Indonesian Journal of Educational Development (IJED)
Volume 6, Issue 4, 2026, pp. 1233-1247
ISSN: 2722-1059 (Online); ISSN: 2722-3671 (Print)
DOI: https://doi.org/10.59672/ijed.v6i4.6050

Evaluating the alignment between needs and the availability of physical education, sports, and health facilities

Rifki Abrori*)[1], Sudarwan Danim[2], Azizatul Khairi[3]
[1]SMA Negeri 14 Bengkulu Utara, Bengkulu, Indonesia; abroririfki55@gmail.com
[2]Universitas Bengkulu, Bengkulu, Indonesia; sudarwan@unib.ac.id
[3]Universitas Bengkulu, Bengkulu, Indonesia; akhairi@unib.ac.id
*)Corresponding author: Rifki Abrori; E-mail addresses: abroririfki55@gmail.com

Article Info

Article history:
Received January 17, 2026
Revised January 28, 2026
Accepted January 29, 2026
Available online February 15, 2026

Keywords: Discrepancy evaluation, Management, Physical education facilities, Sports and health

Abstract. This study examines the alignment between ideal needs and the actual availability of Physical Education, Sports, and Health (PESH) facilities at the secondary school level. Adequate PESH facilities are essential to support safe, effective, and student-centered learning; however, many schools, particularly in resource-limited contexts, face persistent infrastructural constraints. The urgency of this research lies in the need to move beyond descriptive assessments of facility availability toward an evaluative understanding of gaps and policy responses. The study aims to identify the ideal PESH facility needs, assess actual facility conditions, analyze discrepancies between standards and practice, and examine school-level policies to address these gaps. A qualitative descriptive approach was employed using the Discrepancy Evaluation Model (DEM). The research population consisted of school leaders, PESH teachers, and facility management staff, with participants selected through purposive sampling based on their roles and involvement in facility management. Data were collected through observations, interviews, and document analysis. The findings reveal low to moderate alignment between ideal standards and actual provision, with significant gaps in facility quantity, quality, supporting infrastructure, and maintenance systems. Despite these limitations, PESH learning continues through adaptive instructional strategies and collaboration with external stakeholders. The study recommends strengthening needs-based facility planning, establishing systematic maintenance procedures, and developing specific school-level policies to support sustainable PESH facility development. The study concludes that improving PESH learning quality requires systematic facility planning and targeted policy frameworks to progressively reduce discrepancies and ensure sustainable educational development.

Introduction

Physical Education, Sports, and Health (PESH) play a fundamental role in contemporary education systems, as they contribute not only to students' physical fitness and motor skill development but also to the development of character traits such as discipline, cooperation, responsibility, and awareness of a healthy lifestyle. In recent years, international educational discourse has increasingly emphasized the holistic development of learners, positioning physical education as a strategic medium for balancing cognitive, affective, and psychomotor domains in line with sustainable education goals (Baena-Morales et al., 2023; A. Singh & Parmar, 2023; Syaukani et al., 2023). Despite this growing emphasis, disparities in learning conditions across schools remain evident,

particularly in relation to the availability and adequacy of supporting facilities. Consequently, the effectiveness of PESH learning has become a critical indicator of school quality and student well-being.

The quality of PESH instruction is closely linked to the availability and adequacy of educational facilities and infrastructure. Facilities such as sports equipment, courts, and supporting spaces serve as essential learning media that enable teachers to implement practice-based, student-centered instructional strategies. Recent studies indicate that insufficient or substandard facilities constrain instructional variation, reduce student engagement in physical activity, and limit opportunities for skill development (Baena-Morales et al., 2023; A. Singh & Parmar, 2023; P. Singh, 2024). Conversely, well-maintained and adequately provided facilities are associated with higher student motivation, increased participation, and more effective learning outcomes in physical education contexts (Brown et al., 2024; Guo et al., 2023). Ideally, PESH facilities should meet minimum national standards and align with curriculum demands to ensure safe, inclusive, and effective learning environments.

From a policy perspective, many education systems have established minimum standards for school facilities to ensure equitable access to quality learning environments. However, empirical evidence suggests that a substantial gap often exists between policy standards and actual conditions at the school level, particularly in under-resourced and rural educational settings. Field-based studies report that limited funding, inadequate maintenance systems, and weak managerial planning frequently result in facilities that are incomplete, damaged, or insufficient in quantity (Dahuri et al., 2025; Lebea et al., 2024). Importantly, the mere presence of facilities does not automatically translate into effective learning if they are not aligned with instructional needs or supported by appropriate management policies (Singun, 2025). These findings indicate an urgent need for evaluative research that moves beyond availability to examine the alignment between needs and provision.

Within this broader context, faith-based secondary schools represent a unique educational setting that often faces distinct challenges related to infrastructure provision. Differences in institutional governance, funding mechanisms, and community support may influence the quantity, quality, and sustainability of PESH facilities. Recent studies conducted at the secondary school level indicate that while some schools report moderate availability of sports equipment, critical infrastructure such as proper sports fields and supporting spaces frequently remains inadequate (Davidson & Singer, 2024; Merxhani & Ibraimi, 2024; Timba et al., 2025). Empirical evidence from the field further shows that these limitations directly affect teachers' instructional choices and reduce students' opportunities for active and meaningful participation in PESH learning.

Despite the growing body of literature on PESH facilities, several research gaps remain evident. First, many existing studies focus predominantly on descriptive assessments of facility availability or physical condition, without systematically examining the alignment between actual provision and ideal or needs-based standards (Bandeira et al., 2022; Gilic et al., 2022; Rocliffe et al., 2023). Second, prior research has largely concentrated on general public schools in urban contexts, leaving faith-based and rural secondary schools underrepresented in empirical investigations (Greeven et al., 2023; Martín-Rodríguez & Madrigal-Cerezo, 2025; Poulitsa et al., 2025). Third, limited attention has been given to school-level policy responses and strategic management practices aimed at addressing gaps between needs and the availability of PESH facilities (Khanmoradi & Abbas, 2024; Sedai & Shahi, 2025). As a result, current evidence provides insufficient guidance for schools seeking to translate facility standards into sustainable management practices.

The novelty of this study lies in its application of a needs-based Discrepancy Evaluation Model (DEM) to examine not only the condition of PESH facilities but also the degree of alignment between ideal standards, actual provision, and school-level policy responses. By integrating facility assessment with policy and management analysis, this study offers a more comprehensive evaluative framework than prior descriptive studies. This approach enables the identification of priority areas for intervention and supports evidence-based decision-making for facility development in resource-limited school contexts.

Addressing these gaps requires a needs-based analytical approach that systematically compares ideal facility requirements with existing conditions and examines institutional strategies for provision, maintenance, and sustainability. Such an approach not only identifies infrastructural shortcomings but also generates practical insights for school leaders and policymakers seeking to improve the quality and equity of PESH learning environments. By integrating facility assessment with policy analysis, research can offer a more comprehensive perspective on infrastructure readiness and instructional effectiveness.

Based on the issues outlined above, this study aims to evaluate the alignment between the needs and the availability of Physical Education, Sports, and Health facilities at the secondary school level. Specifically, the study seeks to address the following research questions: (1) What are the ideal needs for PESH facilities based on instructional and educational standards? (2) What is the current condition and level of availability of PESH facilities? (3) To what extent does a gap exist between ideal needs and actual provision? and (4) What school-level policies are implemented to address this gap? Accordingly, the objectives of this study are to analyze the ideal needs of PESH facilities, examine the current state of facility provision, identify gaps between needs and availability, and explore school policies to overcome infrastructural limitations. This study is guided by the assumption that significant discrepancies exist between ideal facility standards and actual conditions, and that strategic school policies play a crucial role in mitigating these gaps.

Method

Research Design

This study employed a qualitative descriptive evaluation design grounded in the Discrepancy Evaluation Model (DEM). The qualitative approach was selected to obtain a comprehensive, contextualized understanding of how Physical Education, Sports, and Health (PESH) facilities are planned, provided, and managed in real school settings. This design allowed the researcher to capture factual and experiential data directly from stakeholders without manipulating variables, thereby reflecting natural conditions as they occur in practice (Karagöl & Adigüzel, 2022).

The Discrepancy Evaluation Model served as the primary framework for systematically comparing ideal facility needs, as defined by educational standards and instructional requirements, with actual field conditions. Through this comparison, the study identified gaps between expected and existing conditions and examined institutional responses to these discrepancies. The qualitative orientation of DEM in this study emphasized meaning, process, and policy interpretation rather than numerical generalization (Divayana et al., 2023).

Research Site

The research was conducted at MTs Tarbiyah Islamiyah Kerkap, North Bengkulu Regency, Indonesia, an Islamic lower secondary school operating in a rural context. The site was purposively selected because it is a faith-based educational institution facing resource constraints while maintaining compulsory PESH instruction. Data collection was carried out over a two-month period, from December 2025 to January 2026. This duration enabled prolonged engagement in the

research setting, allowing the researcher to conduct repeated observations, in-depth interviews, and document reviews to ensure data richness and contextual accuracy.

Research Subjects and Sampling Technique

The research subjects were three key stakeholders directly involved in the management and implementation of PESH learning. Subjects were selected using purposive sampling, based on their roles, responsibilities, and access to relevant information. The participants included: (1) The school principal, who acts as the main policy-maker and holds authority over planning, budgeting, and decision-making related to school facilities; (2) The vice principal for facilities and infrastructure, who is responsible for the management, maintenance, and procurement of school facilities; (3) The Physical Education, Sports, and Health teacher, who directly utilizes facilities in instructional practice and understands operational challenges in the learning process. These participants were considered key informants because of their daily involvement in facility planning, utilization, and policy implementation related to PESH learning.

Evaluation Framework and Research Procedures

The research procedure follows the sequential stages of the Discrepancy Evaluation Model, adapted to a qualitative descriptive context. The research procedure is shown in Image 1.

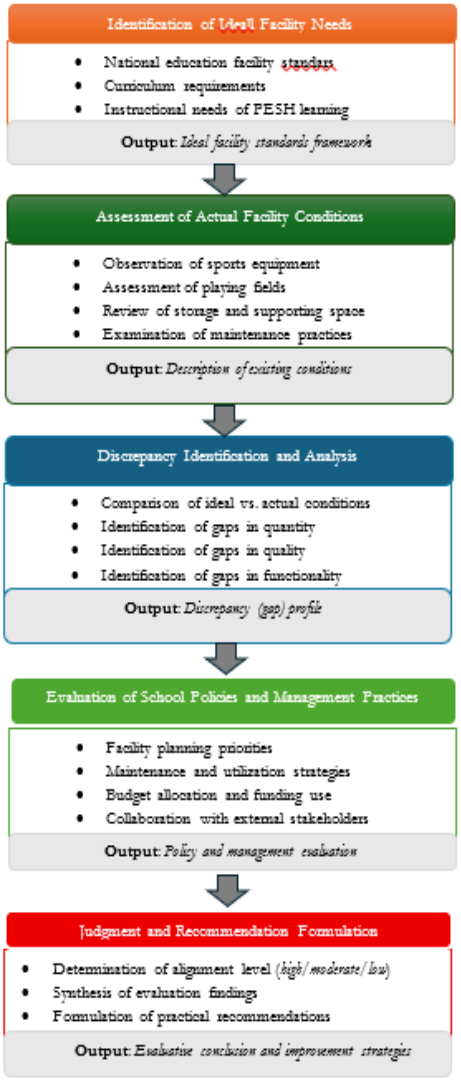

Image 1. Research procedure

Image 1 illustrates the sequential research procedure employed in this study based on the Discrepancy Evaluation Model (DEM). The process begins by identifying the ideal Physical Education, Sports, and Health (PESH) facility needs, derived from national education facility standards, curriculum requirements, and instructional demands, resulting in an ideal facility standards framework. The second stage involves assessing actual facility conditions by observing sports equipment, evaluating playing fields, reviewing storage and supporting spaces, and examining maintenance practices to obtain a comprehensive description of existing conditions. Subsequently, ideal standards and actual conditions are systematically compared to identify discrepancies in terms of quantity, quality, and functionality, producing a clear gap profile. The fourth stage focuses on evaluating school policies and management practices related to facility planning priorities, maintenance and utilization strategies, budget allocation, and collaboration with external stakeholders. Finally, the procedure culminates in the formulation of judgment and recommendations, where the level of alignment between needs and availability is determined, evaluative findings are synthesized, and practical recommendations are proposed to improve the provision and management of PESH facilities.

Data Collection Techniques

Data were collected using multiple techniques to ensure depth and methodological triangulation: (1) structured observation, (2) semi-structured interviews, (3) facility inventory analysis, and (4) document analysis. Each data collection technique was supported by a specific research instrument developed in accordance with national PESH facility standards and relevant literature. The observation instrument consisted of a structured checklist covering sports fields, equipment availability, equipment condition, supporting facilities, and maintenance practices. The interview instrument was developed as an interview guide focusing on facility planning, policy decision-making, budgeting priorities, maintenance systems, and perceived challenges. The document analysis instrument included a review grid used to examine school planning documents, inventory lists, and maintenance records related to PESH facilities. Table 1 presents the instrument grid linking data sources, techniques, instruments, and evaluation aspects.

Table 1. Data Collection Techniques and Instrument Grid

Data Source	Technique	Instrument	Evaluation Focus
PESH facilities	Observation	Observation checklist	Availability, condition, safety
School leaders	Interview	Interview guide	Policy, planning, management
Facility records	Document analysis	Document review grid	Inventory, maintenance
Equipment data	Inventory analysis	Inventory checklist	Quantity and usability

Instrument validity was ensured through expert judgment involving two academics in educational management and one PESH practitioner, who reviewed the instruments for content relevance, clarity, and alignment with research objectives. Reliability was strengthened through repeated observations and consistency checks across data sources. The credibility of the interview data was enhanced through triangulation and member checking. The researcher acted as the primary instrument and was directly involved in all stages of data collection to ensure consistency and contextual sensitivity (Leavy & Patricia, 2017).

Data Analysis Technique

Quantitative data from observations and inventories were analyzed using descriptive statistics, including frequencies and percentages, to assess levels of facility availability and conformity with ideal standards. These results were used to calculate discrepancy scores between ideal needs and actual conditions. Qualitative data from interviews and documents were analyzed using thematic analysis, focusing on patterns related to policy implementation, facility management, and strategic responses to infrastructural limitations. The final conclusions were drawn through integrative

analysis, combining quantitative discrepancy findings with qualitative insights to produce a comprehensive evaluative interpretation (Sugiyono, 2022).

Evaluative Criteria for Alignment Assessment

To ensure systematic and transparent evaluation, this study used predefined criteria to classify the level of alignment between ideal facility needs and actual availability. Establishing these criteria is essential in evaluation research, as it enables objective interpretation of findings and reduces subjectivity in drawing conclusions. By translating qualitative observations into categorical alignment levels, the study provides a clear basis for identifying the severity of discrepancies and prioritizing areas requiring intervention. The alignment levels were determined by comparing the extent to which existing PESH facilities conformed to ideal standards derived from instructional and regulatory requirements.

Table 2. Criteria for Evaluating Alignment Between Needs and Availability of PESH Facilities

Alignment Level	Degree of Conformity with Ideal Standards	Interpretive Meaning
High Alignment	80–100% conformity	Facilities largely meet ideal standards and adequately support PESH learning
Moderate Alignment	60–79% conformity	Facilities partially meet standards but show notable gaps requiring improvement
Low Alignment	< 60% conformity	Facilities do not meet minimum standards and significantly hinder effective PESH learning

After applying these criteria, each evaluated aspect of PESH facilities was assigned an alignment level based on the degree of conformity observed. These categories were instrumental in distinguishing between minor shortcomings and critical deficiencies. High alignment indicates that facilities are generally adequate and functionally supportive, whereas moderate alignment reflects partial adequacy accompanied by structural or operational limitations. Low alignment signifies substantial discrepancies that may compromise safety, instructional quality, and student participation. Consequently, this classification framework not only facilitated consistent evaluation but also informed policy-oriented recommendations to improve facility provision, management, and long-term sustainability. To ensure the credibility of findings, several validation strategies were applied. Data triangulation was achieved by comparing results from observations, interviews, and document analysis. Member checking was conducted by sharing summarized findings with key informants to confirm accuracy and interpretation. Additionally, prolonged engagement in the research setting enhanced contextual understanding and reduced interpretive bias.

Results and Discussion

This section presents and discusses the study's findings based on the Discrepancy Evaluation Model (DEM). The discussion is organized sequentially in accordance with the research objectives, focusing on (1) ideal facility needs, (2) actual facility conditions, (3) discrepancies between needs and availability, and (4) school-level policies addressing these gaps.

Ideal Needs for Physical Education, Sports, and Health Facilities

The evaluation of ideal Physical Education, Sports, and Health (PESH) facility needs was conducted by referring to national education facility standards, curriculum requirements, and instructional demands at the secondary school level (Ma'mun et al., 2025; Vinko et al., 2024). The findings indicate that ideal PESH facilities should include adequate sports fields with standardized dimensions and clear markings, sufficient sports and athletic equipment, supporting facilities such as changing rooms and storage spaces, and a structured, preventive maintenance system. These

components collectively form the foundational infrastructure for ensuring safe, effective, and student-centered PESH learning experiences.

Field data show that sports fields are the most fundamental yet unmet requirement for achieving ideal facility standards. National guidelines stipulate that school sports fields should provide sufficient space to accommodate various physical activities safely and simultaneously. However, the findings indicate that the available field capacity is not proportional to student numbers, resulting in scheduling constraints and limited practice opportunities. This condition necessitates instructional modifications and reliance on external facilities, underscoring that adequate field provision is not merely a physical requirement but a pedagogical prerequisite. Similar conclusions have been drawn in recent studies emphasizing that insufficient or substandard sports fields significantly reduce instructional effectiveness and student engagement in physical education (Hudson et al., 2025; Lombo & Subban, 2024; Samuel et al., 2024).

Beyond field availability, the ideal provision of sports and athletic equipment constitutes a critical requirement for effective PESH instruction. The findings demonstrate that ideal conditions require sufficient quantities of standard equipment, such as balls, mats, nets, cones, and athletic tools, to allow all students to participate actively without excessive rotation or waiting time. However, discrepancies between ideal needs and actual availability suggest that equipment shortages constrain instructional variety and limit skill acquisition. These results align with Mustafa (2023); Khofifah et al., 2025, who argue that equipment sufficiency directly influences learning outcomes by enabling repetitive practice, fair participation, and accurate assessment of motor skills.

The ideal needs analysis also highlights the importance of supporting facilities, particularly changing rooms and storage spaces. Changing rooms are essential to ensure student comfort, privacy, hygiene, and discipline during PESH activities. Their absence forces classrooms to be used for unintended purposes, disrupting instructional flow and reducing students' readiness for physical activity. Similarly, the lack of dedicated storage facilities undermines effective equipment management, accelerates equipment deterioration, and complicates inventory control. Previous studies confirm that inadequate supporting infrastructure weakens overall facility management and reduces the sustainability of physical education programs (Ayoko et al., 2023; Wang et al., 2024).

Furthermore, ideal PESH facility provision extends beyond physical assets to include a systematic maintenance framework. The findings indicate that ideal conditions require scheduled inspections, routine maintenance, and preventive repairs to ensure the facility's long-term usability and safety. In contrast, reliance on incidental maintenance increases equipment failure rates and shortens asset lifespans. This gap highlights that maintenance systems are integral components of facility adequacy rather than secondary administrative concerns. Tross et al (2024) similarly emphasize that maintenance planning is a key determinant of facility effectiveness and instructional continuity in physical education.

In addition to confirming existing theoretical frameworks, this study extends prior research by operationalizing "ideal needs" not merely as regulatory compliance, but as functional requirements directly linked to instructional feasibility, safety, and equity. Unlike earlier studies that emphasize facility presence alone, this research demonstrates that ideal PESH facilities must be evaluated in relation to class size, curriculum load, and instructional frequency. This perspective provides a more pedagogically grounded interpretation of facility adequacy.

Actual Conditions and Availability of PESH Facilities

The assessment of actual facility conditions indicates that the availability of Physical Education, Sports, and Health (PESH) facilities remains substantially below ideal standards. While the school

possesses several types of basic sports equipment, both the quantity and quality of these resources are insufficient to support effective and inclusive learning. A significant proportion of equipment, such as balls, mats, and athletic tools, shows visible signs of wear and damage, limiting their usability and requiring students to share equipment during practice sessions. This situation reduces active participation time and limits teachers' ability to implement varied, simultaneous instructional activities.

The findings further reveal that the school relies on a single multifunctional sports field to accommodate all PESH activities across grade levels. Although this field remains usable, its physical condition does not fully meet safety and instructional standards. Uneven surfaces, faded or absent field markings, and limited space necessitate instructional modifications and rotational scheduling among classes. Consequently, several learning activities, particularly those that require larger movement areas, such as athletics and team sports, cannot be implemented in accordance with curriculum expectations. To mitigate these constraints, the school frequently depends on external facilities through cooperation with the local community and neighboring schools, indicating that internal infrastructure alone is insufficient to support routine PESH instruction.

Supporting infrastructure also presents notable limitations. The absence of dedicated storage facilities has resulted in sports equipment being kept in non-specialized spaces, such as teachers' rooms, where proper organization, ventilation, and protection are not ensured. This condition complicates inventory management, increases the risk of equipment damage, and hinders systematic monitoring of facility conditions. Similarly, the lack of designated changing rooms forces students to use classrooms to change clothes, disrupting instructional flow, reducing student comfort, and raising concerns about privacy and hygiene. These deficiencies suggest that the current provision of facilities does not adequately address essential non-instructional elements that support effective PESH learning environments.

In terms of facility management, maintenance practices are largely reactive rather than preventive. Equipment repairs and facility improvements are typically conducted only after damage becomes apparent or when functionality is significantly compromised. These findings indicate that the current availability of PESH facilities does not provide sufficient support for optimal learning conditions. Instructional quality is maintained primarily through teacher adaptation, equipment modification, and reliance on external facilities rather than through adequate internal infrastructure. This pattern mirrors findings from previous studies conducted in rural and resource-constrained school contexts, where limited facilities and weak maintenance systems restrict instructional effectiveness and student engagement (Ayoko et al., 2023; Tross et al., 2024; Wang et al., 2024). Consequently, improving PESH learning outcomes requires not only increasing facility availability but also strengthening management systems to ensure sustainability, safety, and equitable access for all students.

Compared with previous studies in similar rural, resource-limited contexts, the findings reinforce the persistent pattern of inadequate infrastructure and also reveal a distinctive reliance on teacher-led adaptation and on external facility use. While prior research often reports facility shortages descriptively, this study highlights how such shortages systematically reshape instructional design, reduce time-on-task, and limit curriculum fidelity. This contribution deepens the understanding of how infrastructural constraints translate into pedagogical consequences.

Discrepancies Between Ideal Needs and Actual Provision

A core contribution of this study lies in identifying discrepancies between ideal facility needs and actual conditions. The DEM analysis revealed substantial gaps in the quantity, quality, and functionality of facilities. While instructional standards require diverse and sufficient equipment,

the existing facilities were insufficient to meet these expectations. The absence of supporting infrastructure further widened these gaps, particularly in facility organization and sustainability.

Table 3. Summarizes the results of the DEM-based evaluation

Evaluation Aspect	Ideal Condition	Actual Condition	Discrepancy Identified	Alignment Level
Sports equipment availability	Adequate quantity and variety aligned with the curriculum	Limited and partially damaged equipment	Insufficient quantity and variety	Low
Equipment condition and safety	Functional and safe for repeated use	Some equipment is worn and unsafe	Quality below standard	Moderate
Sports field and practice area	Properly maintained field with clear markings	Single multifunctional field with poor condition	Inadequate space and quality	Low
Supporting facilities	Dedicated storage and supporting spaces	No specific storage facilities	Infrastructure incomplete	Low
Maintenance system	Planned and routine maintenance	Irregular and reactive maintenance	Lack of systematic maintenance	Moderate
Facility utilization	Optimal use to support varied instruction	Limited use due to facility constraints	Instructional potential underutilized	Moderate
School policy support	Specific and structured facility policies	General policies with limited focus on PESH	Policy direction insufficient	Moderate

The findings demonstrate a low to moderate level of alignment between ideal needs and actual availability. These results differ from some studies reporting moderate to adequate facility conditions in urban schools, which may be explained by contextual differences in funding access, institutional support, and geographical location (Hosseini et al., 2022; Papaioannou et al., 2023). A central contribution of this study is its systematic identification of discrepancies between ideal facility needs and the actual provision of Physical Education, Sports, and Health (PESH) facilities. Using the Discrepancy Evaluation Model (DEM), the evaluation revealed pronounced gaps across multiple dimensions, including facility quantity, physical quality, functional adequacy, and management sustainability. These discrepancies indicate that existing facilities are not yet capable of fully supporting curriculum-based PESH instruction in a safe, inclusive, and pedagogically effective manner. Regarding sports equipment availability, the ideal condition is having sufficient quantities and a diverse range of equipment so that all students can engage simultaneously in learning activities.

Discrepancies are also evident in the condition and safety of equipment. While some equipment remains functional, a significant portion shows wear due to intensive use and lack of routine maintenance. This condition limits the execution of technically correct movements and raises safety concerns during practice. Consequently, the alignment level in this aspect is classified as moderate, reflecting partial fulfillment of standards but insufficient quality assurance for sustained instructional use. The sports field and practice area are among the most critical points of discrepancy. Ideally, PESH instruction requires fields that are adequately sized and well-maintained, with clear markings to ensure safety and instructional accuracy. In contrast, the school relies on a single multifunctional field with uneven surfaces and faded markings that must be shared by all classes.

From a management perspective, discrepancies are also observed in the maintenance system. While ideal standards emphasize planned and preventive maintenance, actual practices remain largely reactive and incidental (Widana et al., 2019). Maintenance activities are typically undertaken only after damage occurs, reflecting budget constraints and the absence of standard operating procedures. Although this approach allows facilities to remain minimally functional, it fails to ensure long-term sustainability, resulting in a moderate level of alignment. Facility utilization further illustrates the impact of these discrepancies. Ideally, facilities should enable varied instructional strategies and full student engagement. In reality, limited equipment and space constrain instructional design, leading to underutilization of pedagogical potential. Teachers compensate through instructional adaptations and equipment modifications; however, such strategies cannot fully substitute for adequate infrastructure. This condition reflects a moderate alignment level, as utilization is optimized within constraints rather than supported by ideal facilities. School policy support also demonstrates a moderate discrepancy. Although the school has general policies related to infrastructure management, these policies are not specifically oriented toward PESH facility development. Decision-making is largely driven by immediate needs and budget availability rather than long-term facility planning. While such policies reflect pragmatic adaptation to resource limitations, they fall short of providing a strategic framework for sustained facility improvement. Overall, the DEM-based evaluation demonstrates a predominantly low to moderate level of alignment between ideal needs and actual availability of PESH facilities (Table 1). These findings contrast with studies conducted in urban or better resourced school contexts that report moderate to adequate facility provision (Qin et al., 2025; Sharifi et al., 2024). The divergence can be attributed to contextual factors such as limited access to funding, geographical constraints, and the institutional characteristics of rural religious schools.

The novelty of this study lies in its application of the Discrepancy Evaluation Model as an integrative analytical lens that simultaneously captures physical conditions, instructional implications, and policy responses. Unlike descriptive audits of facilities, the DEM-based approach enables structured judgment regarding alignment levels, thereby identifying which deficiencies pose critical risks to learning quality and which can be mitigated through management interventions. The findings also demonstrate that discrepancies are not uniform across facility components. While deficiencies in sports fields and supporting infrastructure represent structural constraints requiring long-term investment, gaps in equipment condition and utilization reflect managerial and maintenance issues that are potentially addressable through policy reform and procedural standardization. This layered interpretation advances existing literature by distinguishing between structural and managerial sources of facility inadequacy.

School Level Policies and Management Practices

The evaluation of school-level policies and management practices indicates that the school has implemented general facility management policies; however, these policies are not yet specifically structured to support systematic development of Physical Education, Sports, and Health (PESH) facilities. Facilities decisions are primarily guided by short-term priorities and immediate instructional needs rather than by a comprehensive, long-term development plan. This condition reflects a pragmatic response to resource constraints but simultaneously limits the school's capacity to progressively align facility provision with national standards (Pangestu & Wijayanti, 2025).

Empirical findings show that facility planning is largely based on periodic needs identification conducted through observation and semester-based evaluations involving school leaders, PESH teachers, and facility coordinators. This needs-based planning approach enables the school to recognize the most urgent facility shortages, such as damaged sports equipment, limited athletic tools, and inadequate practice areas. Despite these limitations, the school demonstrates adaptive management practices through collaboration with external stakeholders. Partnerships with local

government units and neighboring schools allow temporary access to sports fields and practice facilities that are unavailable internally. These collaborations help ensure continuity of PESH instruction, particularly for activities requiring larger or better-maintained spaces. However, such collaborations are largely informal and situational rather than institutionalized through long-term agreements or structured policy mechanisms. As a result, reliance on external facilities introduces scheduling constraints and reduces instructional flexibility, reinforcing the school's dependence on external support rather than internal capacity building. Teacher involvement emerges as a critical compensatory mechanism within the existing policy environment. PESH teachers actively adapt instructional strategies, modify equipment, and even develop alternative learning tools to overcome facility limitations. While these practices reflect professional commitment and pedagogical creativity, they also highlight a structural dependency on individual initiative. These findings reinforce earlier research emphasizing that facility availability alone is insufficient to ensure effective physical education without strong policy direction and strategic management (Jago et al., 2023; Li et al., 2024; Valiyev et al., 2025).

From a DEM perspective, the gap between ideal policy conditions characterized by structured planning, preventive maintenance, and dedicated facility governance and actual school practices represents a moderate level of alignment. While the school has demonstrated awareness of facility needs and has adopted adaptive strategies to mitigate limitations, these efforts remain insufficient to systematically reduce discrepancies between ideal standards and actual provision. Therefore, strengthening school-level policy frameworks, formalizing stakeholder collaboration, and integrating PESH facilities into long-term development planning are essential steps to improve alignment and ensure sustainable facility management.

From a theoretical standpoint, these findings support institutional management theories emphasizing that infrastructure effectiveness depends not only on material provision but also on governance capacity. Practically, the results suggest that without explicit PESH-oriented facility policies, schools tend to rely excessively on teacher improvisation, which may sustain learning in the short term but undermines consistency, safety, and sustainability. The study further reveals that informal external collaboration, while beneficial, cannot substitute for internal capacity development. This insight refines earlier research by demonstrating that external partnerships are most effective when embedded within formal policy frameworks rather than functioning as ad hoc solutions.

The findings have several important implications. Theoretically, this study contributes to the literature by demonstrating the utility of DEM in evaluating educational facilities as dynamic systems rather than static assets. It provides a structured framework for linking infrastructure, pedagogy, and policy, thereby enriching evaluation research in physical education. In practice, the results indicate that improving PESH learning quality requires a shift from reactive facility management to preventive maintenance systems, dedicated policy frameworks, and needs-based long-term planning. Schools are encouraged to institutionalize maintenance schedules, formalize external partnerships, and integrate PESH facilities into strategic development plans. This study is not without limitations. The research was conducted in a single faith-based rural secondary school, which limits generalizability. In addition, the qualitative design prioritizes depth over breadth and does not capture longitudinal changes in facility development. Future studies are recommended to employ multi-site or mixed-method designs to examine alignment patterns across different school contexts and to assess the long-term impact of policy interventions on facility sustainability.

Conclusion

This study concludes that the alignment between ideal needs and the actual availability of Physical Education, Sports, and Health (PESH) facilities at the secondary school level is still insufficient to fully support effective learning. The findings indicate that while PESH instruction continues to be implemented, it is largely sustained through adaptive practices rather than through facilities that meet instructional and safety standards. Discrepancies were evident across key aspects, including the adequacy of sports fields, the availability and condition of equipment, supporting infrastructure, maintenance practices, and policy orientation, demonstrating that existing facilities have not yet been optimally aligned with curriculum demands. By applying the Discrepancy Evaluation Model, this study provides an integrated understanding of how facility gaps are shaped by both resource limitations and management and policy practices. Based on these findings, it is recommended that schools adopt needs-based, long-term facility planning, institutionalize preventive maintenance systems, develop specific policy frameworks for PESH facilities, and strengthen collaboration with relevant stakeholders to ensure sustainable and equitable support for quality PESH learning.

Acknowledgements

The authors would like to express their sincere gratitude to the lecturers of the Graduate Program in Educational Management, Faculty of Teacher Training and Education, University of Bengkulu, for their academic guidance and constructive feedback throughout the research process. Appreciation is also extended to the entire academic community of MTs Tarbiyah Islamiyah Kerkap, North Bengkulu Regency, for their cooperation and support during data collection. Special thanks are given to fellow postgraduate students of the Master's Program in Educational Management, Faculty of Teacher Training and Education, University of Bengkulu, for their encouragement, collaboration, and shared learning experiences.

Bibliography

Ayoko, V. O., Peter, T., & Jegede, D. O. (2023). *International journal on integrated education https://journals.researchparks.org/index.php/IJIE Inadequacy of Infrastructural Facilities in Public Universities in Nigeria: Causes, Effects and Solutions*. https://journals.researchparks.org/index.php/IJIE

Baena-Morales, S., Merma-Molina, G., & Ferriz-Valero, A. (2023). Integrating education for sustainable development in physical education: Fostering critical and systemic thinking. *International Journal of Sustainability in Higher Education*, *24*(8), 1916–1932. https://doi.org/10.1108/IJSHE-10-2022-0343

Bandeira, A. da S., Ravagnani, F. C. de P., Barbosa Filho, V. C., de Oliveira, V. J. M., de Camargo, E. M., Tenório, M. C. M., Sandreschi, P. F., dos Santos, P. C., Ramires, V. V., Hallal, P. C., & Silva, K. S. (2022). Mapping recommended strategies to promote active and healthy lifestyles through physical education classes: A scoping review. In *International Journal of Behavioral Nutrition and Physical Activity*, *19*(1). BioMed Central Ltd. https://doi.org/10.1186/s12966-022-01278-0

Brown, C. E. B., Richardson, K., Halil-Pizzirani, B., Atkins, L., Yücel, M., & Segrave, R. A. (2024). Key influences on university students' physical activity: a systematic review using the Theoretical Domains Framework and the COM-B model of human behaviour. *BMC Public Health*, *24*(1). https://doi.org/10.1186/s12889-023-17621-4

Dahuri, M., Che-Ani, A. I., Johar, S., Talib, O., Mokhatar, S. N., Abd Wahab, M. A., & Shamsuddin, M. (2025). Optimizing maintenance budget allocation in higher educational institutions: A systematic review of building condition assessment and service quality. *Journal of Facilities Management*. https://doi.org/10.1108/JFM-09-2024-0112

Davidson, G., & Singer. (2024). Sports facilities and sports development in secondary schools in delta north senatorial district. *International Journal of Innovative Social & Science Education Research*, *12*(3), 217–226. https://doi.org/10.5281/zenodo.13867906

Divayana, D. G. H., Adiarta, A., & Suyasa, P. W. A. (2023). Implementation of discrepancy evaluation application based on topsis-tta. *TEM Journal*, *12*(4), 2613–2624. https://doi.org/10.18421/TEM124-73

Gilic, B., Malovic, P., Sunda, M., Maras, N., & Zenic, N. (2022). Adolescents with higher cognitive and affective domains of physical literacy possess better physical fitness: the importance of developing the concept of physical literacy in high schools. *Children*, *9*(6). https://doi.org/10.3390/children9060796

Greeven, S. J., Medellin, A. M., Watkins, J. M., Coble, C. J., Brunnemer, J. E., Fernández Solá, P. A., Dutta, S., Hobson, J. M., Evanovich, J. M., Martinez Kercher, V. M., & Kercher, K. A. (2023). Multilevel needs assessment of physical activity, sport, psychological needs, and nutrition in rural children and adults. *Frontiers in Public Health*, *11*. https://doi.org/10.3389/fpubh.2023.1290567

Guo, Q., Samsudin, S., Yang, X., Gao, J., Ramlan, M. A., Abdullah, B., & Farizan, N. H. (2023). Relationship between perceived teacher support and student engagement in physical education: A systematic review. In *Sustainability (Switzerland)*, *15*(7). MDPI. https://doi.org/10.3390/su15076039

Hosseini, A., Farhadi, E., Hussaini, F., Pourahmad, A., & Seraj Akbari, N. (2022). Analysis of spatial (in) equality of urban facilities in Tehran: An integration of spatial accessibility. *Environment, Development and Sustainability*, *24*(5), 6527–6555. https://doi.org/10.1007/s10668-021-01715-3

Hudson, C., Lindsay, R., Goncalves, L., McNeil, E., & Ambrosy, J. (2025). Physical education in rural schools: A scoping review. *European Physical Education Review*. https://doi.org/10.1177/1356336X251334547

Jago, R., Salway, R., House, D., Beets, M., Lubans, D. R., Woods, C., & de Vocht, F. (2023). Rethinking children's physical activity interventions at school: A new context-specific approach. *Frontiers in Public Health*, *11*. https://doi.org/10.3389/fpubh.2023.1149883

Karagöl, İ., & Adigüzel, O. C. (2022). Hammond değerlendirme modeli. *ODÜ Sosyal Bilimler Araştırmaları Dergisi (ODÜSOBİAD)*. https://doi.org/10.48146/odusobiad.1160173

Khanmoradi, S., & Abbas, A. (2024). Developing and equipping schools sports facilities: An eight-stage model of public-private partnership. *Educational Administration Theory and Practices*. https://doi.org/10.53555/kuey.v30i1.6732

Khofifah, J. M., Nurdin, D., & Herawan, E. (2025). Enhancing teacher professionalism through academic supervision: A CIPP model evaluation. *Indonesian Journal of Educational Development (IJED)*, *6*(2), 380–392. https://doi.org/10.59672/ijed.v6i2.4727

Leavy, & Patricia. (2017). *Research design: Quantitative, qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches*. The Guilfors Press.

Lebea, M. J., Agumba, J. N., & Adebowale, O. J. (2024). Critical success factors in the maintenance strategies of public healthcare facilities. *International Journal of Building Pathology and Adaptation*, *42*(7), 55–75. https://doi.org/10.1108/IJBPA-02-2024-0038

Li, H., Zhang, W., & Yan, J. (2024). Physical activity and sedentary behavior among school-going adolescents in lowand middle-income countries: Insights from the global school-based health survey. *PeerJ*, *12*(4). https://doi.org/10.7717/peerj.17097

Lombo, N., & Subban, M. (2024). Physical infrastructure challenges in rural schools reflections to promote quality education. *Administratio Publica* |, *32*(1), 69–101. https://journals.co.za/doi/full/10.10520/ejc-adminpub_v32_n1_a6

Ma'mun, A., Tinaz, C., Anira, A., Syarifatunnisa, S., Hertem, Ö. O., Mahendra, A., & Juliantine, T. (2025). Physical education and school sport in emerging nations: A comparison of Indonesia

and Türkiye. *Frontiers in Sports and Active Living*, *7*. https://doi.org/10.3389/fspor.2025.1582778

Martín-Rodríguez, A., & Madrigal-Cerezo, R. (2025). Technology-enhanced pedagogy in physical education: bridging engagement, learning, and lifelong activity. In *Education Sciences*, *15*(4). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/educsci15040409

Merxhani, H., & Ibraimi, F. (2024). Enhancing the potential of sports facilities at schools. *Journal of Applied Sciences-SUT*, *10*(19–20), 47–56. https://doi.org/10.62792/ut.jas.v10.i19-20.p2738

Mustafa, P. S. (2023). *Pendidikan jasmani dan kesehatan untuk guru kelas MI/SD* (Physical Education and Health for Elementary School/MI Class Teachers) (M. Rouf, Ed.). Insight Mediatama. www.insightmediatama.co.id

Pangestu, F. A., & Wijayanti, W. (2025). Examining teacher performance from the perspective of principal academic supervision, work environment, and compensation. *Indonesian Journal of Educational Development (IJED)*, *6*(2), 575–590. https://doi.org/10.59672/ijed.v6i2.4735

Papaioannou, G., Volakaki, M. G., Kokolakis, S., & Vouyioukas, D. (2023). Learning spaces in higher education: A state-of-the-art review. In *Trends in Higher Education*, 2(3), 526–545. Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/higheredu2030032

Poulitsa, D., Choustoulakis, E., & Travlos, A. (2025). Ict and inclusion in physical education: Promoting the social integration of students with psychosocial barriers in primary education. *European Journal of Special Education Research*, *11*(6). https://doi.org/10.46827/ejse.v11i6.6305

Qin, L., Ho, W. K. Y., & Khoo, S. (2025). The relationship between perceived quality physical education and 7-day physical activity among secondary school students in China: The mediating role of exercise self-efficacy. *Archives of Public Health*, *83*(1). https://doi.org/10.1186/s13690-025-01731-z

Rocliffe, P., O' Keeffe, B. T., Sherwin, I., Mannix-McNamara, P., & MacDonncha, C. (2023). School-based physical education, physical activity and sports provision: A concept mapping framework for evaluation. *PLoS ONE*, *18*(6). https://doi.org/10.1371/journal.pone.0287505

Samuel, E., Chioma Precious, U., & Bombum, D. (2024). Perceptions of school administrators on the impact of recreational facilities on service delivery of physical education teachers in secondary schools in calabar education zone, cross rivers state, nigeria. *ZAJES Zarjes.Com Zaria Journal of Educational Studies*, *24*(2). https://zarjes.com/ZAJES/article/view/1381

Sedai, S. P., & Shahi, S. J. (2025). Enhancing sports facilities and strengthening physical education programs in public colleges. In *Journal of Balkumari College*, *14*(1). http://balkumaricollege.edu.np/journal

Sharifi, K. D., Sidiqi, K. M. S., & Ajmiri, M. Y. (2024). Impact of a harmonious sports environment on learning interest. *Sprin Journal of Arts, Humanities and Social Sciences*, *3*(4), 20–23. https://doi.org/10.55559/sjahss.v3i4.271

Singh, A., & Parmar, Dr. V. S. (2023). Comprehensive approach to managing physical education and sports at all educational levels. *Journal of Sports Science and Nutrition*, *4*(2), 258–263. https://doi.org/10.33545/27077012.2023.v4.i2d.233

Singh, P. (2024). NEP 2020: The status of the role of infrastructure in enhancing physical education programs. *International Journal of Current Science Research and Review*, *7*(3), 1540–1545. https://doi.org/10.47191/ijcsrr/V7-i3-15

Singun, A. J. (2025). Unveiling the barriers to digital transformation in higher education institutions: A systematic literature review. In *Discover Education*, *4*(1). Discover. https://doi.org/10.1007/s44217-025-00430-9

Sugiyono. (2022). *Metode penelitian kuantitatif, kualitatif, dan R&D* (Quantitative, Qualitative, and R&D Research Methods). Alfabeta.

Syaukani, A. A., Hashim, A. H. M., & Subekti, N. (2023). Conceptual framework of applied holistic education in physical education and sports: A systematic review of empirical evidence. *Physical Education Theory and Methodology*, *23*(5), 794–802. https://doi.org/10.17309/tmfv.2023.5.19

Timba, F. N. S. ., Chandra, C. J. ., Rawe, A. S. ., & Mbari, M. A. F. . (2025). The effectiveness of biomechanical technology-based sports training models in improving elementary school students' motor skills. *Indonesian Journal of Educational Development (IJED)*, *6*(3), 893–908. https://doi.org/10.59672/ijed.v6i3.5426

Tross, L. F. S., Magalhães Dias, H., & Callegari Zanetti, M. (2024). Maintaining exercise in fitness centre settings: Insights from the physical activity maintenance theory. *International Journal of Qualitative Studies on Health and Well-Being*, *19*(1). https://doi.org/10.1080/17482631.2024.2409832

Valiyev, Y., Aliyev, S., Huseynova, K., & Khalilov, T. (2025). Planning and implementation of physical education and sports policy in the context of strategic management of education: An administrative perspective analysis. *Science of Law*, *2025*(1), 159–166. https://doi.org/10.55284/zk11v055

Vinko, M., Lesnik, T., & Radoš Krnel, S. (2024). Evaluator's alignment as an important indicator of adequacy of the criteria and assessment procedure for recognizing the good practice in public health. *Frontiers in Public Health*, *12*. https://doi.org/10.3389/fpubh.2024.1286509

Widana, I. W., Suarta, I. M., Citrawan, I. W. (2019). Application of the simpang tegar method: Using data comparison. *Jour of Adv Research in Dynamical & Control Systems, 11*(2)-Special Issue on Social Sciences, 1825-1832, http://www.jardcs.org/abstract.php?id=1563

Wang, J., Wu, S., Chen, X., Xu, B., Wang, J., Yang, Y., Ruan, W., Gao, P., Li, X., Xie, T., Yang, K., & Zhuang, J. (2024). Impact of awareness of sports policies, school, family, and community environmental on physical activity and fitness among children and adolescents: a structural equation modeling study. *BMC Public Health*, *24*(1). https://doi.org/10.1186/s12889-024-19795-x