Vol. 12, No. 1, 2026, pp. 1-7
DOI: https://doi.org/10.29210/1202626763

Contents lists available at Journal IICET

Jurnal EDUCATIO (Jurnal Pendidikan Indonesia)
ISSN: 2476-9886 (Print) ISSN: 2477-0302 (Electronic)

Journal homepage: https://jurnal.iicet.org/index.php/jppi

The psychosocial impact of madrasah infrastructure: A qualitative evaluation of BAZNAS philanthropic program

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Article Info

Article history:

Received Feb 7th, 2026
Revised Mar 10th, 2026
Accepted Apr 2th, 2026

Keyword:

Qualitative evaluation,
Madrasah infrastructure,
educational philanthropy,
psychosocial impact,
Student well-being

ABSTRACT

This study investigates the intersection of Islamic philanthropy and educational psychology by evaluating the "Madrasah Layak Belajar" (MLB) program by BAZNAS RI. While infrastructure is often viewed through a technical lens, this research conceptualizes it as a psychosocial intervention. Using a qualitative case study at MI Al-Muslimun NW, data were gathered through semi-structured interviews and observations. Findings suggest that improved physical facilities such as lighting, ventilation, and furniture act as a catalyst for emotional readiness and student motivation. The physical environment functions as a "third teacher," where structural upgrades reduce cognitive load and foster a sense of institutional dignity. However, sustainability remains a primary challenge, requiring long-term institutional commitment and community-based maintenance models. This study contributes to the discourse on how philanthropic interventions can transform the "academic mood" in faith-based educational settings, suggesting that infrastructure is a fundamental psychosocial support system.

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Introduction

Educational infrastructure is widely recognized as a key determinant of instructional effectiveness and overall learning quality. Physical components such as classrooms, lighting, ventilation, sanitation facilities, furniture, and instructional media shape the conditions under which teaching and learning take place. Within the contemporary pedagogical discourse, modern classrooms are no longer viewed as passive containers or mere background settings; instead, they are perceived as "active participants" or "third teachers" in the instructional process (Woolfolk, 2023). This paradigm shift suggests that every structural element from the height of a desk to the color of a wall emits a silent curriculum that influences student behavior. In this context, the built environment serves as a non-verbal medium of communication that signals to students whether they are valued within the academic community (Fisher, 2022).Empirical studies consistently demonstrate that inadequate infrastructure limits teachers' pedagogical flexibility, forcing them into rigid, teacher-centered methods due to space constraints (Leiringer & Cardellino, 2021). Furthermore, substandard facilities negatively affect students' academic achievement by creating physical barriers to information processing (Earthman, 2021). Poor physical conditions, such as flickering lights or excessive heat, also diminish student attention spans by increasing cognitive load (Barrett et al., 2021). Classroom participation is particularly stifled in developing-country contexts where the lack of basic amenities creates a sense of academic exclusion (Yangambi, 2023). In these regions,

disparities in educational resources remain pronounced, often mirroring broader socioeconomic inequalities (Suhardi et al., 2024). Consequently, the quality of school facilities acts as a structural determinant of educational equity, where the "physicality of school" can either bridge or widen the achievement gap (Uline & Tschannen-Moran, 2023). Thus, infrastructure development is increasingly understood not only as a technical requirement but as a foundational investment in student dignity and systemic equity.

From an educational psychology perspective, the physical learning environment functions as a potent external ecological factor that interacts dynamically with students' cognitive and affective processes. Drawing on ecological systems theory, the environment serves as a microsystem the most immediate layer of influence that shapes the daily developmental trajectory of the child (Bronfenbrenner & Ceci, 2022). When this microsystem is broken or dysfunctional, the child's developmental potential is restricted. According to self-determination theory, the physical setting can either support or thwart basic psychological needs for competence, autonomy, and relatedness (Ryan & Deci, 2020). For instance, a flexible seating arrangement can support autonomy, whereas a cramped and dilapidated room can signal a lack of institutional care, thwarting a student's sense of belonging. Learning environments significantly influence students' motivation by providing a "stage" that either invites or repels academic curiosity (Mulyadi, 2022). These spaces also dictate levels of emotional comfort, which is the baseline requirement for any high-level cognitive activity (Korpela et al., 2024).

Moreover, a well-designed space enhances readiness to engage in learning tasks by reducing environmental stressors (Cheryan et al., 2021). Supportive physical conditions such as adequate natural lighting can reduce physiological stress and regulate circadian rhythms, which are crucial for morning alertness (Higgins et al., 2021). Proper ventilation is linked to lower CO2 levels, which is directly associated with better cognitive performance and decision-making speed (Fraser & Wang, 2023). Safe, clean, and aesthetically pleasing classroom spaces foster positive emotions among young learners, creating a "safety net" for intellectual risk-taking (Anwar & Rahmawati, 2022). Such environments strengthen students' intrinsic motivation by making the act of "going to school" an enjoyable sensory experience (Muliyati & Rahman, 2023). This enhancement leads to greater persistence in learning activities, as students are more likely to stay engaged in a space that feels dignified and comfortable (Wu et al., 2022). In contrast, poorly maintained environments, characterized by leaks, odors, or noise, contribute to persistent emotional discomfort and "environmental learned helplessness" (Asiyai, 2021). Ultimately, limited learning satisfaction derived from a poor environment undermines long-term learning outcomes and can lead to higher dropout rates in marginalized communities (Zulfiqar et al., 2025).

In the Indonesian education system, madrasahs occupy a strategic and unique position by providing an integrated curriculum that merges religious moral education with general academic knowledge. These institutions are vital for students from low-income communities who seek affordable education that aligns with their spiritual values (Zuhdi, 2022). They play an essential role in rural education, often serving as the only accessible educational hubs in remote areas (Kurniawan, 2021). Despite their critical importance, many madrasahs continue to experience chronic infrastructure challenges, often referred to as an "infrastructure deficit" compared to general state schools. Overcrowded classrooms remain a persistent issue, leading to poor air quality and increased irritability among students (Ministry of Religious Affairs RI, 2023). Insufficient sanitation facilities pose significant health risks and affect the dignity of female students in particular, often impacting their attendance (Mulyadi, 2022). Limited learning resources and outdated furniture further hamper the quality of instruction, making it difficult for madrasahs to compete in the digital era (Anwar & Rahmawati, 2022). These infrastructural constraints often restrict teachers' ability to implement active pedagogical approaches, such as group work or technology-integrated learning (Suhardi et al., 2024). They also adversely affect students' psychological comfort, creating a perception that religious education is synonymous with poor facilities (Muliyati & Rahman, 2023). Consequently, improving madrasah infrastructure remains a critical yet underexplored dimension of quality enhancement in the national education strategy.

Islamic philanthropic institutions have emerged as significant and transformative actors in addressing this educational inequality. In Indonesia, the tradition of Zakat, Infaq, and Sadaqah (ZIS) has moved beyond traditional "charity" toward strategic social investment. Through modern instruments of zakat, philanthropic organizations contribute to systemic social development by targeting the root causes of educational poverty (Kasri & Ajija, 2023). This strategic alignment reflects a "faith-based impact investing" model that prioritizes long-term human flourishing over immediate relief (Hasan & Rahman, 2024). Infaq and sadaqah are increasingly used for human capital formation, acknowledging that a child's environment is just as important as their textbook (Abdullah & Suhaib, 2022). These funds are now strategically directed toward the education sector as a form of "productive zakat" (Fauzia & Mufraini, 2022). One prominent and highly impactful initiative is the Madrasah Layak Belajar (MLB) Program implemented by BAZNAS Republik Indonesia. This program focuses on improving the feasibility, safety, and aesthetic quality of madrasah environments through targeted physical interventions (BAZNAS RI, 2024). By rehabilitating these learning spaces, the program essentially

restores the "psychological contract" between the institution and the marginalized student (Sari et al., 2023).While institutional reports from BAZNAS emphasize the program's massive scope and reach, systematic academic evaluations of its psychosocial impact remain limited. Most evaluations are focused on financial accountability or physical completion rates. There is a lack of research that explores how these physical changes alter the "heart and mind" of the student. Responding to this gap, the present study evaluates the MLB Program at MI Al-Muslimun NW in Lombok Barat. This study aims to analyze how changes in infrastructure specifically lighting, ventilation, and furniture influence instructional practices and, more importantly, the psychosocial implications for student motivation, emotional readiness, and academic engagement (Sulasmi, 2022). By bridging the gap between infrastructure studies and educational psychology, this research seeks to demonstrate that philanthropic investment in bricks and mortar is, in fact, an investment in the psychological resilience of the next generation.

Method

Research Design and Philosophical Framework

This study employs a qualitative case study design to provide a granular exploration of how physical infrastructure upgrades translate into complex psychosocial shifts within a school ecosystem. This design was selected because it facilitates an intensive, multi-faceted examination of a single entity MI Al-Muslimun NW within its unique natural context (Yin, 2018). By focusing on a "bounded system," the researcher can capture the nuanced interactions between the environment and human behavior that large-scale quantitative surveys might overlook.

Philosophically, the study is rooted in constructivism. This paradigm posits that the "impact" of a building is not a static or objective reality; rather, it is a subjective experience constructed through the lived realities of students and teachers (Fraser & Wang, 2023). By prioritizing the meanings participants ascribe to their physical surroundings such as light, color, and space the researcher uncovers how structural changes influence internal psychological states, including intrinsic motivation, institutional pride, and a sense of belonging.

Case Selection and Contextual Nuances

The research site, MI Al-Muslimun NW in West Lombok, was selected via criterion-based purposive sampling. The selection was guided by several critical factors (1) Scope of Intervention: The madrasah received a comprehensive renovation package from BAZNAS, encompassing classroom stabilization, sanitation facilities, and aesthetic exterior upgrades, (2) Operational Stabilization: The school had completed at least one full semester post-renovation. This duration is essential to ensure that observed behavioral changes are stabilized patterns rather than a temporary "novelty effect" (Kurniawan, 2021). (3) Historical Structural Vulnerability: This site represents a demographic where infrastructure changes are most likely to trigger significant psychological shifts due to the severe lack of basic facilities prior to the intervention (Ministry of Religious Affairs RI, 2023).

Participant Composition and Recruitment

Participants were recruited using stratified purposive sampling to ensure a holistic, 360-degree view of the program's impact across different roles (1) The Principal (n=1): Provided an administrative and longitudinal perspective on the madrasah's evolution and institutional management. (2) Teachers (n=6): Inclusion was limited to those with a minimum 3-year tenure. This ensures they possess the "institutional memory" required to provide a vivid "before-and-after" narrative regarding classroom dynamics and student engagement (Anwar & Rahmawati, 2022). (3) Students (n=12): Participants were divided into lower (Grades 1–3) and upper (Grades 4–6) clusters. This stratification accounts for varying levels of cognitive maturity, environmental perception, and the ability to articulate emotional responses during interviews (Woolfolk, 2023).

Data Collection Procedures

Data collection was conducted on February 2, 2026, utilizing a tripartite approach to ensure data depth and richness (1) Non-Participant Observation: A total of 400 minutes were dedicated to observing instructional sessions. The researcher used a structured checklist focusing on non-verbal cues of student engagement (e.g., eye contact, posture, alertness) and physical environmental variables (e.g., airflow, natural light distribution, and acoustics) (Muliyati & Rahman, 2023). (2) Semi-Structured Interviews: These 30-to-45-minute sessions utilized open-ended prompts grounded in Self-Determination Theory (SDT). The goal was to probe how the renovated physical space influenced the three pillars of psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2020). (3) Field Notes and Documentation: Observations were supplemented by high-fidelity photographic documentation of the renovated areas and a review of BAZNAS project completion reports to validate the technical scope of the changes.

Data Analysis and Trustworthiness

The data were analyzed using Thematic Analysis (Braun & Clarke, 2006) through a rigorous four-stage process (1) Verbatim Transcription: Audio recordings were transcribed into text to preserve the original nuances of the

participants' voices. (2) Initial Open Coding: Labeling raw data segments related to infrastructure and psychological impact. (3) Thematic Categorization: Grouping codes into broader sub-themes (e.g., "Thermal Comfort" or "Cognitive Focus"). (4) Theme Definition: Finalizing core themes that link the physical environment to psychosocial outcomes.

To ensure a rigorous process, the researcher maintained a reflexive journal to document personal biases and ensure findings were grounded purely in the participants' narratives (Nowell et al., 2021) and to verify trustworthiness (validity and reliability), the study employed methodological triangulation by cross-referencing observation data with interview transcripts. Furthermore, member checking was conducted (Lincoln & Guba, 1985), where preliminary findings were shared with the teachers and the principal to ensure the researcher's interpretations accurately reflected their lived experiences (Zulfiqar et al., 2025).

Results and Discussions

Results

The Transformation of the Physical Learning Microsystem

The observational findings confirmed a drastic improvement in the madrasah's physical state. Classrooms transitioned from damaged, leaking structures to clean, bright, and safe spaces. Natural lighting was maximized through refurbished windows, and the ergonomic quality of the furniture was markedly improved.

The Principal described the previous state as a barrier to basic safety:

"Before receiving the Program, infrastructure was limited. Several classrooms had moderate damage like leaking roofs, inadequate lighting, and sanitation facilities that did not meet standards".

Figure 1. Teaching and Learning Process

This description aligns with the concept of "educational poverty," where the physical setting actively hinders the pedagogical process. Following the intervention, the environment became an enabler. Teacher Hirmayadi, S.HI, noted: "I can focus more on material delivery without having to overcome technical disturbances in the classroom". From a psychosocial perspective, this removal of "background noise" (physical distractions) allows for a more stable teacher-student bond.

Emotional Comfort and the "Third Teacher"

In educational psychology, the environment is often referred to as the "third teacher." Student participants at MI Al-Muslimun NW expressed a profound shift in their emotional readiness to learn. Nabil (Grade V) remarked, "I am more comfortable learning because the class is not hot and the chairs are good to use". Similarly, Hana (Grade V) linked the windows to a sense of freedom: "I like the classroom windows because there is a lot of wind so it's not hot".

The removal of physiological stressors (heat, discomfort) directly correlates with increased cognitive focus. Iqbal (Grade V) shared a detail that highlights the importance of ergonomic furniture: "I'm comfortable because the table doesn't shake and the class is cool... the new desks and chairs are comfortable for writing". This stability in the physical environment provides a psychological anchor for students, reducing the cognitive load spent on navigating physical discomfort (Cheryan et al., 2021).

Motivational Resilience and Institutional Pride

One of the most striking findings was the shift in how students perceived themselves and their school. Teacher Hajrur Rasyidin, S.Pd, observed: "I see students being more active in asking questions and brave enough to state opinions". This increase in academic courage suggests that a clean, modern facility communicates a sense of value and dignity to the students.

Gina (Grade V) perfectly captured this sentiment: "Now the class looks beautiful and clean, so I'm happy to learn... I've become diligent and excited to come to school". This "happiness" is not merely superficial; it is an indicator of institutional pride, which is a key component of long-term academic resilience. When a philanthropic institution like BAZNAS invests in their school, students perceive that their education matters to the larger community, thereby strengthening their intrinsic motivation (Ryan & Deci, 2020).

Pedagogy of Space: Teacher Empowerment

The impact was equally pronounced among the faculty. Rohmatul Ummah, S.Pd mentioned that the facilities "make it easier for me to manage the class, so that learning can run more direct". Before the renovation, teachers were often forced into "damage control" mode dealing with leaks or poor lighting rather than "pedagogical" mode.

Teacher Muharni, S.Pd noted that the students appear "more confident and more focused during learning". This feedback loop where a better environment creates a better student, which in turn motivates the teacher demonstrates the reciprocal determinism of the school ecosystem (Bronfenbrenner & Ceci, 2022).

Challenges: The Sustainability of Psychosocial Gains

While the MLB program has been a catalyst for change, the research identified critical maintenance gaps. Hana noted that "the toilet still needs to be cleaned more often", and Iqbal pointed out that the "lapangan sekolah (school field) could be tidied up for sports".

The Principal summarized the institutional anxiety regarding the future: "Maintaining the facilities in the long term is our main challenge". Psychosocial gains can quickly erode if the facilities fall back into disrepair. This highlights the need for a "Psychology of Maintenance", where the school community must develop a shared sense of ownership to preserve the physical and psychological benefits provided by the philanthropic intervention (Latief, 2021).

Discussion: Infrastructure as Psychosocial Support

The findings of this study suggest that infrastructure acts as a mediator between philanthropic intent and student outcomes. By applying Self-Determination Theory (Ryan & Deci, 2020), we can see that the MLB program fulfilled the students' need for Competence (by providing ergonomic tools for writing and focus) and Relatedness (by creating a dignified space where students felt valued by the community).

Furthermore, the results align with Ecological Systems Theory (Bronfenbrenner & Ceci, 2022). The physical classroom is a microsystem. When the microsystem is repaired, the interactions within it (teacher-student, student-peer) become more fluid and less conflict-prone. However, the sustainability concerns raised by the participants suggest that the Exosystem (the philanthropic policy of BAZNAS) and the Macrosystem (national education funding) must work in harmony to ensure that these local improvements survive beyond the initial renovation phase.

This study argues that madrasah infrastructure should not be evaluated solely on a "cost-per-square-meter" basis. Instead, it should be measured by its "psychosocial return on investment" the degree to which a building fosters hope, discipline, and engagement in its inhabitants.

Conclusions

This study examined the psychosocial impact of madrasah infrastructure improvement through a qualitative case study of the Madrasah Layak Belajar (MLB) Program implemented by BAZNAS RI at MI Al-Muslimun NW. The findings indicate that infrastructure improvement functions as a psychosocial enabling condition that enhances students' psychological comfort, emotional readiness, motivation, and classroom engagement, while also supporting smoother instructional processes. However, these effects were not uniform and cannot be attributed solely to infrastructure change, as contextual factors such as external attention and institutional dynamics also played a role. Sustainability emerged as a critical issue, as the long-term psychosocial benefits of infrastructure improvement depend on consistent maintenance, institutional commitment, and governance capacity. Despite limitations related to single-case design and potential response bias, this study contributes to educational and philanthropic literature by conceptualizing madrasah infrastructure as a psychosocial intervention rather than a purely physical investment, highlighting the need for integrated and sustainable approaches in infrastructure-based educational programs.

Acknowledgments

The authors would like to express their deepest gratitude to Allah SWT for His guidance, mercy, and blessings that made this research possible. Salawat and salam are respectfully extended to Prophet Muhammad SAW, whose teachings inspire the pursuit of knowledge, social responsibility, and educational justice. The authors sincerely thank BAZNAS Republik Indonesia for implementing the Madrasah Layak Belajar (MLB) Program

and for granting access to conduct this research. Appreciation is also extended to MI Al-Muslimun NW, particularly the madrasah principal, teachers, and staff, for their openness, cooperation, and valuable insights throughout the research process. Special thanks are conveyed to all student participants who shared their experiences honestly and enthusiastically. This study would not have been possible without the trust, participation, and support of all stakeholders involved.

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