconfiguring limited space, sustaining the moral economy of the schoolyard. These movements are physical, but they also constitute a moral geography. Teachers carry with them a form of quiet spatial intelligence, an attunement to thresholds and proximities. They learn when to pause, where to rest, and how to read the affective weather of their surroundings. It is a literacy of space, acquired through repetition and necessity rather than through theory. This study approaches such intelligence not as anecdote but as knowledge. To understand education as a spatial practice is to take seriously the notion that learning and teaching occur somewhere, that the where of pedagogy matters as much as the what. When a teacher adjusts the angle of a desk to catch better light or takes a longer route home to regain a sense of calm, these gestures are not incidental; they are spatial decisions that carry pedagogical weight. They are also acts of resistance, however small, against the abstract rationality of bureaucratic space.

The school, as a spatial form, functions simultaneously as institution and habitat. Its architecture dictates visibility, mobility, and control, yet its daily use by teachers redefines those same boundaries. The corridor that was designed for surveillance may become a space for informal mentoring; the unused storage room may turn into a place of reprieve. Every teacher, knowingly or not, participates in a slow rewriting of space, one that reveals the politics embedded in walls, paths, and distances. The question then is not only how teachers teach, but where and through what spatial negotiations their teaching becomes possible. While previous studies examined teacher resilience psychologically, few explored how spatial practices shape resilience within Indonesian educational settings. This framing justifies the need to examine teachers not as passive recipients of reform but as active spatial agents. Their capacity to produce and inhabit space with intention is central to their resilience. The following sections, therefore, proceed with this conviction: that the everyday mobility of teachers is not peripheral to educational theory, but foundational to it.

2. Methods

The research employed a qualitative approach using an intensive contrastive case study to investigate the spatial dynamics and social practices of teachers. The study is grounded in the Spatial Turn, utilizing Henri Lefebvre's concept of the production of space (Lefebvre, 1974) and Michel de Certeau's framework of strategy and tactic (de Certeau, 2025). The primary methodological tool was cultural mapping with a participatory approach (Duxbury et al., 2015; Taylor, 2013), designed to capture the teachers' lived space (espace vécu).

Involved three (N=3) active teachers selected based on their diverse spatial contexts (risiko fisik, isolasi administrasi, dan lingkungan pesisir). Data were collected in two main stages. In the first stage, participatory mapping workshops, each teacher created a Story

Map depicting their daily routines and spatial journeys (Home -> School -> Home). They were instructed to annotate this map with hotspots of stress, hotspots of resilience, and spatial actions (representing tactics or improvisations) to visualize the emotional and physical geography of their route and workplace. In the second stage, map-based interviews were conducted using the completed maps as visual prompts. This allowed the researcher to ground the narrative data in specific spatial features and practices, linking emotional experiences to physical locations and institutional strategies (de Certeau, 2025).

Data analysis utilized Cross-Case Thematic Analysis on the annotated maps and transcripts. The analysis focused on two main comparative axes: identifying Universal Themes of fatigue and resilience common among all three teachers; and contrasting how different spatial contexts (e.g., risk-prone roads vs. administrative proximity) shape the specific nature of their adaptive social practices (strategy). The findings were then interpreted theoretically to explain how teachers' tactics produce a resilient lived space (Lefebvre, 1974) in response to systemic pressures. The decision to employ Cultural Mapping as the central method was grounded in the belief that teachers' knowledge of space cannot be captured through linear interviews alone. Mapping provides a slower, more reflective form of articulation. It allows the participants to externalize memory and affect onto paper, tracing not just movement but significance. The drawn line, the small annotation, the chosen symbol, each becomes a spatial sentence in an otherwise unwritten narrative. This process transforms the map from an object of measurement into an instrument of listening.

In practice, the participatory mapping sessions unfolded less as formal workshops and more as collective reflections. The teachers often began hesitantly, unsure how to translate emotion into line. Over time, they began to remember small landmarks: a slope where the motorcycle stalled, a tree that marked halfway, a house where they could borrow signal on rainy days. These recollections anchored the maps in lived detail. The act of drawing thus became a mode of storytelling, one that preserved the grain of experience that spoken accounts might smooth over. To complement qualitative cultural mapping, a topographical slope analysis was performed using ArcGIS 10.8. Digital Elevation Model data from the Shuttle Radar Topography Mission (SRTM, 30m resolution) was processed to identify terrain gradients surrounding Teacher A's daily route. The slope map provided a physical reference for triangulating teachers' spatial narratives, linking lived stress experiences to measurable geographical features. This integration aligns with Lefebvre's notion that the material dimension of space co-produces its social meaning.

The analysis respected this subjectivity. Each map was treated not as data to be normalized but as a distinct narrative object. Comparison occurred not through metrics but through resonances, recurring gestures, repeated metaphors, shared symbols. The researcher's task was to read these traces as forms of reasoning, as attempts to give shape to spatial sense-making. The goal was not to correct or standardize, but to see how spatial thought emerges in the practice of teaching. Ethical clearance for data collection was obtained through the Blitar Regency National Unity and Political Agency, as required for social research activities in Indonesia. Fieldwork was conducted in 2024 at SD Negeri 2 Bululawang, involving teachers who voluntarily participated after being informed of the study's aims and procedures. All participants provided written consent and were assured of anonymity and confidentiality. Identifiable details of the school and participants are used here only for contextual accuracy, not for evaluative comparison. The study adhered to ethical principles of non-maleficence, voluntary participation, and respect for local institutional regulations.

Positionality was crucial in maintaining interpretive integrity. The researcher, though academically distant, shared the cultural and institutional background of the participants. This proximity allowed a kind of translational empathy: the ability to recognize when a pause signified fatigue, or when silence carried critique. Reflexive journaling accompanied each session to record these subtleties, ensuring that the reading of maps remained faithful to their lived tone. The research process, in that sense, became a dialogue between spaces, the lived space of teachers and the conceptual space of theory.

3. Results and Discussion

The findings of this study are drawn from the triangulation of teachers' story maps and the corresponding narrative interviews (N=3). The analysis utilized a cross-case thematic approach to compare how different spatial contexts (Teacher A: risk-prone; Teacher B: administrative proximity; Teacher C: coastal) manifest stress and generate adaptive social practices. The core synthesized data is presented in Table 1, providing a comprehensive overview of the spatial dynamics, emotional geographies, and corresponding tactics employed by the participants.

Table 1. Cross-case thematic analysis of emotional geography and spatial adaptation

Teacher (Case)	Key route context	Hotspot stress (Spatial dynamics)	Hotspot resilience (Emotional geography)	Spatial tactics (Social practices)
Teacher A	JLS Route (Straight Road) & Inland	Sharp Turns & Landslide-Prone Slopes: Muddy/rocky road, prone to landslides, and steep incline after the JLS intersection. This creates spatial risk and physical barriers (inability to attend school during heavy rain).	JLS & Hilltops: The straight road offers distant views of hills and the far end of the beach (mental escape and recharge). Intersection Stall: A place to socialize and interact with drivers (social support).	Taking the SD 01 Back Route: Deliberately changing the route to see the cows (other living beings). This tactic is used to offset social fatigue from human interaction all day (improving mental balance).
Teacher B	Forest Route & Sub-district Center (Different Village)	Forest Road before the Bridge: The primary point of stress. Indicates spatial insecurity or isolation on the route.	Bridge & Sugarcane Field: The bridge serves as a point for reflection/stopover (mental transition). The sugarcane field offers a point of visual comfort before entering the administrative center/intersection.	Dhuhr Prayer at Sub-district Mosque: A spiritual practice in a public/strategic space. The mosque's inexhaustible water supply provides material and spiritual resilience.
Teacher C	Coastal Route, Market, Estuary	No Clear Route Stress Hotspot: Stress is implicitly focused on reform fatigue at school.	Pasur Beach, Estuary, Chicken Noodle Stall: Using the route and environment for hedonistic compensation (buying sempol, fried snacks) and recreation (watching fishermen's boats).	Buying Food for Family: A social practice that connects the workspace (sub-district) with the home space (family), building role balance through consumption.

3.1 Spatial dynamics of professional stress and risk

This theme illustrates how generalized professional stress and 'reform fatigue' become materialized and localized into specific geographical risks, highlighting the critical disparity between the planned, ideal school environment (conceived space) and the precarious

reality of the daily route (perceived space). The social production of space inherently involves conflicts and tensions between different actors (van Lanen & Meij, 2025).

For Teacher A, professional fatigue is anchored to infrastructural precarity. The commute is characterized by landslide-prone slopes and muddy roads, creating a direct "spatial risk" that can threaten professional continuity. To contextualize these spatial risks materially, a digital elevation and slope analysis was conducted using GIS. The slope map (Figure 1) illustrates the steep gradients and elevation differences along Teacher A's daily route. The terrain profile confirms participants' narrative accounts of infrastructural precarity, where mobility fatigue is compounded by physical geography. This visual layer substantiates how spatial stress operates not only socially but also geomorphologically, aligning the lived 'risk geography' with measurable topographic constraint.
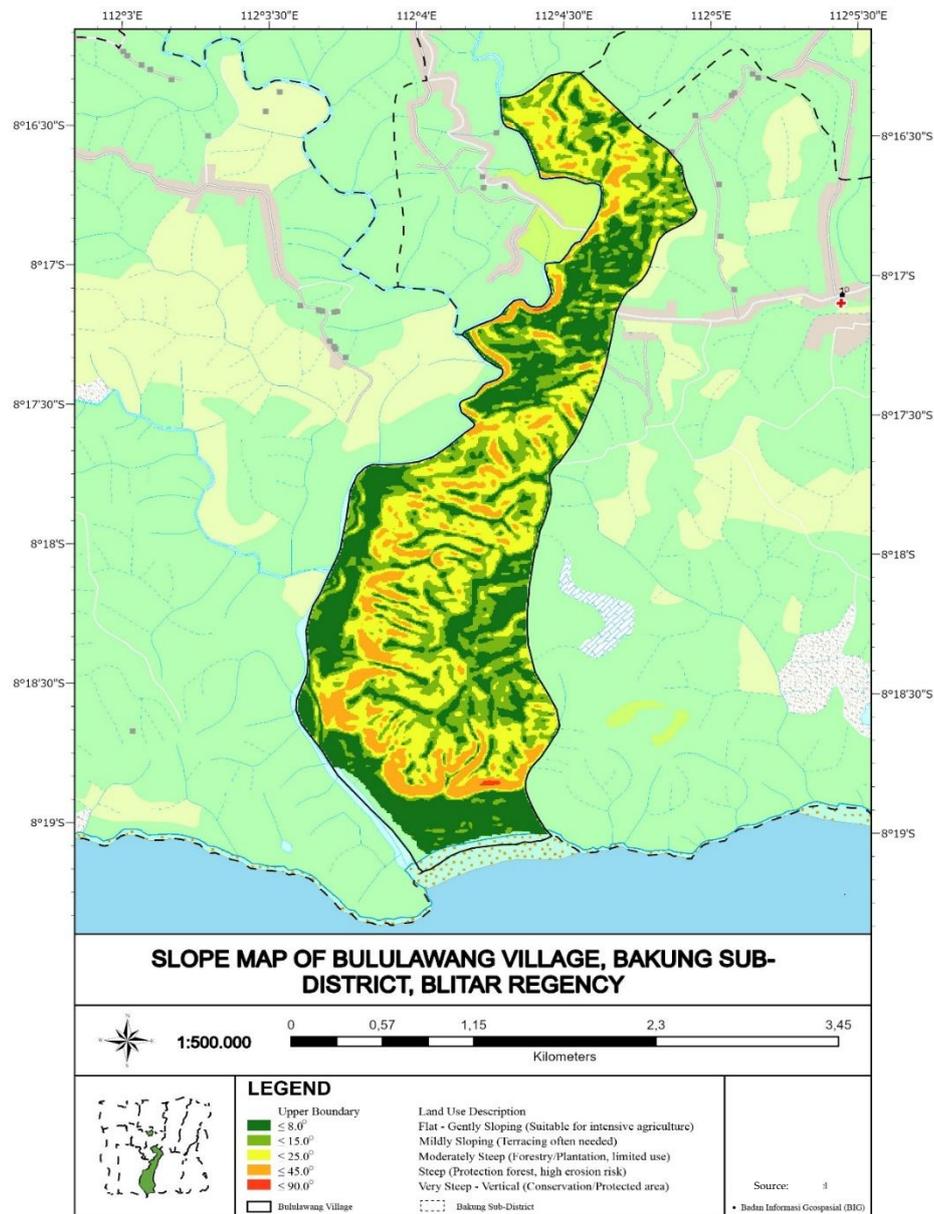
Fig. 1. Slope map of Bululawang Village, Bakung Sub-District, Blitar Regency

The slope classification derived from National Self-Reliant Village Program data reveals the geomorphological heterogeneity of Bululawang Village. While the northern and coastal sectors are dominated by gently sloping land, the central spine of the area transitions into moderately steep to steep gradients, precisely the terrain traversed by the participating teachers.

Table 2. Slope classification of Bululawang Village (Derived from National Self-Reliant Village Program data)

Class	Upper boundary (°)	Land use description
1	≤ 8.0	Flat–gently sloping, suitable for intensive agriculture and settlement areas.
2	≤ 15.0	Mildly sloping, terracing often required for stable cultivation.
3	≤ 25.0	Moderately steep, primarily used for plantation or mixed forestry with limited accessibility.
4	≤ 45.0	Steep, generally reserved for protection forest due to high erosion risk.
5	≤ 90.0	Very steep to vertical, unsuitable for development; designated for conservation or natural vegetation.

These gradients do not merely describe elevation differences; they translate directly into the rhythms of teachers' daily endurance. The steeper the terrain, the heavier the psychological and logistical burden—turning topography into a lived measure of resilience. This condition exemplifies how the interaction between mental, physical, and social realities produces the space of the school (Lefebvre, 1992). Teacher B experiences stress from spatial isolation on the Forest Road, where the threat is rooted in remoteness and security concerns. Conversely, Teacher C reports no clear external route stress; instead, the environmental pressure is displaced and internalized to the school environment, resulting in different coping mechanisms. These findings confirm that daily spatial conditions are not neutral but are actively risk-prone geographies that redefine the general pressure faced by teachers.

Fig. 2. Story mapping Teacher A

Configuration of spatialized stress reveals a broader epistemic issue: the invisibility of geography in educational policy. When stress is consistently anchored in spatial risk, the profession itself becomes a geography of exposure. Teachers do not merely experience stress; they inhabit it. Their commute is a corridor where state failure and personal endurance converge. The absence of infrastructural security—muddy slopes, isolation, impassable roads—is not only a logistical problem but a symbolic manifestation of how educational systems disregard spatial justice.

Distinction between the conceived and the lived becomes a moral boundary. For Teacher A, every turn of the muddy road materializes institutional neglect; for Teacher B, the forest path translates isolation into bodily vigilance. Teacher C's apparent absence of

route-based stress does not negate spatial struggle, it internalizes it, relocating precarity into institutional walls. This internalization is the quiet violence of uneven geography: the farther the state withdraws, the deeper the individual internalizes adaptation.

From a Lefebvrian way, such conditions demonstrate that space, when left unacknowledged, governs silently. The production of risked geographies, therefore, is not accidental but structural produced by policy designs that imagine education without place. The lived consequences are profound: fatigue becomes cartographic, drawn along routes of neglect and improvisation. Teachers, in this sense, become both the surveyors and the casualties of uneven modernity. While topographical risk is most visible in Teacher A's route, the subtle geography of endurance becomes clearer when viewed through Teacher B's experience. Her daily movement from the sub-district center to the school traces a quieter but equally demanding terrain, one marked by forest roads, a narrow bridge, and small nodes of reflection and recovery.
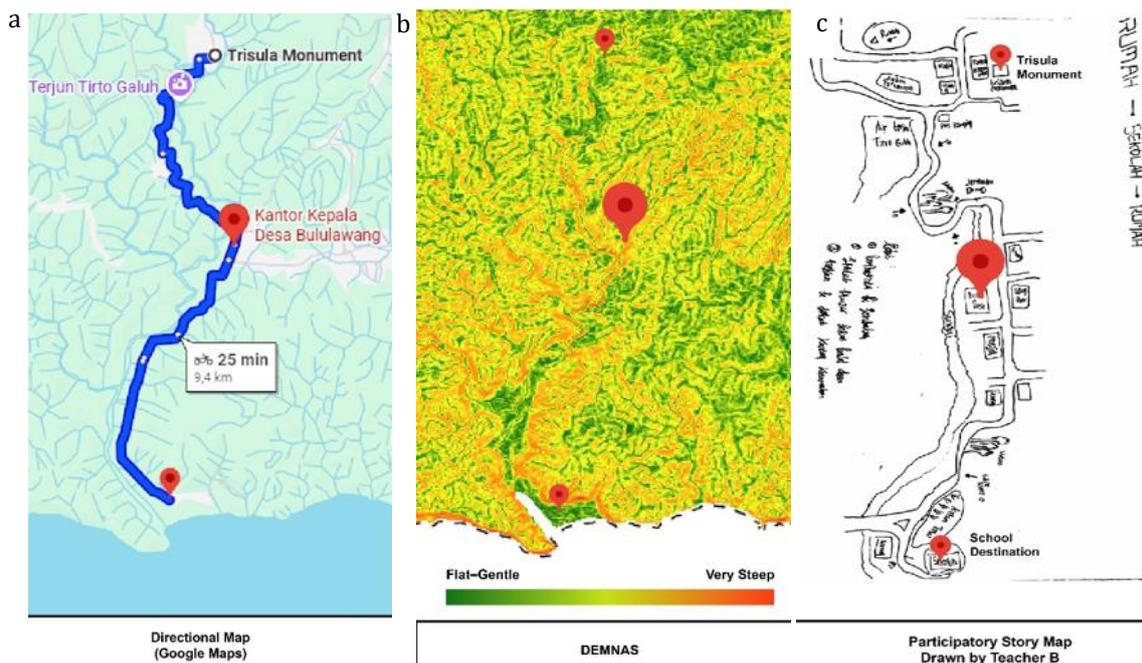

Fig. 3. Integrated spatial context: Direction, slope, and participatory mapping (a) Directional route from the Bakung Sub-district Office to SD Negeri 2 Bululawang (Google Maps base layer); (b) Slope terrain derived from National Self-Reliant Village Program data; (c) Participatory story map drawn by Teacher B during the cultural-mapping session

Figures 3a, 3b, and 3c together illustrate how everyday movement through forest roads, bridges, and open fields becomes both a spatial and emotional negotiation. The bridge and mosque, repeatedly mentioned by Teacher B as resting and reflective points, emerge as micro-anchors of stability within an uneven geography of work. Beyond these physical routes, what sustains Teacher B and the others is not only endurance of distance but the creation of emotional landmarks along the way. These lived geographies of feeling are explored in the following section.

3.2 Emotional geography

Emotional Geography defines the purposeful practices by which teachers map and utilize spaces for managing their emotional well-being and constructing resilience, thus defining their lived space (espace vécu). These spaces function as essential anchors for psychological recovery. Teacher A utilizes natural and visual escape; distant views of hilltops and the sea serve as key nodes for mental decompression. This spontaneous use of non-school space as a sanctuary is crucial for maintaining energy. Teacher B anchors resilience in material and spiritual certainty at the district mosque. The mosque's reliable

water supply provides a powerful symbol of stability, as stability and cohesion are crucial elements of social spatiality. Furthermore, the bridge and sugarcane plantation act as designated reflection/stopover points, necessary for mental transition. Teacher C manages stress through hedonic compensation, transforming the coastal route into a space for consumption and leisure (buying food, watching boats). These deliberate spatial choices demonstrate that resilience is achieved through a conscious mapping of emotional needs onto accessible physical and social spaces (O'Brien, 2023). The lived space is the area where human desires are formulated and realized, often conflicting with the conceived space of institutions (O'Brien, 2023).

Fig. 4. Story mapping Teacher B

Emotional geographies traced in these maps indicate not just coping but composition deliberate crafting of affective continuity. Each teacher converts a fragment of the physical world into an affective resource. This conversion is neither random nor naïve; it represents what de Certeau would call the art of making do. Emotional geographies, therefore, are aesthetic acts, subtle rearrangements of meaning that transform exhaustion into rhythm. The sea view, the mosque water, the food stall, these are not leisure markers but affective infrastructures. They allow the teacher to reassert authorship over their day, to punctuate institutional rhythm with personal cadence. The act of pausing by the bridge or watching fishermen is pedagogical in its own right: it teaches the body how to endure. These gestures are the hidden syllabus of resilience.

This pattern also exposes the porous boundary between professional and personal space. Emotional repair no longer happens outside work but within its geography. Teachers curate micro-sanctuaries inside a demanding system, showing that emotional survival is spatially mediated. In rural Indonesia, where institutional support is weak, such micro-geographies become the real welfare architecturem improvised, invisible, yet indispensable. When policy speaks of teacher well-being, it often assumes psychological interventions detached from geography. The findings here demand an alternative logic: well-being as spatial right. Resilience cannot be abstracted from where it occurs. Teachers' emotional geographies are thus quiet protests against the placelessness of reform, they insist that to care for teachers is to care for the spaces they inhabit.

3.3 Social practices counter-mapping

This final theme analyzes the intentional Social Practices—or micro-tactics—teachers employ to negotiate the rigid spatial and temporal structures imposed by the educational system (strategy). These tactics prioritize personal psychological needs over systemic efficiency (Saltmarsh, 2015). Teacher A performs a preci*se* spatial deviation (taking the back route to "see the cows"). This is a direct tactic that prioritizes improving mental balance over the expected 'efficient' route, serving as a subtle rebellion against the totalizing strategies of institutions (de Certeau, 2025; Saltmarsh, 2015). This action contributes directly to the production of their own resilient space (lived space) (Karplus & Meir, 2013). Teacher B's tactic focuses on social-informational capital: utilizing mealtimes at the Warung Kecamatan to "Seek Tactical Information". This converts a basic biological need into a strategic professional practice for navigating administrative uncertainties, illustrating the negotiation of power through space (Massey, 2005). Finally, Teacher C engages in a consumptive tactic—buying food for family on the way home—to integrate professional and domestic roles. This practice utilizes the commute as a platform for achieving role balance. These diverse practices demonstrate the teachers' creative agency in shaping the meaning of their professional world through spatial intervention, proving that space is always being made and remains unfinished (Massey, 2005).
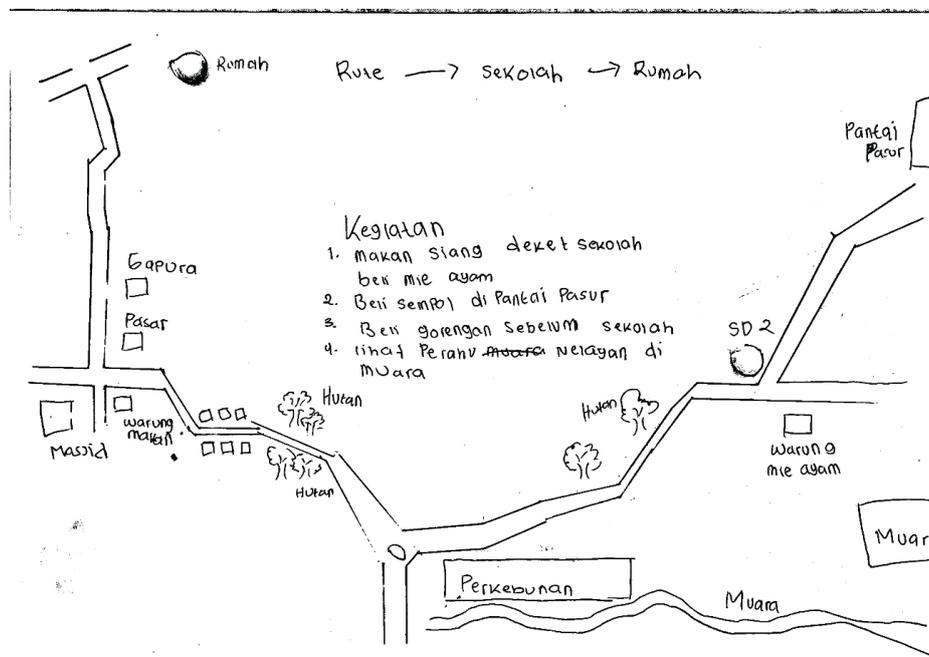
Fig. 5. Story mapping Teacher C

Counter-mapping, in this sense, is a pedagogical act. Through their everyday tactics, teachers redraw the coordinates of professional life, challenging the monopoly of official maps. The back road, the mosque, the warung, the market — these are informal cartographies of agency, each representing a spatial correction to institutional blindness. The teacher's hand, tracing an alternate route or noting a resting point, reclaims authorship over the geography of work. What emerges from these practices is a quiet form of spatial literacy. Teachers read space tactically: they know which routes absorb fatigue, which corners offer visibility, and which nodes enable survival. This literacy is neither taught nor rewarded, yet it sustains the profession where policy cannot. It is, in essence, a counter-pedagogy — teaching the system how it truly functions through the grammar of movement and pause.

De Certeau reminds that tactics thrive in the cracks of power. Here, each teacher's deviation from the "efficient route" is a moral argument: that efficiency without empathy is failure. Counter-mapping is therefore not defiance for its own sake but the spatial

articulation of care. It embodies what Massey called "space as the sphere of co-existence" — a place where teachers reconcile institutional demands with lived ethics. By situating these acts as cartographies of care, this study reframes resilience not as inner strength but as spatial authorship. Teachers make the map live. Each detour, prayer, and purchase is a re-inscription of meaning onto terrain that official systems have flattened. Their tactics, far from trivial, constitute a moral geography — one drawn not with instruments but with endurance.

3.4 Materiality and symbolic production of resilience

Final thematic synthesis explores the explicit mechanism by which teachers actively achieve resilience: the transformation of ordinary material elements into powerful symbolic anchors. This process confirms that professional sustainability is fundamentally a geographical endeavor. As summarized in Table 2, these localized symbolic productions serve to neutralize the systemic pressures stemming from generalized policy flux and infrastructural neglect, showcasing the creative agency embedded within the teachers' lived space. Synthesizing theme explicitly analyzes how the material components of the environment are transformed into symbolic anchors that facilitate resilience, deepening the understanding of the teachers' lived space. Lefebvre emphasized that representational spaces (spaces imbued with symbolism and imagination) are crucial to social life, often existing in opposition to institutional conceived space. This process of symbolic spatial production confirms that professional sustainability is fundamentally a geographical endeavor (Helfenbein, 2021).

Table 3. Symbolic transformation of materiality in teachers' lived space

Material/spatial element	Symbolic anchor (Significance)	Countering institutional failure
Back Route (Teacher A)	Mental Balance/Neutralization of Social Exhaustion.	Abstract efficiency and social pressure from reform fatigue.
Inexhaustible Water Supply at Mosque (Teacher B)	Symbol of Stability and Material Resilience.	Policy flux and generalized scarcity; state's failure to deliver reliable resources.
Warung/Coastal Stalls (Teacher B & C)	Social Node for Role Integration and Rhythmic Interruption.	Bureaucratic noise and rigid institutional time; separation of professional/domestic roles.

The "cows" (Teacher A) are a key example of this symbolic production: a non-human, non-work element that is intentionally sought out to re-establish mental balance, symbolically neutralizing the social exhaustion caused by the system. This deliberate spatial tactic, which prioritizes the intimate psychological need over institutional efficiency, forms a core part of the teacher's emotional geography (Hargreaves, 2001). Furthermore, the "inexhaustible water supply" at the sub-district mosque (Teacher B) transforms a simple material resource into a profound symbol of stability and material resilience, countering the generalized scarcity (Schmied, 2022). This symbolic transformation is crucial for sustaining emotional well-being, especially for rural teachers facing high levels of burnout (Sun et al., 2025; Werang et al., 2025). Similarly, the district food stall (Teacher B) and the coastal stalls (Teacher C) are materially modest, yet they are elevated to highly significant social nodes—spaces that interrupt the systemic rhythm of work and facilitate vital social and familial integration (Bravaglieri et al., 2025; Cresswell, 2015).

Concept of spatial justice is also implicitly woven into these symbolic productions. When the state (representing conceived space) fails to deliver essential geographical equity—be it safe infrastructure (Teacher A) or reliable resources (Teacher B)—teachers must actively produce their own form of justice and sustainability. The mosque's water supply, elevated to a symbol of reliability, provides a spiritual and material anchor of

certainty in an environment marked by policy flux and material scarcity. This reliance on locally imbued symbolism and communal nodes (warung, mosque) highlights a powerful critique: resilience is not a policy outcome, but a local, geographical achievement contingent upon the teacher's creative ability to invest ordinary materiality with extraordinary personal significance. This bottom-up, geographical work is essential for professional sustainability, especially when teachers must improvise daily to overcome deficiencies caused by mismatched policy

The symbolic transformation observed in these practices reveals a subtle but powerful form of spatial authorship. Teachers, often constrained by institutional order, reclaim fragments of their environment as sites of meaning. The cow by the roadside, the steady flow of mosque water, the market stall at dusk, these are not merely incidental images. They are thresholds where exhaustion is reconfigured into continuity. Through these gestures, space itself becomes pedagogy: it teaches endurance, adaptation, and belonging. The lived space of teachers is, therefore, neither fixed nor purely personal. It is relational, emerging from constant negotiation with material, social, and emotional forces. Each adaptation redefines what counts as professional space. To linger at the warung may appear trivial to outsiders, yet within the rhythm of teaching life it marks a crucial act of balance, a re-centering of self amid bureaucratic noise. In this sense, resilience is not the heroic overcoming of adversity but the quiet maintenance of presence within uneven space.

This interpretation extends the notion of resilience beyond psychological vocabulary. It is not merely coping but composing; not surviving in spite of conditions but working through them materially. Teachers do not escape precarity, they shape it into form. The slope that delays them becomes a temporal marker, the sea view a breathing point, the daily crossing a ritual. Each repetition binds them to place even as they resist being defined by it. What emerges is a spatial ethics of endurance, one that values presence over productivity and care over compliance. Such ethics is inherently geographical. It locates the moral dimension of teaching not in policy but in place. The school becomes an ecology rather than an institution, a site where multiple temporalities meet: bureaucratic, communal, natural. Teachers navigate these layers through micro-decisions that rarely enter policy discussions but determine the sustainability of their labor. This study, by foregrounding these decisions, reveals that the struggle for teacher well-being is inseparable from the geography of their work.

The continuous practice of Cultural Mapping allows this symbolic transformation to be visualized (Garrett-Petts, 2018; Ghilardi, 2017). This process confirms that the act of teaching is a spatially embedded profession (Thrift, 2008), where ordinary matter is imbued with extraordinary personal significance. Story Maps effectively formalize the teachers' lived experience, translating ephemeral emotional geographies into tangible spatial data. This process confirms that the act of teaching is a spatially embedded profession, where teachers are active agents in the production of educational space, constantly negotiating constraints and redefining meaning through spatial interventions. The symbolic landscape they produce—the collection of cows, mosques, and food stalls—is crucial for achieving professional sustainability, providing the essential *lived space* necessary to counterbalance the immense.

3.5 The teacher's spatial literacy and the demand for geographical equity

Accumulated evidence of micro-tactics (3.3) and symbolic transformation (3.4) reveals a sophisticated form of spatial expertise: The Teacher's Spatial Literacy. Not only does this literacy consist of knowing one's place, but also of perceiving how place itself participates in the moral and affective economy of teaching. It is not a literacy that can be taught through manuals or measured through standards, for it grows in the friction between institutional expectations and lived conditions. What teachers read, in this sense, is not text but terrain—the slope that shifts after the rain, the path that collapses when policy ignores geography. Such acts of reading are not metaphorical but practical, ethical, and embodied, for they involve the continuous negotiation between what is given and what can still be transformed.

Regarding of spatial literacy in education, however, is to acknowledge a long-standing absence. Even in the past fifty years, research on spatial thinking has progressed by only a modest eight percent, signaling how deeply the educational field has neglected the spatial dimensions of thought (De Queiroz, 2021). The irony lies in the fact that every act of learning is already spatial—situated in classrooms, corridors, and communities—yet the spatial imagination of teachers remains peripheral. A comprehensive exploration of geography education should, therefore, include spatial thinking not as a decorative supplement but as a foundation for justice itself (Hammar et al., 2021). For teachers, this means understanding that inequity does not only arise from differences in funding or curriculum but also from how geography distributes fatigue, opportunity, and care. The uneven presence of infrastructure and digital accessibility in rural schools, for instance, further complicates this landscape, shaping how teachers and students interact with knowledge and with each other (Prayitno et al., 2024). In such conditions, spatial literacy becomes an act of adaptation as much as resistance, a way of reading constraints while refusing to be entirely defined by them. This reinterpretation of literacy is summarized in Table 3, contrasting conventional notions of spatial competence with the ethical and situated understanding that emerged in this study.

Table 4. Spatial literacy in educational contexts

Aspect	Traditional view	Teacher's spatial literacy (This study)
Knowledge	Abstract understanding of space	Embodied and local knowledge of place
Skill	Mapping, measuring, planning	Reading terrain, adapting, negotiating constraints
Ethics	Neutral use of geography	Awareness of spatial inequality and positional responsibility
Outcome	Cognitive competence	Geographical equity and professional attunement

Such a recognition repositions teachers as geographical agents, whose sensitivity to place can reconfigure the very idea of professional competence. Through the utilization of Earthcomm learning, for instance, students are provided opportunities to develop spatial thinking abilities through analysis, comprehension, and representation (Aliman et al., 2024). Yet what emerges from the teachers in this study is not a derivative skill but an organic orientation—an attunement that grows from inhabiting fragile environments. Components of place and the sites from which we know are crucial to positionality, especially in educational research conducted with and for communities (Germinaro, 2025). To overlook this is to perpetuate a view of teaching detached from its own geography. Spatial literacy, then, becomes not merely an academic competence but an ethical stance, one that insists on geographical equity: that the worth of teaching should never be measured apart from the landscapes that sustain it. The same inequity that separates access to knowledge also mirrors the broader separation between those who shape educational policies and those who live within their spatial consequences—a separation not unlike the distance between centers of human decision-making and the regions most affected by them (Kasperson & Dow, 1991). The relational dynamics between spatial inequity and pedagogical response are illustrated in Figure 4, depicting how teachers' spatial literacy operates within unequal geographies.

Table 3 and Figure 4 consolidate the argument that spatial literacy is not merely cognitive but ecological, emerging precisely where inequity and moral awareness intersect. It is ecological because it locates teaching within networks of material and affective dependency—roads, rains, walls, screens—that both enable and constrain the act of learning. To cultivate such literacy is to recognize that knowledge travels unevenly, that each gesture of teaching is conditioned by geography as much as by policy. This awareness redefines the moral horizon of pedagogy: equity is no longer confined to distribution of resources but extends to the right to inhabit educational space with dignity. Teacher who reads terrain, therefore, does more than adapt; they perform a subtle act of justice, rebalancing what geography has rendered unequal. In this sense, spatial literacy is the

ground upon which any pursuit of geographical equity must stand—an ethical intelligence grown not from abstraction but from endurance, movement, and care for the places that teach us how to teach.
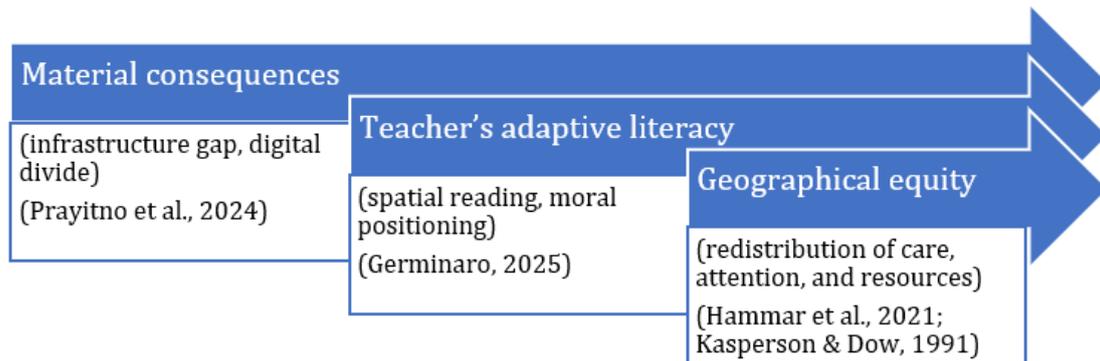

Fig. 6. Spatial inequity and pedagogical response

4. Conclusions

Research confirms that teachers are active agents who constantly develop sophisticated micro-geographies of resilience through intentional practices. The findings revealed a clear divergence in coping mechanisms dictated by geographical context: stress stemming from infrastructural precarity is countered by visual and natural escape, while stress rooted in social isolation is countered by seeking social-informational capital. Crucially, this resilience relies heavily on the symbolic production of space, transforming ordinary objects and routes into powerful anchors that sustain the teachers' lived space against the systemic pressures of institutional strategy. The primary conclusion for policymakers is that top-down educational reform remains unsustainable if it fails to acknowledge and integrate the heterogeneous spatial realities and localized adaptive practices documented in this study.Despite the richness of its qualitative data, this research is subject to certain limitations that must be acknowledged.

Given the use of an intensive contrastive case study design with a limited sample size (N=3), the findings, while interpretively deep, are not intended for statistical generalization across the broader Indonesian educational landscape. Furthermore, the reliance on self-generated Story Maps and narrative interviews captures the lived experience of the teachers, but lacks the crucial counter-perspective of institutional actors. Future research should address these limitations by incorporating a larger, more diverse sample and by directly contrasting the strategic spatial practices of school administrators against the tactical practices of teachers, providing a more comprehensive view of power dynamics and resource allocation within educational space. The integration of slope analysis reaffirms that teacher resilience cannot be separated from geography's material conditions; spatial justice begins with acknowledging the terrain teachers must literally traverse.

This study underscores that teacher well-being in Indonesia cannot be separated from geography. Policies often assume that all schools exist on an even surface, overlooking the spatial inequities that quietly structure exhaustion and resilience. Teachers work not only within institutions but across terrains: roads, slopes, and distances that shape their daily endurance. Recognizing this spatial reality demands a shift from administrative-centered reform toward spatially responsive policy, where mobility, access, and environmental context are treated as integral dimensions of teacher welfare. Accordingly, educational planning should integrate geospatial analysis into teacher deployment, resource allocation, and school accessibility assessments. Terrain data such as National Self-Reliant Village Program can inform realistic zoning and workload distribution, ensuring that distance and topography are accounted for in welfare schemes. More broadly, policy must acknowledge teachers as spatial agents whose labor produces not just learning outcomes but lived educational space. Addressing their well-being, therefore, begins with achieving geographical equity, a form of justice that values where and how teachers endure.

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Author Contribution

The author conceptualized the study, designed methodology, collected and analyzed data, interpreted findings, and wrote the manuscript, ensuring integrity and coherence of the research.

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