

Facilities and Infrastructure Management Cooperation Program to Realize Child Friendly Schools at SDN 09 Teluk Keramat and SDN 22 Mengkudu Sambas Regency

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Received: 2026, 05,24 Accepted: 2026, 07,28

Available online: 2026, 09,06

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KEYWORDS	ABSTRACT
Keywords: Cooperation, Management; Facilities And Infrastructure; Elementary Schools; Child-Friendly Schools Copyright © 2026 Vifada Journal of Education. All rights reserved.	This study aims to describe the implementation of a collaborative program for facilities and infrastructure management in creating a child-friendly school, the role of the school principal, and the obstacles encountered during implementation. The study employs a qualitative descriptive approach using a case study method at SDN 09 Teluk Keramat and SDN 22 Mengkudu, Sambas Regency. Data were collected through observation, interviews, and document analysis, involving school principals, teachers responsible for facilities and infrastructure, students, and parent representatives. Data validity was verified through source and technique triangulation, while data analysis employed the interactive model developed by Miles, Huberman, and Saldaña. The research results indicate that the collaborative program for managing facilities and infrastructure was implemented in a collaborative, structured, and sustainable manner, involving principals, teachers, educational staff, students, parents, and both local and central governments. The nature of each party's contribution varied according to the specific context and needs of each school. Principals played roles as managers, leaders and drivers of change, and innovators. Challenges encountered stemmed from internal school factors, external parties, and students, with contexts varying across schools. These findings underscore the importance of strengthening principal leadership and multi-stakeholder collaboration in the management of facilities and infrastructure to foster a safe, comfortable, and child-friendly school environment.

1. Introduction

Education is a process that is systematically designed to develop the potential of students as a whole, covering aspects of knowledge, personality, skills, and social abilities. The fulfillment of the right to education is also part of the basic rights of children guaranteed in various regulations in Indonesia. Regulation of the Minister of Women's Empowerment and Child Protection of the Republic of Indonesia Number 4 of 2024 emphasizes that every child has the right to live, grow, develop, obtain protection from discrimination and violence, and receive services that prioritize the best interests of children. Therefore, the implementation of education is not enough to guarantee access, but also needs to provide a learning environment that is safe, comfortable, inclusive, and supports children's development. The concept is in line with the Sustainable Development Goals (SDGs) 4.A goal which emphasizes the importance of building educational facilities that are child-friendly, inclusive, safe, and free from violence.

The urgency of creating a safe educational environment is getting stronger because violence against children is still found in the educational environment. Data from the Indonesian Child Protection Commission (KPAI) shows that child protection cases still reach thousands of cases every year, with forms of violence that include physical, psychological, verbal, and bullying violence. In West Kalimantan, child protection cases are also still found, including in Sambas Regency, although

there is a tendency to decrease the number of cases. This condition shows that child protection in the educational environment remains a problem that requires attention and systematic school management. One of the approaches developed by the government is child-friendly schools, which place the fulfillment of children's rights and protection as an important part of the implementation of education.

Child-friendly schools are not only concerned with learning policies and processes, but also include the creation of a safe physical environment as well as the involvement of various stakeholders. Fitriani et al. (2021) identified the components of child-friendly schools including anti-violence policies, safe physical environments, participatory learning, educator capacity building, and parent and community involvement. In Sambas Regency, the development of child-friendly schools is supported by Sambas Regency Regional Regulation Number 1 of 2023 concerning Child-Friendly Districts which includes aspects of policy, learning, capacity of educators and education personnel, infrastructure, children's participation, and the involvement of parents, the community, the business world, and other stakeholders. However, of the hundreds of educational units in Sambas Regency, the number of schools that have the status of child-friendly schools is still relatively limited. This condition shows the need to examine how schools manage various resources in the process of developing child-friendly schools.

One of the important aspects in realizing child-friendly schools is the management of facilities and infrastructure. Facilities and infrastructure are important components in supporting the sustainability of the educational process while creating a safe and comfortable learning environment. Previous research has shown that the provision of facilities such as comfortable learning spaces, proper sanitation, clean water, play facilities, and a safe physical environment are important parts of child-friendly schools. Suharsiwi et al. (2023) show that the management of child-friendly school facilities still faces problems in creating a safe, comfortable, and conducive environment. Febriantina et al. (2018) also found that the fulfillment of infrastructure related to building safety is still low, while Ambarsari and Harun (2018) emphasized the importance of ensuring the safety of buildings and supporting facilities so as not to endanger students. The findings show that the problem of infrastructure facilities is not only a problem of facility availability, but also related to management, maintenance, security, and suitability with children's needs.

In addition to limited facilities, previous research has shown that the management of facilities and infrastructure is influenced by limited budgets, policies, resources, community participation, and stakeholder involvement. Ananda et al. (2023) show that budget limitations and low community participation are challenges in managing facilities and infrastructure, but collaboration with the community can be one of the alternatives to overcome them. Tonapa (2024) also emphasizes the importance of parental involvement in decision-making regarding school resources and facilities. Thus, a collaborative approach is important because the fulfillment of child-friendly infrastructure facilities cannot be fully charged to schools. Cooperation between school principals, teachers, students, parents, the government, and other stakeholders is needed so that the planning, procurement, use, maintenance, and evaluation of infrastructure facilities can be adjusted to the needs of children.

Although a number of studies have addressed child-friendly schools and infrastructure management, previous research has tended to emphasize the fulfillment of facility standards, physical environmental conditions, or factors that affect the management of infrastructure. Studies that specifically analyze cooperation programs in the overall process of managing facilities and infrastructure to realize child-friendly schools, including the role of school principals and constraints of collaboration between stakeholders, are still limited. This gap is important to study because the fulfillment of child-friendly infrastructure facilities is not only determined by the availability of funds and facilities, but also by the school's ability to build cooperation, coordinate the contributions of various parties, and ensure the sustainability of its management. Thus, this study offers novelty through a comprehensive study of facilities and infrastructure management cooperation by comparing practices in two elementary schools in the context of Sambas Regency.

The need for this study is increasingly relevant based on the initial conditions at SDN 09 Teluk Keramat and SDN 22 Mengkudu Sambas Regency. Both schools are trying to meet the indicators of child-friendly school infrastructure, but still face funding limitations, suboptimal maintenance and management of facilities, and low participation of some parents. At SDN 09 Teluk Keramat, some of

the tables have not met the child-friendly criteria, the management of sports equipment has not been optimal, and the library has not been used to its fullest. Meanwhile, SDN 22 Mengkudu still faces problems with the fulfillment of child-friendly furniture, equipment storage, maintenance of technological devices, and communication and parental involvement. Both schools have also involved students in the maintenance of infrastructure facilities, but student involvement in conveying aspirations for facility planning has not been optimal. This condition shows that the development of child-friendly schools requires more structured and sustainable cooperation.

Based on these research gaps and empirical conditions, this study focuses on the facility and infrastructure management cooperation program to realize child-friendly schools at SDN 09 Teluk Keramat and SDN 22 Mengkudu Sambas Regency. The research uses a qualitative descriptive approach with a case study method to examine the implementation of the cooperation program, the role of the principal, and the obstacles faced in its implementation. The study of the two schools allowed the research to identify similarities and differences in cooperation practices according to the context of each school. This research is expected to contribute to the development of education management studies, especially regarding the management of collaboration-based facilities and infrastructure to support the creation of a safe, comfortable, and child-friendly school environment.

2. Research Design and Methodology

This study uses a qualitative descriptive approach with a compound case study method to describe the facilities and infrastructure management cooperation program in realizing child-friendly schools at SDN 09 Teluk Keramat and SDN 22 Mengkudu Sambas Regency, West Kalimantan. Multiple case studies were used to gain an in-depth understanding of the cooperation program in the management of facilities and infrastructure from various sources of information in the two schools. The research will be carried out in May-July 2025. The two schools were chosen because they were the best schools in two different groups and both were trying to meet the indicators of child-friendly school facilities and infrastructure in Teluk Keramat District.

The research data source consisted of eight informants, namely school principals, teachers in charge of facilities and infrastructure, students, and parent representatives from each school. Data were collected through observations, semi-structured interviews, and document studies. Observations were carried out to obtain data on physical conditions and actual situations in the implementation of facilities and infrastructure management, from planning to elimination. Interviews were used to obtain in-depth information about the implementation of cooperation programs, management of facilities and infrastructure, school cooperation with students and parents, the role of school principals, and obstacles in realizing child-friendly schools. Document studies were carried out on various documents related to the management of facilities and infrastructure, the fulfillment of child-friendly facilities and infrastructure indicators, as well as school cooperation with students and parents, including inventory lists, procurement procedures, archives, and photo documentation.

Data collection is supported by observation sheets, interview guidelines, and document checklists compiled based on research focus. Observation sheets are used to record the condition of facilities and infrastructure as well as the physical condition of the school, interview guidelines are used to maintain the direction of discussion while providing space for informants to convey information openly, while checklists are used to identify documents that are available and relevant to the research.

The validity of the data is carried out through source triangulation and technique triangulation. Source triangulation is carried out by comparing information obtained from school principals, teachers in charge of facilities and infrastructure, students, and parent representatives. Meanwhile, triangulation techniques are carried out by comparing data obtained through observation, interviews, and document studies to check the consistency of research findings.

Data analysis used the interactive model of Miles, Huberman, and Saldaña which was carried out from the initial stage of research to the preparation of findings. Analysis includes data condensation, data presentation, and conclusion drawing and verification. Data condensation is done by selecting, centralizing, simplifying, and grouping data from documents, field notes, interview transcripts, observations, and empirical data based on their relevance to the research focus. The condensed data is then presented narratively and in the form of a table so that the patterns and relationships between

findings can be understood systematically. Furthermore, conclusions are drawn by comparing and analyzing various data as well as findings obtained during the research and verified based on available field evidence.

3. Findings and Discussion

3.1. Findings

The results of the study show that the facilities and infrastructure management cooperation program to realize child-friendly schools at SDN 09 Teluk Keramat and SDN 22 Mengkudu is carried out through six stages, namely planning, procurement, inventory, use, maintenance, and elimination. In both schools, the management of facilities and infrastructure is not only the responsibility of the principal, but also involves teachers, education staff, students, parents, and the government in accordance with the stages and needs of the school.

1. Implementation of the Facilities and Infrastructure Management Cooperation Program Planning

The planning of facilities and infrastructure at SDN 09 Teluk Keramat and SDN 22 Mengkudu began through a meeting at the beginning of the year involving the principal, teachers, education staff, and parents/committee representatives. The need for infrastructure facilities is determined based on the results of evaluations, national education standards, input from school residents, and the needs of student safety and comfort. At SDN 09 Teluk Keramat, the planning results are outlined in the RKAS and compiled based on the priority scale. The principal stated that planning refers to existing national standards and student needs so that students are comfortable and safe in school.

"It should always refer to the existing national standards and the needs of students so that students are comfortable and safe at school and in accordance with how much damage needs to be replaced or can still be repaired." (JN. 4)

The condition of the facility is then evaluated based on the real needs in the school. The teacher said that some facilities still need to be improved, such as library collections and toilet cleanliness, although the canteen, play room, and sports equipment are considered quite complete (I.3). On the contrary, parents consider the school facilities in general to be quite good and child-friendly (YK.3).

At SDN 22 Mengkudu, planning also refers to national standards and the results of evaluations and inputs in internal meetings. The informant stated that the school always refers to existing national standards, and looks at the results of evaluations from both teachers and school staff. The indicators used include safety, comfort, student convenience, and space availability, with the results of the annual evaluation being the basis for determining the facilities that need to be added or improved (JM.3).

Thus, cross-case findings show that the planning of facilities and infrastructure in both schools is participatory, evaluation-based, and oriented to student needs. Planning is carried out through joint meetings, outlined in school documents, and prioritizes safety and comfort aspects to support the realization of child-friendly schools. However, the fulfillment of facilities in both schools is still carried out in stages according to conditions and priority needs.

Procurement

The procurement of facilities and infrastructure at SDN 09 Teluk Keramat and SDN 22 Mengkudu was carried out based on the results of planning and meetings at the beginning of the year which were then outlined in the RKAS. Procurement is prioritized on needs that support the safety, comfort, and urgent needs of students. At SDN 09 Teluk Keramat, the principal explained that the main source of financing for procurement comes from regular BOS funds:

"So far, it has only been sourced from regular BOS funds and there has been no assistance or levy to the committee and other sources are only regular BOS." (JN.8)

Budget limitations are the main obstacle in fulfilling infrastructure facilities. The teacher stated, "The obstacle is of course in the school budget, because it only relies on BOS funds to fulfill facilities and infrastructure that are still lacking" (I.21). Nevertheless, the school received external support, including local government assistance through the Leadership Directive (Arpim) program for the construction of fences and community support in the form of manpower. Parents also contribute non-financially through the provision of plant seeds, fireground, and bamboo for school greening:

"If the material is not there because all of the BOS funds are there, at least we who were at the time of making the park helped bring plant seeds, burnt soil, and bamboo if needed for school greening." (YK.14)

At SDN 22 Mengkudu, procurement is also based on the results of the meeting at the beginning of the year and is outlined in the RKAS. Procurement priorities are determined with the safety and comfort of students in mind. The principal gave an example of procuring tables and chairs with blunt corners and books in accordance with the curriculum changes:

"In the early planning of the year, we consider what is needed for the comfort of children and not endangering children while at school as well as the urgent need for school infrastructure. For example, when the curriculum changed yesterday, we prioritized to fulfill books that were in accordance with the Merdeka curriculum, then we have also changed tables and chairs for two years in a row and chose those that have blunt corners considering the safety of students." (JM.6)

The main source of financing also comes from BOS funds, as stated that "procurement so far is based on activity plans and school budgets through BOS funds" (JM.7). In addition, the school received assistance from the central government in the form of tablets and chromebooks as well as local government assistance for the construction of classrooms. The community also provides non-financial support, especially in the creation of gardens through the provision of soil and plant seeds.

Cross-case findings show that the procurement of facilities and infrastructure in both schools is carried out in a planned, priority-based, and student-oriented manner. BOS funds are the main source of financing, while budget constraints are overcome through cooperation with the central government, local governments, and the community. This form of cooperation is not only in the form of financial assistance, but also the provision of facilities, materials, and manpower. Thus, the procurement of child-friendly infrastructure facilities does not completely depend on the school's internal resources, but is strengthened through the collaboration of various parties.

Inventory

An inventory of facilities and infrastructure at SDN 09 Teluk Keramat and SDN 22 Mengkudu was carried out to ensure that all school assets were recorded, identified, and could be monitored periodically. Both schools implement manual and digital recording and involve principals, teachers, operators, and library officers.

At SDN 09 Teluk Keramat, the inventory is carried out through recording in a manual and archiving digitally by the school operator. Each asset is recorded based on information such as the year of purchase, brand, and item code. The principal explained:

"There is, in this school, if the recording is through the operator because every year it will be archived for the BOS, both capital goods, other fixed assets that are inventoried which have previously been recorded in the manual, both the year, the brand, the code, the year of purchase and so on." (JN.12)

Each item received is also inspected to ensure its fit for order. The process involves teachers and library staff, then the results of the inspection are documented and the asset data is updated by the operator. As the principal explained:

"Goods that come are still checked, the order of goods is adjusted to the goods that arrive at the school. Usually, at school, there is an appointment of one of the teachers and library staff to record the goods and check one by one the goods, whether books or other goods, then in the photo, documented." (JN.14)

Inventory updates are carried out at least annually and can be done at any time if there are new items.

Meanwhile, SDN 22 Mengkudu implements an inventory system through manual inventory books and Dapodik applications. Each item that enters is coded and recorded by teachers and library staff. The informant explained:

"Yes, so far we have been using manual inventory books and updating them in the dapodik application. Then every item that enters is coded and recorded by the library staff and teachers." (JM.12)

Inventory management is carried out by teachers and appointed library staff, while data updates are carried out at least twice a year or every time there are new items and asset deletions.

Cross-case findings show that the inventory in both schools has been carried out systematically through a combination of manual and digital recording. The difference lies in the frequency of updates, namely SDN 09 Teluk Keramat updates at least once a year, while SDN 22 Mengkudu at least twice a year or every time there is a change in assets. Inventory also not only functions as asset administration, but also supports data accuracy, monitoring the condition of infrastructure facilities, and accountability for school asset management in realizing a child-friendly school environment.

Usage

The use of facilities and infrastructure in both schools is carried out through scheduling, discipline, and teacher assistance to ensure security, order, and equitable access for students. At SDN 09 Teluk Keramat, the principal explained:

"Students who want to use the library must be accompanied by a teacher or there must be a library officer. Likewise, if you want to use the volleyball court, play badminton, table tennis, you must also be accompanied by a teacher." (JN.20)

Meanwhile, SDN 22 Mengkudu implements scheduling of the use of facilities and safety rules. The teacher stated:

"Setting a schedule for use, for example each class has a schedule to go to the library, then scheduling book borrowing at the library, always remind in the use of the field so that no one gets hurt when playing." (JM.19)

In general, the infrastructure facilities in both schools have been used to support students' learning and play activities. However, some facilities still need improvement, such as the worship room at SDN 09 Teluk Keramat as well as the comfort of classrooms, library collections, and technology facilities at SDN 22 Mengkudu. These findings show that the use of infrastructure facilities has been managed in a structured manner and oriented towards safety, comfort, discipline, and equitable student access as part of efforts to realize child-friendly schools.

Maintenance

Maintenance of facilities and infrastructure at SDN 09 Teluk Keramat and SDN 22 Mengkudu is carried out regularly, periodically, and responsive to damage to ensure the safety, comfort, and feasibility of facilities. At SDN 09 Teluk Keramat, the principal stated:

"The maintenance system is of course carried out periodically, daily routine, and I also always check it every day. But if there is something that is unsightly or endangers students, it does not have to be on schedule but treated as soon as possible." (JN.24)

Maintenance is also accompanied by education to students about the use and maintenance of facilities. The teacher explained that students were given examples of how to maintain cleanliness and use the facilities correctly (I.9). These activities are carried out through daily picketing and community service, with the involvement of teachers, students, principals, and parents. Parents also participate in community service work to clean classrooms, libraries, toilets, and school environments (YK.9).

At SDN 22 Mengkudu, maintenance is carried out through the division of tasks involving school residents. Activities include daily picketing, weekly toilet cleaning, library maintenance, and community service. The teacher explained:

"For routine maintenance, every day students per class, cleaning the toilet is done once a week, but if someone gets sanctioned, they will usually clean the toilet accompanied by a picket teacher. For the library, every day there are also library officers, besides that there are also cleaners and picket teachers in the teacher's office room and the principal's room." (JM.24)

Students are also accustomed to maintaining facilities through hands-on practices, such as throwing garbage in place, picketing, using cleaning tools correctly, and storing them after use (AK.13). Parents participate through mutual cooperation activities to clean the classroom and environment and make a garden (IL.9).

Cross-case findings show that the maintenance of facilities and infrastructure is carried out collaboratively and oriented towards the safety and sustainability of the facilities. The principal and teachers play a role in monitoring, students are involved in routine maintenance, while parents contribute through regular community service. This practice not only maintains the feasibility of infrastructure, but also fosters responsibility, mutual cooperation, concern, and a sense of belonging to the school environment as part of the implementation of child-friendly schools.

Removal

The removal of facilities and infrastructure in both schools was carried out based on periodic evaluation of the condition of goods. Information about damage is obtained through teacher checks and student reports, then followed up based on the level of damage, function of the item, age of the item, and especially the potential danger to students. At SDN 09 Teluk Keramat, the teacher explained that items that endanger students are immediately removed if they cannot be repaired (I.13). At SDN 22 Mengkudu, the main considerations also include the level of damage and potential harm to students (JM.31). Thus, the elimination is not solely positioned as an inventory administration activity, but as part of a strategy to maintain student safety, space efficiency, and the feasibility of the learning environment.

Across cases, the findings show a consistent pattern of cooperation in the two schools, although the form of support and the condition of facilities are different. Planning is participatory and based on student needs; procurement of combining school funds with external support; inventory using a dual recording system; use is controlled through schedules and regulations; maintenance is carried out collectively; while the elimination is oriented towards student safety and space efficiency. Thus, the cooperation in the management of facilities and infrastructure in the two schools is not only oriented towards the fulfillment and maintenance of facilities, but is integrated with the principles of child-friendly schools through an emphasis on safety, comfort, accessibility, participation, responsibility, and concern for the environment.

2. The Role of School Principals in the Facilities and Infrastructure Management Cooperation Program to Realize Child-Friendly Schools

The results of the study show that the principals of the two schools play the role of managers, leaders/movers, and innovators in developing facilities and infrastructure management cooperation. At SDN 09 Teluk Keramat, the principal emphasized decision-making through deliberation, as stated, "Funding through BOS funds is based on the results of committee meetings, parent representatives, teachers and the results of evaluations ... is poured into RKAS" (JN.37). Meanwhile, at SDN 22 Mengkudu, the principal submitted a procurement based on the results of a joint meeting and RKAS (JM.37). Although the two schools show a collaborative pattern, SDN 22 Mengkudu faces the dynamics of leadership transitions that affect the consistency of cooperation.

Table 1. The Role of School Principals in Facilities and Infrastructure Management Cooperation.

Role Aspects	SDN 09 Teluk Keramat	SDN 22 Mengkudu	Cross-Case Findings
Manager	Coordinate planning and procurement through meetings with teachers, committees, and parents; optimizing BOS funds and local resources; as well as monitoring and evaluating infrastructure facilities.	Coordinating planning and procurement through RKAS and the results of deliberations; optimize BOS funds and involve teachers and parents in fulfilling facilities.	The principal acts as a collaborative manager who integrates planning, procurement, maintenance, and supervision by involving various parties.
Leader/ Drive	Build cooperation with teachers, students, parents, committees, and the community through community service, maintenance, supervision, and communication through class groups.	Encourage the involvement of teachers, students, and parents in maintenance and community service. However, collaboration is still influenced by leadership transitions.	The principal plays a role as a driver of collaboration, but leadership consistency is an important factor in the sustainability of cooperation.
Innovator	Develop automatic lights and perform facility repairs independently to save resources and improve safety.	Develop innovative activities with students, such as vegetable gardens and making brooms from rice stalks.	Principals develop available resource-based innovations to support child-friendly school environments.
Leadership Dynamics	Cooperation between parties is relatively consistent and integrated in the management of infrastructure facilities.	There are still differences in perceptions about the effectiveness of leadership after the change of principal, so collaboration needs to be strengthened.	The continuity of leadership and communication styles affects the sustainability of infrastructure management cooperation.

Source: Primary data from interviews, observations, and documentation.

3. Obstacles to the Facilities and Infrastructure Management Cooperation Program

Table 2. Obstacles to the Facilities and Infrastructure Management Cooperation Program

Obstacle Aspects	SDN 09 Teluk Keramat	SDN 22 Mengkudu
Students	Students' awareness and responsibilities are not evenly distributed and there are water limitations in maintenance.	Students' awareness and responsibilities are not evenly distributed and limited in equipment and water.
Internal school	Limited budget and technical resources.	Budget constraints, teacher understanding, collaborative skills, and motivation.
External	Limited time and parental participation due to work in the field.	Limited time and parental participation and communication that is not optimal.
Key findings	The constraints are mainly related to limited resources and participation.	Obstacles are more complex because they are also influenced by communication and leadership transitions.

Source: Primary data from interviews, observations, and documentation.

Table 2. It shows that the two schools face relatively similar obstacles in the aspects of students, internal schools, and external parties. The main similarities lie in the uneven awareness of students, limited resources, and limited parental participation. The difference is that SDN 22 Mengkudu faces more complex obstacles because it is related to collaborative capacity and changes in communication patterns due to leadership transitions. Thus, the sustainability of the cooperation program depends

not only on the availability of facilities and budget, but also on the awareness of school residents, collaboration capacity, parental participation, and leadership consistency.

3.2. Discussion

Implementation of Facilities and Infrastructure Management Cooperation Program to Realize Child-Friendly Schools at SDN 09 Teluk Keramat and SDN 22 Mengkudu

The results of the study show that the facilities and infrastructure management cooperation program at SDN 09 Teluk Keramat and SDN 22 Mengkudu has been implemented in an integrated manner through the stages of planning, procurement, inventory, use, maintenance, and disposal. The main findings of the study show that cooperation not only functions as a supporting mechanism for the management of facilities and infrastructure, but also becomes a school strategy in optimizing resource limitations while ensuring the fulfillment of children's needs.

In the planning stage, the two schools involve principals, teachers, education staff, committees, and parent representatives in identifying the needs of facilities and infrastructure. The identification results are then compiled based on a priority scale and outlined in the RKAS by considering aspects of security, comfort, ease of access, and student needs. This pattern shows that planning is not purely administrative, but has been directed to the real needs of the school and the best interests of the child. The findings are in line with Neliwati et al. (2023) and Melinda and Istanto (2025) who emphasized the importance of school community involvement and discussion processes in infrastructure planning. Thus, collaboration from the planning stage is an important foundation for the development of infrastructure facilities that are responsive to children's needs.

At the procurement stage, budget limitations cause the fulfillment of facilities and infrastructure to be carried out selectively, gradually, and based on a priority scale. The school prioritizes facilities that are directly related to the safety, health, comfort, and learning needs of students, as well as optimizing government and parent support. This condition shows that cooperation functions as an adaptive mechanism to overcome the limitations of school resources. These findings support Karkee (2024) that the gradual fulfillment of facilities requires the collaboration of various stakeholders. Thus, limited funds are not only seen as an obstacle, but encourage schools to develop procurement strategies based on collaboration and the use of local resources.

At the inventory stage, the two schools systematically recorded facilities and infrastructure through manual and digital mechanisms, accompanied by providing codes and checking the condition of goods. Inventory not only functions for administrative order, but also serves as a basis for determining the need for repair, procurement, and removal. These findings show that good asset data management allows schools to make more precise and gradual decisions according to priorities. The use of digital recording also strengthens the efficiency and accuracy of asset management as shown by (Ikhwan et al. 2025).

At the stage of use, facilities and infrastructure are utilized through clear schedules and rules and with the assistance of teachers or education personnel. The arrangement aims to ensure that all students have access safely, fairly, and non-discriminatoryly. These findings are in line with the principles of child-friendly schools that place non-discrimination, safety, comfort, and the best interests of children as the basis for managing the school environment. Thus, the use of infrastructure facilities is not only oriented to effectiveness and efficiency, but also to equitable access and student protection.

At the maintenance stage, cooperation is seen to be strongest because it involves school principals, teachers, education staff, students, and parents through routine monitoring, daily maintenance, and periodic mutual cooperation activities. The involvement of students in maintenance shows that infrastructure facilities are not only positioned as school assets, but as a shared environment that needs to be maintained. This is in line with the principle of children's participation in the implementation of child-friendly schools and the view of Nasrullah (2024) that the maintenance of school facilities is a shared responsibility. The direct involvement of students and parents is an important finding because it links facility management to the formation of a sense of belonging, responsibility, and concern for the school environment.

Meanwhile, the elimination was carried out through an evaluation of the condition of facilities and infrastructure by considering the level of damage, age of use, function, and potential risks to student safety. This process involves school residents through damage reports and periodic inspections. The findings show that the removal is not understood as an administrative procedure, but as part of an effort to keep the school environment safe, clean, and usable. Thus, the decision to retain, repair, or remove a facility is based on functional considerations and especially the interests and safety of the child.

Overall, the findings of the study show that the implementation of the facilities and infrastructure management cooperation program in both schools has collaborative, participatory, gradual, and child-oriented characteristics. Cooperation lasts throughout the management cycle, from the identification of needs to the elimination of unsuitable facilities. This pattern shows that the success of the management of child-friendly school infrastructure facilities is not solely determined by the availability of the budget, but also by the ability of schools to integrate the participation of school residents, parents, the government, and local resources in every stage of management. An important contribution of this research lies in the finding that cross-stakeholder cooperation can be a managerial strategy to maintain the sustainability of the fulfillment of child-friendly infrastructure facilities even though schools face limited resources.

The Role of School Principals in the Facilities and Infrastructure Management Cooperation Program to Realize Child-Friendly Schools

The results of the study show that the principals at SDN 09 Teluk Keramat and SDN 22 Mengkudu carry out three main roles, namely as managers, leaders/movers, and innovators. As a manager, the principal coordinates the planning, procurement, use, and maintenance of infrastructure facilities by involving teachers, education staff, students, and parents. Management is carried out by optimizing BOS funds and utilizing local resources to meet the needs of infrastructure facilities in stages. This finding is in line with Arifin and Elfrianto (2017) who place school principals as managers of planning, organizing, leadership, and control functions.

As leaders and drivers, school principals play a role in building communication, coordination, and participation of various parties in the management of infrastructure facilities. The principal not only directs school residents, but also builds relationships with parents and external parties so that cooperation can take place in a sustainable manner. This role strengthens joint involvement in creating a safe, comfortable, healthy, and non-discriminatory school environment for students. This is in accordance with the view of Alhabsyi et al. (2022) that the leadership of a school principal includes the ability to facilitate communication, increase motivation, supervise, and delegate tasks.

Furthermore, school principals play the role of innovators by optimizing limited resources through the use of simple technology, the potential of school land, and the improvement of facilities independently. The strategy shows the ability of school principals to adapt to school conditions while saving budget to meet more priority needs. This finding is in line with the view of Mulyasa (2004) and Huda et al. (2022) that school principals need to be creative, innovative, adaptive, and flexible in managing schools.

Thus, the role of school principals is not only administrative, but also the main driver of collaboration in the management of facilities and infrastructure. The integration of roles as managers, leaders/movers, and innovators allows resource limitations to be overcome through cooperation and utilization of local potential. These findings show that the effectiveness of child-friendly school programs is greatly influenced by the ability of school principals to integrate managerial functions, collaborative leadership, and innovation in infrastructure management.

Obstacles to the Facilities and Infrastructure Management Cooperation Program to Realize Child-Friendly Schools

The results of the study show that the implementation of the facilities and infrastructure management cooperation program at SDN 09 Teluk Keramat and SDN 22 Mengkudu still faces obstacles stemming from internal factors of the school, external parties, and student characteristics. Internal constraints include budget limitations, uneven understanding of child-friendly schools, low sense of

ownership of infrastructure, limited cooperation skills, and technical obstacles in maintenance. The limited resources cause the fulfillment and maintenance of child-friendly infrastructure facilities to be carried out in stages. These findings are in line with Hamdani et al. (2023) and Masriah et al. (2025) who show that limited concern, understanding, and resources can hinder the implementation of child-friendly school programs.

External constraints are mainly related to limited time and parental participation, communication, and continuity of leadership. The majority of parents who work as farmers cause involvement in school activities to be not optimal. In addition, the change of principals and differences in communication patterns also affect the dynamics of cooperation between schools and parents. This condition shows that the sustainability of collaborative programs depends not only on the availability of resources, but also on open communication and leadership consistency. These findings are in line with Arkam and Sulistyorini (2024) who emphasize the importance of communication between school principals and parents, and Salam et al. (2023) who show that child-friendly school programs require continuity, coordination, and communication between stakeholders.

Meanwhile, from the student side, differences in the level of awareness, concern, and responsibility in maintaining infrastructure facilities are obstacles in the implementation of the program. This shows that student involvement in cooperation is not enough only through assignments, but needs to be strengthened through habituation and strengthening understanding of responsibility for the school environment. This finding is in line with Hamdani et al. (2023) which shows that there is a difference in students' ability and interest in participating in school programs.

Thus, the constraints of the facilities and infrastructure management cooperation program can be understood as a problem of limited resources as well as a problem of coordination and participation. Budget and technical resource constraints need to be balanced with strengthening collaboration, while participation and communication constraints require consistent leadership and more adaptive student and parent engagement strategies. These findings confirm that the success of child-friendly schools is not only determined by the availability of infrastructure, but also by the school's ability to build sustainable cooperation among all stakeholders.

Although the findings of the study show that the facilities and infrastructure management cooperation program has been implemented at various stages, this study still has some limitations that need to be considered in interpreting the research results. First, the research was only conducted in two schools, namely SDN 09 Teluk Keramat and SDN 22 Mengkudu, so the research findings have limitations in terms of transferability and cannot be generalized widely to schools with different characteristics, contexts, or cooperation practices. Second, data collection that lasts for approximately two months limits observations on the dynamics of facilities and infrastructure management in the long term. There are also limitations in school documentation that is not always available in complete and up-to-date, so some information cannot be traced optimally.

Third, the qualitative approach used is highly dependent on the completeness, openness, and perspective of the informant, so there is still a possibility of subjectivity in the data interpretation process. The research instrument also did not fully capture the dynamics of informal cooperation that took place outside of school activities, especially daily interactions between teachers, students, and parents. Although triangulation through interviews, observations, and documentation has been carried out to increase the credibility of the data, these limitations still need to be considered in understanding the research findings.

4. Conclusion

This study shows that the facilities and infrastructure management cooperation program to realize child-friendly schools at SDN 09 Teluk Keramat and SDN 22 Mengkudu has been carried out collaboratively through the stages of planning, procurement, inventory, use, maintenance, and elimination of infrastructure facilities. The cooperation involves school principals, teachers, education staff, students, parents, and the government with contributions that are tailored to the context and needs of each school. School principals become the main mover through their roles as managers, leaders, and innovators. However, the implementation of the program still faces budget and resource

limitations, understanding and awareness of school residents, parental involvement, communication, and continuity of leadership.

This study confirms that child-friendly schools are not only determined by the availability of facilities and infrastructure, but also by the quality of cooperation and leadership in managing them. The main contribution of the research lies in the finding that resource constraints can be offset through collaboration between schools, students, parents, and the government as well as the creative use of local resources. Thus, collaborative infrastructure management can be a practical approach to strengthen the safety, comfort, participation, and sustainability of a child-friendly school environment.

This study was limited to two schools and was carried out in a relatively short data collection period, so the transferability of the findings to other school contexts is still limited. Further research can expand the scope of schools with different characteristics and regions and use longer observation periods to assess the sustainability of the program. Subsequent studies can also develop research by exploring more measurable models of infrastructure management cooperation, including the effectiveness of parents, students, and government involvement in supporting the sustainability of child-friendly schools.

Statement on the Use of Generative Artificial Intelligence (AI)

During the preparation of this manuscript, the authors used generative artificial intelligence (AI) tools solely to support the scientific writing process. Specifically, Grammarly was used to improve grammar, language quality, readability, and writing clarity. The AI tools were not used to generate research ideas, analyze data, interpret findings, or draw scientific conclusions. All study design, data collection, analysis, interpretation of results, and conclusions were conducted and verified entirely by the authors. The authors take full responsibility for the accuracy, integrity, and originality of the content presented in this manuscript.

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