

Strategic Management in the Context of Public Policy of Education at the North Aceh Regency Education and Culture Office

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Abstract

Minimum Service Standards (SPM) are intended to guarantee equitable basic education services; however, their implementation in decentralized regions often remains uneven. This study examined how strategic management shaped the acceleration of education SPM achievement at the North Aceh Regency Education and Culture Office. A qualitative case-study design was employed. Data were collected in 2026 through semi-structured interviews with five purposively selected informant groups: service leadership, facilities and infrastructure managers, planning and cross-sector actors, school supervisors, and school principals. Non-participant observations and document reviews of planning, budgeting, performance, SPM, Dapodik/EMIS, and coordination records complemented the interviews. Data were analyzed using the Miles, Huberman, and Saldaña interactive model and validated through source and technique triangulation, member checking, and audit trails. The findings showed that SPM had been incorporated into formal planning and reporting but had not been fully operationalized as an outcome-based performance target. The overall case-based analytic reach score was 61.30%, while planning, budgeting, and data utilization showed the lowest achievement at 56.00%. Infrastructure management remained reactive, teacher and facility provision was uneven, and cross-sector coordination was not yet institutionalized. Geographical remoteness also continued to constrain access, supervision, and service equity. These findings indicate that regulatory commitment alone cannot ensure SPM achievement without integrated leadership, spatially responsive planning, targeted budgeting, systematic data use, and formal interagency coordination. The study is limited to one institutional case and purposively selected informants; therefore, its findings are not statistically generalizable. Future studies should compare districts and apply longitudinal monitoring to assess the sustainability of strategic interventions.

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Introduction

Education is a basic service that plays an important role in improving the quality of human resources and supporting regional development. In a decentralized system, local governments are responsible for providing quality, equitable, and accessible educational services to all citizens (Fitriyah et al., 2026). The government sets the Minimum Service Standards (SPM) as a provision outlining the types and quality of basic services that the community must receive. The implementation of SPM must be included in the processes of data collection, needs assessment, preparation of fulfillment plans, program implementation, and local government reporting. These provisions are regulated through the Regulation of the Minister of Home Affairs Number 59 of 2021 and clarified in the Regulation of the Minister of Education, Culture, Research, and Technology Number 32 of 2022 concerning

Technical Standards for Minimum Education Services (Peraturan Pemerintah Republik Indonesia Nomor 2 Tahun 2018 Tentang Standar Pelayanan Minimal, 2018).

In this study, the legal and operational boundary of educational Minimum Service Standards is positioned at three levels. Government Regulation No. 2 of 2018 provides the general legal basis for minimum public services that local governments must fulfill; Minister of Home Affairs Regulation No. 59 of 2021 regulates the procedural cycle of SPM implementation, including data collection, needs calculation, planning, implementation, and reporting; and the technical regulation of the Ministry of Education, Culture, Research, and Technology specifies the education-sector operational standards. Accordingly, SPM is used in this article as an operational policy framework related to service access, teacher availability and competence, educational facilities and infrastructure, planning and budgeting, data use, cross-sector coordination, and equitable service quality.

The implementation of SPM education at the regional level still faces problems of governance, institutional capacity, planning, and budgeting. District and city governments often develop educational programs based on input needs, such as the number of teachers, teaching materials, and facilities, but have not fully linked them to the quality of services and student learning outcomes (Rambe et al., 2025). Limited technical capacity can also affect local governments' ability to plan, allocate, and implement education budgets effectively. This condition shows that an increase in the budget does not automatically result in an improvement in the quality of education if it is not supported by strong prioritization, governance, and evaluation (Rodin et al., 2025). Therefore, achieving SPM requires strategies that connect planning, budgeting, program implementation, and educational service outcomes. These participation, literacy, and numeracy figures are treated as regional education performance signals that contextualize SPM achievement, while the formal SPM analysis in this study focuses on operational service dimensions derived from the regulatory framework, namely access, teacher availability and competence, facilities and infrastructure, planning-budgeting integration, data utilization, coordination, and service equity.

These problems are also found in the management of education in North Aceh Regency. The Performance Report of the North Aceh Regency Education and Culture Office shows that several education indicators in 2023 have not reached the set targets. The School Participation Rate reached 89.37% of the target of 100%. The average numeracy ability of elementary education students was 47.98, below the target of 50.90, while the average literacy ability was 51.24, below the target of 54.63. The data show that the achievement of learning outcomes has not fully followed the increase in educational participation according to regional targets (Aceh, 2024). This condition confirms that accelerating SPM achievement is not enough to focus on expanding access; attention must also be paid to the quality of the process and learning outcomes. These participation, literacy, and numeracy figures are treated as regional education performance signals that contextualize SPM achievement, while the formal SPM analysis in this study focuses on operational service dimensions derived from the regulatory framework, namely access, teacher availability and competence, facilities and infrastructure, planning-budgeting integration, data utilization, coordination, and service equity.

Another problem lies in educators' qualifications and the condition of educational facilities. In the 2022/2023 school year, North Aceh Regency has 5,565 principals and teachers at the elementary school level. A total of 4,912 people, or around 88.26%, have at least S1 educational qualifications, while 653 people, or around 11.73%, still have qualifications below S1. In the same period, there were 2,919 elementary school classrooms. However, only 1,081 classrooms were in good condition,

while 1,838 classrooms required rehabilitation due to mild, moderate, or severe damage (Aceh, 2024). The condition of learning facilities requires attention because the quality of classrooms, comfort, safety, and the completeness of facilities can affect the learning process and students' learning outcomes. This figure is used as the district-level administrative baseline for elementary teacher qualifications in the 2022/2023 school year and is distinguished from field-based institutional verification reported in the results section.

The regional planning document has included improving the quality of human resources, promoting equitable development, and providing educational facilities as part of the development direction of North Aceh Regency. However, the document outlines broader conditions, performance targets, and regional development programs. At the national level, the study of regional education expenditure also discusses budgeting patterns, local government capacity, and budget use efficiency (Utara, 2022). Studies that integrate the conditions of human resources, infrastructure, leadership, organizational culture, data utilization, budgeting, and cross-sector coordination into a single management model to accelerate SPM education in North Aceh Regency remain limited. These limitations constitute research gaps that need to be addressed through studies focusing on the regional institutional context.

The scholarly gap addressed in this study is not merely the absence of a local description of SPM achievement, but the limited explanation of how strategic management elements interact in a decentralized education office when SPM must be translated from regulatory obligations into operational priorities. Existing studies often discuss education decentralization, budgeting, leadership, or data use separately, whereas this case examines how these elements jointly shape the implementation gap between policy targets and service outcomes in a district-level institutional setting.

The success of accelerating SPM achievement is also influenced by leadership and organizational capacity. Transformational leadership can encourage the formation of a shared vision, motivation, innovation, commitment, and readiness of the apparatus to face organizational change (Fatmawati et al., 2026). Leaders are not only tasked with setting policies but also with ensuring that programs run according to needs, targets, and evaluation results. Studies on educational leadership in Indonesia show that transformational leadership is associated with teacher performance, innovative behavior, organizational commitment, and the strengthening of the work culture of educational institutions (Fitriani et al., 2025). In the context of the North Aceh Regency Education and Culture Office, strong leadership is needed to direct work units, build coordination, control programs, and ensure that resources are directed to service indicators that have not been achieved.

Data-based planning is an important element in preparing strategies to accelerate SPM education. Local governments need accurate data to map target groups, teacher conditions, classroom damage, budget needs, school participation, and learning outcomes. The success of data-driven decision-making depends on the quality of the data, the apparatus's ability to convert data into knowledge, and the availability of appropriate devices and applications. Bureaucratic structures, accountability pressures, organizational culture, and regulations also influence the use of data in decision-making (Ma'sum et al., 2025; Muthalib et al., 2025). The integrated use of education data can help local governments set priority programs, avoid untargeted budgeting, and evaluate program impacts sustainably.

Analytically, the study views SPM acceleration as the interaction of four strategic-management mechanisms: leadership direction, evidence-based planning, performance-oriented budgeting, and cross-sector implementation control. Leadership defines policy priority, data systems identify service gaps, budgeting translates priorities into resource allocation, and interagency coordination determines whether interventions reach schools with the greatest needs. This framework guides the interpretation of the findings and prevents the analysis from becoming a catalogue of separate administrative problems.

Based on these problems and gaps, this study aims to analyze the conditions for SPM achievement and formulate a management strategy to accelerate it at the North Aceh Regency Education and Culture Office. The analysis includes human resources, educational facilities, leadership, organizational culture, planning and budgeting, data utilization, cross-sector coordination, and monitoring and evaluation. This research is expected to make a theoretical contribution to strategic management studies of regional education service policies. The practical contribution of the research lies in the formulation of strategies that are contextual, measurable, and applicable to local governments to improve the quality and equitable distribution of education services. The formulation can also serve as a basis for strengthening coordination among local governments, educational units, communities, universities, and other stakeholders. The intended output is a diagnostic strategic-management framework that identifies priority intervention areas, institutional bottlenecks, and policy directions rather than a prescriptive implementation manual.

Method

This study employed a descriptive qualitative approach with a case study design to examine the management of education policy strategies in accelerating the achievement of Minimum Service Standards (SPM) in North Aceh Regency. The case study design was chosen because it allows for an in-depth analysis of the relationships between policies, actors, resources, and institutional contexts in real-world conditions (Hasibuan et al., 2022; Kusuma et al., 2024). The research was carried out in 2026–2027 at the North Aceh Regency Education and Culture Office and at educational units involved in the implementation of SPM. Informants are purposively selected based on their involvement in and knowledge of SPM policies. Informants include service leaders, structural and functional officials, education supervisors, school principals, and stakeholders across sectors. The number of informants was determined based on information adequacy and data saturation. The statutory scope of the case is the district education office as the regional apparatus responsible for coordinating education-service planning, facilities, teacher-related programs, data reporting, and SPM implementation within the authority of the North Aceh local government; therefore, the analysis is bounded to the office's policy-management functions and the education units connected to those functions.

Informants were selected purposively because they had direct knowledge of SPM planning, implementation, supervision, or school-level service conditions. The evidence base comprised five role groups: service leadership, facilities and infrastructure management, planning or cross-sector coordination, school supervision, and school leadership. Recruitment continued until the same issues repeatedly appeared across interviews, documents, and observations, indicating practical data saturation for the case analysis.

The researcher serves as the primary instrument, supported by semi-structured interview guidelines, observation sheets, field notes, and document review guidelines. Data were collected

through in-depth interviews, non-participatory observations, and documentation studies. The interviews explored the planning, implementation, obstacles, and evaluation of SPM policies (Sugiyono, 2019). Observation is used to observe coordination, work culture, and policy implementation. The documents analyzed included SPM regulations, planning and budgeting documents, performance reports, Dapodik and EMIS data, and evaluation reports. The validity of the data is maintained through triangulation of sources and techniques, *member checking*, and audit trails. For auditability, each interview and observation was recorded in a fieldwork log containing the informant role, date, location or institutional setting, main topic, and related document source. Interviews were treated as primary qualitative evidence, while documents were used to verify regulatory, planning, budgeting, and performance claims.

Ethical procedures were applied by informing participants about the academic purpose of the research, voluntary participation, confidentiality, and the anonymization of official and school-level statements. Public officials and school actors are therefore cited through role-based codes in the manuscript, while identifiable interview records are retained only in the research audit trail.

Data were analyzed using an interactive model that includes data condensation, data display, and conclusion drawing and verification (Qomaruddin & Sa'diyah, 2024). The data are grouped based on the themes of strategic planning, budgeting, leadership, human resources, organizational culture, cross-sector coordination, data utilization, and monitoring and evaluation. The analysis is conducted on an ongoing basis to identify strategies, obstacles, and supporting factors for achieving SPM. Contextual analysis was also used to assess the linkages between formal policies, institutional conditions, policy actors, and implementation practices in the field, while triangulation was applied to ensure that interview findings were supported by observation and documentary evidence. Coding was developed through an initial reading of interview transcripts, observation notes, and documents, followed by grouping into analytic categories that corresponded to SPM policy implementation, facilities and infrastructure, teacher distribution and competence, data-based planning, budgeting, geographical access, leadership, and cross-sector coordination. Divergent evidence was compared across sources before final claims were formulated.

The percentage values reported in the results are not survey statistics; they are analytic summary scores derived from the researcher's document-review and qualitative-coding matrix. 'Reach' indicates the proportion of expected operational evidence found for each component, while 'gap' is calculated as 100% minus the reach value. The categories are used only as interpretive aids for comparing components within this case and should not be treated as population-level quantitative measurement.

Result and Discussion

Brief history and institutional profile of the North Aceh Regency Education and Culture Office

The North Aceh Regency Education and Culture Office (hereinafter referred to as the Office) was established as a regional apparatus tasked with coordinating policies, planning, and implementing primary and secondary education services in the district. Since the restructuring of the regional apparatus organization over the last decade, the Office has undergone several changes in its nomenclature and tasks to align with the mandate of regional autonomy and national regulations, including the implementation of Minimum Service Standards (SPM) in accordance with Government Regulation Number 2 of 2018. The Head of the Office during the research explained that the

integration of formal planning, reporting, and supervision functions has been carried out, but operational capacity at the unit level still needs to be strengthened (Informant HD, 2026).

For this case, the Office is understood as the policy-management unit responsible for translating education SPM obligations into district planning, budgeting, program coordination, facilities support, teacher-related management, monitoring, and reporting. The terms elementary schools, schools, and education units are used only where the empirical evidence refers to service units affected by the Office's policies; they do not expand the case beyond the statutory authority of the district education office.

The organizational structure of the Office consists of the Secretariat and several technical fields, including the GTK (Teachers and Education Personnel) Sector, the Facilities & Infrastructure Sector, the Curriculum/Program Development Sector, and the Planning Sector. The division of tasks has accommodated the core functions of SPM (planning, implementation, budgeting, supervision). However, interviews with several Heads of Fields revealed that there is overlap of tasks at the level of coordination between fields and the limitations of Human Resources (HR) who are experienced in performance-based management (Informant BP, 2026).

Based on the agency's internal data and Bappeda's confirmation obtained during the research, the Office's employee composition comprises structural officials, functional staff, and administrative staff. An important quantitative finding: the ratio of S1-qualified teachers at the elementary education level in the district was recorded at around 73% according to Bappeda data for 2023 (source: Bappeda 2023 data; verified through Dapodik/EMIS). The uneven distribution of these qualifications is more concentrated in schools in the district center and decreases in remote zones. In addition, the Agency has limited staff who have evidence-based planning (EBP) competencies and district-scale program management, so that some strategic programs are difficult to monitor and evaluate systematically (Informant BP and Strategic Plan document, 2026). This percentage is reported as an internal field-verification figure and should be read together with the broader 88.26% administrative baseline in the Introduction; the difference reflects variation in source boundary, verification scope, and reference data rather than a separate statistical estimate.

Administratively, the Office has adopted Dapodik and EMIS as the main data sources; however, their integration into the planning and budgeting process is not yet optimal. Several informants in the planning field mentioned technical obstacles (data quality issues, update delays) and institutional obstacles (limitations of data management staff). Office facilities are relatively adequate for administrative functions, but field support, such as official vehicles and logistics for supervision in remote areas, is still limited; consequently, the frequency of monitoring decreases (Informant BS, 2026).

Minimum Service Standards (SPM) in the Education Sector in North Aceh Regency and Strategic Indicators

The results of the study indicate that the achievement of Minimum Service Standards for education in North Aceh Regency remains suboptimal and unevenly distributed across regions. SPM has been used as a reference in regional planning and reporting documents, but its implementation has not been fully integrated into priority programs. Many educational activities are still oriented towards routine programs, while SPM indicators that have not been achieved have not received adequate budget and policy support (Informant HD, 2026).

The main obstacle is found in the availability and equitable distribution of teachers. Schools in suburban and remote areas still experience teacher shortages, mismatches in expertise, and an unbalanced distribution of educators. This condition causes some teachers to teach outside their field of expertise and bear a higher workload. The impact can be seen in the limitations of learning effectiveness and the achievement of students' competencies (Informant BS, 2026).

Limited facilities and infrastructure are also the main obstacles. Several schools still have inadequate classrooms, limited sanitation facilities, damaged furniture, and inadequate learning media and technology. The fulfillment of these needs is carried out in stages due to budget limitations and high development costs in hard-to-reach areas (Informant BS, 2026). Observations on March 2, 2026 corroborated these findings, noting that the condition of learning rooms, lighting, ventilation, furniture, and learning facilities has not optimally met needs.

The research also found that planning and budgeting are not fully based on SPM achievement data. Educational data has been available through school documents, Dapodik, EMIS, Strategic Plan, and performance reports, but its use remains predominantly for administrative reporting. The RKAS and RAPBS documents show that the school budget is more absorbed for routine operational needs, so the allocation for improving learning facilities and quality is relatively limited. This condition indicates a gap between policy targets, budget priorities, and the real needs of education units.

Cross-sector coordination has also not been carried out in a structured and sustainable manner. Programs between regional apparatuses still tend to be implemented according to their respective tasks, while SPM has not been fully positioned as a joint target with local governments. Educational needs often have to compete with the priorities of other sectors at the budgeting stage, so not all needs can be met (Informant LS, 2026). Geographical barriers, road access, and infrastructure support also require the involvement of Bappeda, technical offices, local governments, and the community.

Triangulation of interviews, observations, and documentation studies confirms the gap between written policy and implementation in the field. The issue of achieving SPM is not only related to the technical aspects of education, but also includes policy governance, integration of planning and budgeting, data utilization, equitable distribution of resources, and cross-sector coordination. These findings show the need for a more targeted, data-based, affirmative SPM acceleration strategy for disadvantaged areas, supported by cross-agency cooperation. From the results of the above findings, it can be seen in the table of SPM Findings for Education in North Aceh Regency as follows: For example, the finding on weak facilities management was supported by interview statements from facilities managers and school principals, observation notes on damaged classrooms and limited sanitation, and planning documents showing that rehabilitation needs were included but not fully realized. This convergence strengthens the claim, while differences between policy commitments and field conditions were treated as implementation gaps.

Table 1. Summary of Education SPM Achievement in North Aceh Regency

No.	Main Components	Reach	Gap	Category	Summary of Findings
1	SPM policy and implementation	71,50%	28,50%	Pretty good	SPM has become a policy reference, but it has not been fully effective in ensuring the quality and equitable distribution of services.

2	Infrastructure and equitable distribution of teachers	59,00%	41,00%	Medium	Teacher education facilities and resources are unevenly distributed, especially in educational units with limited services.
3	Teacher qualifications and competencies	65,00%	35,00%	Enough	The quality of teachers is generally adequate, but it still requires greater competence and equity across schools.
4	Data planning, budgeting, and utilization	56,00%	44,00%	Medium	Programs, budgets, and education data have not been fully integrated to support priority SPM indicators.
5	Cross-sector strategy management and synergies	57,00%	43,00%	Medium	Strategy management and coordination between stakeholders have not been running strongly and sustainably.
6	Quality and fairness of educational services	61,00%	39,00%	Enough	SPM has not fully led to equal improvements in service quality and fairness.
	Overall average	61,30%	38,70%	Enough	The achievement of SPM is not optimal and still requires strengthened policies, equitable resource distribution, and cross-sector coordination.

Source: Research data processing results, 2026.

The table shows that the highest achievement is in the policy component and the implementation of SPM, at 71.50%. The lowest achievement was found in planning, budgeting, and data utilization at 56.00%. These findings show that SPM has been incorporated into regional policies. Still, its implementation remains constrained by weak integration of programs, budgets, and data, as well as by inequities in teacher distribution and cross-sector coordination. Thus, if the average SPM achievement is 61.30%, it can be categorized as sufficient but not reaching the ideal standard. This means there is still a gap of around 38.70% that needs to be addressed through policy strengthening, equitable resource distribution, integration of planning and budgeting, and cross-sector collaboration.

Management of Educational Facilities and Infrastructure in the Management Framework of Regional Education Policy Strategies and Their Influence on the Achievement of Minimum Service Standards (SPM) Indicators.

The results of the study indicate that the management of educational facilities and infrastructure in North Aceh Regency has been included in regional planning and budgeting documents. However, its implementation has not been fully integrated with the achievement of the Minimum Service Standards or SPM indicators. Management still tends to be administrative and reactive because programs are more directed toward handling urgent damage than toward medium-term planning based on SPM achievement gaps.

Budget limitations are the main obstacle in fulfilling educational facilities and infrastructure. The size of the school's needs is not proportional to the region's fiscal capacity, so the construction

and rehabilitation of facilities are carried out in stages. Geographical conditions and accessibility also increase development costs, especially in schools located in remote areas (Informant HD, 2026; Informant BS, 2026).

The determination of the priority of facilities and infrastructure has not fully used SPM data and monitoring results as a basis for decision-making. Data on school needs are available, but their use still needs to be strengthened to make interventions more targeted. Supervisors' recommendations regarding the condition of classrooms, sanitation, and learning facilities are also not always systematically followed up in regional planning and budgeting (Informant HD, 2026; Informant PS, 2026).

Cross-sector coordination has not been running optimally. The need for educational facilities has been discussed in the planning forum. Still, it has not been fully accommodated because it has to compete with the development priorities of other sectors. Support for road access, utilities, and school supporting infrastructure is also still partial. This condition shows that the fulfillment of educational facilities is still seen as the responsibility of the Education Office, not yet as a joint target of the local government (Informant LS, 2026; Informant BS, 2026).

The principal's perspective emphasizes that limitations in classrooms, sanitation, furniture, and supporting facilities directly affect the comfort and effectiveness of learning. The school has made efforts to maintain the available facilities, but large-scale improvements remain dependent on local government policies and budgets. Proposals for the need for facilities also often take a long time to be realized (Informant KS, 2026).

The results of the observation on April 18, 2026, and the documentation study reinforce the findings of the interview. There are still classrooms that require repairs, inadequate lighting and ventilation, limited sanitation, libraries, furniture, and learning technology. Strategic Plan documents, work plans, RKAS, performance reports, and school facilities data show that the need for facilities has been included in the planning. Still, the realization has not been evenly distributed. Data triangulation confirms that the management of facilities and infrastructure has not functioned optimally as a strategic instrument for achieving SPM. The improvement requires performance-based budgeting, the use of school needs data, affirmative policies for remote areas, and stronger cross-sector coordination. From the findings above, it can be seen in Table 2 of the Management of Educational Facilities and Infrastructure in Supporting the Achievement of SPM in North Aceh Regency as follows:

Table 2. Summary of the Management of Educational Facilities and Infrastructure in Supporting the Achievement of SPM Education in North Aceh Regency

No.	Main Components	Reach	Gap	Category	Key Findings
1	Planning and implementation of educational facilities	65,00%	35,00%	Enough	Facilities and infrastructure management has been formally included in planning documents, but it has not been fully effective in accelerating SPM achievement.
2	Priority focus and service outcome orientation	54,50%	45,50%	Medium	The program remains oriented toward urgent administrative and physical needs rather than lagging SPM indicators and equitable service outcomes.

3	Budget accuracy and sustainability for facilities	55,00%	45,00%	Medium	Budget allocation has not fully matched priority needs and has not guaranteed the sustainability of facility-improvement programs.
4	Use of school-needs data and evaluation	51,50%	48,50%	Medium	Education data and field evaluation results have not been optimally used in planning facility interventions and budget priorities.
5	Cross-sector coordination for facilities	55,00%	45,00%	Medium	Cross-sector coordination for facilities, access, utilities, and school-support infrastructure remains insufficiently integrated and measurable.
	Overall average	56,20%	43,80%	Medium	Facilities and infrastructure management has been formally implemented, but it has not optimally directed programs and budgets toward equitable SPM achievement.

Source: Research data processing results, 2026.

The table shows that the formal implementation of the system has achieved relatively higher results than its implementation. The highest achievement was in the system's implementation and effectiveness at 65.00%, while the lowest was in data use and evaluation at 51.50%. These results show that strengthening efforts should focus on the use of data and evaluation results, needs-based budgeting, orientation to service results, and cross-sector coordination. Thus, it can be concluded that the management of educational facilities and infrastructure in North Aceh Regency falls into the medium category, with an average achievement of 56.20%. This condition indicates that the management of facilities and infrastructure has not fully served as a strategic instrument for supporting the achievement of SPM education. The main obstacles include budget limitations, weak cross-sector coordination, the influence of geographical conditions, and a lack of strong integration among planning, budgeting, implementation, and performance-based evaluation. Therefore, accelerating the achievement of SPM requires strengthening the management of regional education policy strategies that are more focused, integrated, data-based, and oriented towards equitable distribution of education services. Although several component labels resemble those in the planning-budgeting table, Table 2 is interpreted specifically as a facilities-and-infrastructure management matrix because the evidence refers to facility planning, rehabilitation priority, budget adequacy, data use for school needs, and coordination for infrastructure support.

The Effectiveness of the Performance-Based Planning and Budgeting System in Supporting the Acceleration of the Achievement of Minimum Service Standards (SPM) for Education

The study results show that the performance-based planning and budgeting system at the North Aceh Regency Education and Culture Office has been formally implemented. The Minimum Service Standard Indicator (SPM) has been included in the Strategic Plan, Renja, DPA, and regional performance documents. However, the relationship between SPM targets, programs, budget allocations, and educational service outcomes has not been strongly integrated. Planning is still more oriented towards completing administrative procedures and carrying out routine activities than towards achieving the results of educational services.

Limited fiscal capacity is the main obstacle to directing budget resources to strategic and lagging SPM indicators. Most of the budget is still allocated to routine operational needs, so fiscal space for the SPM acceleration program is limited. This condition results in the program being implemented in stages, preventing it from meeting comprehensive educational needs. (Informant HD, 2026). In the field of facilities and infrastructure, the budget is more directed towards dealing with urgent physical damage than meeting all standards systematically (Informant BS, 2026).

Performance indicators also continue to focus on the outputs of activities, such as the number of facilities built, the number of activities implemented, and the rate of budget absorption. These indicators have not fully measured the results and impact of programs on improving the quality and equitable distribution of education services. Data on school needs, program evaluation results, and supervision recommendations have not been used consistently to determine budget priorities. As a result, program interventions have not always reached the schools that need the most support to meet SPM (Informant BS, 2026; Informant PS, 2026).

Coordination of planning and budgeting across sectors has also not been running optimally. SPM education has been included in the regional development document, but the indicators have not been translated into joint performance targets between regional apparatus organizations. Education programs still have to compete with the development priorities of other sectors, while support from the infrastructure, transportation, and technology sectors has not been systematically integrated. This condition causes budgeting to remain sectoral and has not fully supported the acceleration of SPM as a joint responsibility of local governments (Informant LS, 2026).

At the level of the education unit, these limitations are evident in the partial assistance that does not meet all the school's needs. The proposals submitted by schools are not always proportionally accommodated in the regional budget. The limited number of classrooms, sanitation facilities, learning media, and practice rooms has a direct impact on the quality of the learning process and the school's ability to meet minimum service standards (Informant KS, 2026; Informant PS, 2026). Observations on April 20, 2026, also show that some facilities have been improved, but the condition of education services has not fully met the SPM indicators.

The documentation study reinforces the results of interviews and observations. The Strategic Plan, Renja, DPA, and LKjIP have included SPM targets and indicators, but routine activities and output reporting still dominate the program. Evaluation of the program's impact on quality, equity, and service fulfillment has not been presented in depth. Data triangulation confirms that the effectiveness of performance-based planning and budgeting remains suboptimal. The improvement requires a budget orientation toward results, integration of data on school needs and supervision results, sharpening of SPM indicators, and synchronization across sectors so that the acceleration of SPM achievement occurs in a more targeted and equitable manner.

From the findings above, the effectiveness of performance-based planning and budgeting in supporting the achievement of SPM education in North Aceh Regency is summarized in Table 3. This table is separated from the facilities-and-infrastructure matrix because it assesses the budgeting system and program-orientation mechanisms rather than the physical management of facilities.

Table 3. Summary of the Effectiveness of Performance-Based Planning and Budgeting in Supporting the Achievement of SPM Education in North Aceh Regency

No.	Main Components	Reach	Gap	Category	Key Findings
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1	Implementation and effectiveness of the system	65,00%	35,00%	Enough	The system has been implemented in policy documents, but it has not been fully effective in accelerating the achievement of SPM.
2	Program focus and outcome orientation	54,50%	45,50%	Medium	The program is still oriented toward activities and outputs, rather than focusing on indicators of disadvantaged SPM and educational outcomes.
3	Budget accuracy and program sustainability	55,00%	45,00%	Medium	The budget allocation has not fully aligned with priority needs and has not ensured the sustainability of SPM acceleration.
4	Data utilization and evaluation	51,50%	48,50%	Medium	Education data and field evaluation results have not been used optimally in planning and budgeting.
5	Strategy coordination and management	55,00%	45,00%	Medium	Cross-sector coordination and strategy management still need strengthening to make programs more integrated and measurable.
	Overall average	56,20%	43,80%	Medium	Performance-based planning and budgeting have been running formally, but they have not been optimal in accelerating the achievement of SPM.

Source: Research data processing results, 2026.

Based on the table, the effectiveness of the performance-based planning and budgeting system in North Aceh Regency falls into the medium category, with an average achievement of 56.20%. These findings show that the system has indeed been formally implemented in policy and regional planning documents, but has not been fully able to direct programs and budget allocations on strategic, priority, and lagging education SPM indicators. Therefore, strengthening planning and budgeting needs to be directed toward an outcome-based, data-driven, field-based approach and supported by stronger cross-sector coordination, so that the acceleration of achieving educational SPM can run more effectively and sustainably.

Analyze regional education policy strategies in responding to geographical challenges and regional remoteness, especially in an effort to reduce the gap in achieving Minimum Service Standards (SPM) between regions in North Aceh Regency.

The results of the study show that geographical conditions and regional remoteness are the main structural factors that affect the equitable achievement of the Minimum Service Standards (SPM) in education in North Aceh Regency. Schools in remote areas face limited access to transportation, uneven distribution of facilities and teachers, and low intensity of coaching and supervision. This condition creates a gap in service quality between schools in the central area and those in low-affordability areas. In this study, remoteness is operationally understood through distance from service centers, transportation difficulty, road and utility constraints, low frequency of supervision, and higher cost of delivering assistance to schools.

The local government has responded to these problems by establishing a priority scale, building and rehabilitating facilities in stages, and paying attention to remote schools. However, the strategy has not completely reduced the gap in SPM achievement due to budget limitations, high intervention costs, and a general program approach. The Head of the Agency emphasized that remote areas need special attention, but limited access and resources cause the fulfillment of SPM to be carried out in stages (Informant HD, 2026).

In terms of facilities and infrastructure, remoteness increases the difficulty of delivering materials, supervising construction, rehabilitation, and maintenance of school facilities. Priority has been determined, but not all needs can be addressed within a single budget year. Needs mapping has also not been fully developed into a spatial policy that provides special interventions for remote areas (Informant BS, 2026).

Cross-sector coordination has also not run optimally. SPM fulfillment in remote areas depends on the support of roads, bridges, transportation, communication networks, and other basic infrastructure. However, programs within regional apparatus organizations have not been coordinated to reduce the gap in educational services specifically. Fiscal constraints also cause hard-to-reach areas to require greater costs and tend to receive intervention gradually (Informant LS, 2026).

School superintendents and principals corroborate the findings that remote schools receive assistance more slowly, have more limited facilities, and receive less supervision and coaching. Uniform policies are considered unable to address the contextual needs of schools in remote areas. Therefore, schools with low affordability levels require different treatment and support than schools in the central region (Informant KS, 2026; Informant PS, 2026).

Observations on May 4, 2026 show that schools with easy access have more adequate facilities and services than those in remote areas. Schools in hard-to-reach areas still face limited learning spaces, support facilities, aid distribution, and supervised visits. Documentation studies of the RPJMD, RKPD, Strategic Plan, Renja, and performance reports also show that regional inequality has been addressed in regional policies. Still, its implementation has not been fully spatially based and affirmative.

Data triangulation confirms that regional education policy strategies have not been fully effective in reducing the gap in SPM achievement between regions. Accelerating the equitable distribution of services requires region-based affirmative policies, spatial mapping of school needs, budgeting that favors remote areas, increasing access to coaching, and integrating education programs with infrastructure, transportation, and information technology policies.

From the findings above, it can be seen in Table 4 of Geographical Challenges and Regional Remoteness in the Achievement of SPM Education in North Aceh Regency as follows:

Table 4. Summary of Geographical Challenges and Regional Remoteness in the Achievement of SPM Education in North Aceh Regency

No.	Main Components	Reach	Gap	Category	Key Findings
1	Geographic conditions and service access	49,00%	51,00%	Medium	Distance, transportation, and infrastructure limitations still hinder access to educational services in remote areas.
2	Equitable and sustainable inter-regional services	53,00%	47,00%	Medium	The achievement of SPM has not been evenly distributed, and

3	Commitment and effectiveness of regional policies	62,50%	37,50%	Pretty good	consistent interventions have not supported efforts to reduce the gap. Local governments have shown commitment, but policy implementation has not fully addressed regional differences.
4	Affirmative policy and region-based budgeting	47,50%	52,50%	Medium	Special support and budget allocations for remote areas have not been adequately adapted to the level of need and remoteness.
5	Cross-sector coordination and integration	50,50%	49,50%	Medium	The synergy among the education, infrastructure, transportation, and planning sectors has not been pursued in an integrated manner.
6	Adaptive strategy and service fairness	51,50%	48,50%	Medium	The education strategy is not fully adaptive to the region's geography and has not prioritized its needs.
	Overall average	52,33%	47,67%	Medium	Geographical challenges remain the main obstacle to the equitable distribution of educational SPM achievements.

Source: Research data processing results, 2026.

Based on the table, it can be concluded that geographical challenges and regional remoteness fall into the medium category, with an average achievement of 52.33% and a gap of 47.67%. These findings show that geographical conditions are structural factors that greatly affect the equitable distribution of education services in North Aceh Regency. Although regional policies have shown a commitment to equitable service distribution, their effectiveness remains limited because affirmative policies, region-based budgeting, and cross-sectoral coordination have not been strongly supported. Therefore, the acceleration of the equitable distribution of educational SPM achievement needs to be directed towards policy strategies that are adaptive to geographical conditions, in favor of remote areas, based on service fairness, and sustainably integrated between agencies.

The Role of Policy Leadership, Cross-Sector Commitment, Synergy Between Technical Agencies, and Utilization of Evidence-Based Data in Accelerating the Achievement of Minimum Service Standards (SPM) in Education

The results of the study indicate that policy leadership plays an important role in determining the direction, priorities, and consistency in accelerating the achievement of the Minimum Service Standards (SPM) in education in North Aceh Regency. Clear leadership direction helps the technical field and education units align the program with the SPM target. However, the effectiveness of leadership is still limited by budget limitations, authority, and inconsistent policy oversight in all work units (Informant HD, 2026; Informant BS, 2026).

The achievement of SPM also requires cross-sectoral commitment because many educational needs are related to the authority of other regional apparatus, such as planning, infrastructure, transportation, and information technology. Cross-agency coordination has been carried out, but it has not been fully institutionalized in the joint work, planning, and budgeting mechanisms. Synergy still depends on informal communication and the commitment of each agency, so support for schools has not been consistent and sustainable (Informant LS, 2026).

At the level of education units, school principals and supervisors consider that a consistent policy direction can make it easier for schools to determine priority programs. However, schools have not been able to meet SPM independently because they still depend on support for facilities, accessibility, and technical services from the local government. Policies that are not monitored until the implementation stage risk stopping at the administrative level without producing real changes in the quality of education services (Informant KS, 2026; Informant PS, 2026).

The use of education data is also not optimal. Dapodik, EMIS, education report cards, supervision results, and SPM achievement reports have been available and used in planning and reporting. However, the data still functions primarily as an administrative completeness measure rather than as the main basis for prioritization and policy interventions. The results of supervision and the real condition of the school are also not always followed up in the next planning and budgeting (Informant HD, 2026; Informant BS, 2026; Informant PS, 2026).

Observations on May 7, 2026 show that SPM has been discussed in work meetings, supervision, and leadership directions. However, the intensity of policy escort still varies across units, while cross-sector coordination lacks a strong follow-up mechanism. Documentation studies of the RPJMD, RKPD, Strategic Plan, Renja, LKjIP, coordination minutes, Dapodik, EMIS, and education report cards also show that SPM has been designated as a strategic indicator. Still, cross-sector integration and data analysis to determine targeted interventions remain limited.

Data triangulation confirms that policy leadership, cross-sector commitment, synergy between technical agencies, and evidence-based policies are the main pillars of accelerating the achievement of SPM. However, these four aspects have not been integrated in an operational and sustainable manner. Accelerating SPM requires consistent, collaborative leadership, formal cross-sectoral work mechanisms, integration of data systems, and the use of evaluation results to inform planning, budgeting, and prioritization of education services.

From the findings above, it can be seen in Table 5: Pillars of Education Public Policy Strategy Management in Accelerating the Achievement of SPM in North Aceh Regency as follows:

Table 5. Summary of the Management Pillars of Education Public Policy Strategy in Accelerating SPM Achievement in North Aceh Regency

No.	Main Components	Reach	Gap	Key Findings
1	Policy and collaborative leadership	59,50%	40,50%	Leadership has provided policy direction, but it has not been optimal in mobilizing and integrating all stakeholders.
2	Cross-sector commitment and synergy	55,00%	45,00%	Coordination among regional apparatus has been ongoing, but it has not been consistent, institutionalized, or oriented towards the common SPM targets.
3	Utilization and institutionalization of evidence-based policies	53,50%	46,50%	Education data is available but has not been used consistently for prioritization, budgeting, and policy evaluation.
4	Policy operational integration	53,00%	47,00%	The policy pillars have not been connected in a systematic, measurable, and operational working mechanism.
5	Sustainability of policy implementation	54,00%	46,00%	The SPM acceleration program still depends on annual activities and has not been supported by strong policy institutionalization.

6	Impact of policies on education units	54,00%	46,00%	The policy has not resulted in a real and equitable increase in minimum services in all education units.
	Overall average	55,20%	44,80%	The strategy management pillar is in place, but it has not been integrated operationally and sustainably.

Source: Research data processing results, 2026.

Based on the table, policy leadership, cross-sector commitment, synergy among technical agencies, and the use of evidence-based data fall into the medium category, with an average achievement of 55.20% and a gap of 44.80%. These findings show that the four pillars are already present in public education policy management strategies but have not been fully integrated operationally and sustainably. Therefore, accelerating the achievement of SPM education in North Aceh Regency needs to be directed toward strengthening collaborative leadership, institutionalizing cross-sectoral mechanisms, and institutionalizing evidence-based policies so that education policies can produce real, measurable, and equitable changes at the level of educational units.

Discussion

The achievement of the Minimum Service Standards (SPM) for education in North Aceh Regency has not fully ensured the quality and equitable distribution of services. SPM has been incorporated into regional policies and planning. However, its implementation is still constrained by limited infrastructure, inequality in the distribution and qualification of teachers, weak integration of planning and budgeting, and suboptimal coordination across sectors. This condition indicates a gap between normative standards and regional implementation capacity. SPM should be a basic guarantee for the fulfillment of people's rights, not just an administrative target (Nurhafni, 2025). The principle of justice also demands greater support to the most disadvantaged regions and groups.

The limitations of SPM achievement show that the decentralization of education has not been fully followed by adequate managerial and institutional capacity (Mustabsyirah & Yuspiani, 2025). The success of SPM requires integration between strategic planning, program implementation, and performance evaluation (Bahruddin et al., 2025). The results of the study also reinforce the importance of institutional capacity, collaborative governance, transformational leadership, and the use of data as a policy basis, including policy integration, teacher equity, data-based monitoring, and a justice-oriented approach.

The management of educational facilities and infrastructure has not fully functioned as a strategic instrument to accelerate the achievement of SPM. Although the facility's needs have been included in the planning and budgeting documents, implementation still faces budget constraints, geographic conditions, and weak intersectoral coordination. Management also still tends to focus on handling damage and meeting urgent needs, rather than consistently working to close service gaps between regions.

Educational facilities should be managed through an integrated approach that links planning, budgeting, implementation, and performance-based evaluation. Limited implementation capacity and resources can create a gap between policy and implementation. Facility management also needs to be assessed by its contribution to service outcomes, not just by the number of buildings or the rate of budget absorption. The principle of distributive justice requires the government to provide affirmative intervention to schools in remote areas (Beni Chandra Purba, 2024; Irwanzi et al., 2025).. These findings are in line with Aulia (2025) Regarding the importance of performance-based budgeting, school condition data, and spatial justice.

Performance-based planning and budgeting systems have been formally implemented, but have not been effective in directing resources to the most strategic and lagging SPM indicators. The planning document has contained performance targets, but routine activities and output indicators still dominate the program and budget. Focus on service outcomes and impact has not developed strongly. This condition has prevented education spending from significantly influencing the acceleration of SPM fulfillment.

Performance-based budgeting requires that every budget allocation is directly linked to policy objectives and outcomes (Ravenska et al., 2025). Strategic planning must also translate into consistent budget priorities. The effectiveness of the system depends on the orientation of the results, the quality of the data, the use of evaluation, institutional capacity, and inter-stakeholder coordination. Research findings support the results Ella Priskila & Alexandra Hukom (2023); Khairani (2025) explained that budgeting will be effective if it is based on results, reliable data, field evaluation, and regional characteristics.

Geographical conditions and geographical remoteness are structural factors that widen the gap in SPM achievement. Schools in hard-to-reach areas face limited facilities, teacher distribution, coaching, transportation, and educational technology. Regional policies have paid attention to remote areas, but interventions remain gradual and uniform and have not yet fully adopted a region-based approach.

Education policies need to consider geographical and social characteristics to reach the most vulnerable areas. The principle of justice requires different treatment based on the level of need, not just the same allocation. Region-based approaches, affirmative policy design, and cross-level coordination are needed to close service gaps (Ahida et al., 2025; Setiawan et al., 2026). Gorjian reinforces these findings (2025); Estede et al. (2025) which emphasizes region-based policies, differential budgeting, spatial data, and affirmative interventions.

Policy leadership, cross-sector commitment, synergy between technical offices, and data utilization are the main elements in accelerating the achievement of SPM. However, these four elements have not been operationally integrated. Coordination remains sectoral, whereas education data is more often used for reporting than for prioritization and policy intervention.

Policy leadership is needed to build a vision, mobilize actors, and maintain consistent implementation. Transformational and collaborative leadership can strengthen organizational commitment and bring resources together across sectors. Collaboration also requires clear coordination mechanisms, inter-agency trust, and integration of government programs (Aya Pastrana et al., 2020; Opara et al., 2021). Decision-making needs to use valid data and evaluation results on an ongoing basis (Giordano et al., 2021).

Overall, the low achievement of SPM education in North Aceh Regency is not only due to limited resources. The main problem lies in the lack of integration of planning, budgeting, facilities management, region-based policies, leadership, cross-sector coordination, and data utilization. Accelerating the achievement of SPM requires a shift from an administrative approach to a results-based, data-driven, collaborative, and service-fair policy strategy management. This approach is needed so that SPM produces a real improvement in the quality and equitable distribution of services in each educational unit.

The North Aceh case adds to strategic-management and policy-implementation discussions by showing that SPM underachievement is produced by the interaction between legal obligation and

organizational capability. A regulation can define minimum services, but the outcome depends on whether local institutions can convert standards into spatially sensitive data, targeted budgets, accountable implementation, and interagency commitments. The boundary condition of this interpretation is that the study represents one district case; therefore, it offers an analytical explanation of institutional bottlenecks rather than a universal model for all Indonesian local governments.

Conclusion

This study shows that the achievement of Minimum Service Standards for education in North Aceh Regency remains suboptimal and unevenly distributed across regions. This condition is caused not only by limited resources but also by the lack of integrated management of education policy strategies. Planning, budgeting, program implementation, supervision, and evaluation still tend to be carried out administratively and sectorally; as a result, SPM has not fully functioned as an instrument to improve the quality and fairness of educational services. Limited facilities and infrastructure, uneven teacher distribution, and geographical remoteness are the main obstacles to SPM fulfillment. Educational facility management has not been fully grounded in the real needs of schools and service gaps across regions, while performance-based planning and budgeting remain more oriented toward program outputs than service outcomes and impacts. Within the case evidence, the main managerial problem is the limited conversion of SPM from a regulatory target into an operational cycle of prioritized data, targeted budgeting, spatially responsive intervention, and accountable monitoring. Therefore, accelerating SPM achievement requires visionary and collaborative policy leadership, institutionalized cross-sector coordination, affirmative budgeting for remote areas, spatial mapping of school needs, and consistent use of evidence-based data throughout the policy cycle. Data on school conditions, SPM achievements, supervision results, and program evaluation should be used as the basis for prioritization, budget allocation, and policy intervention. The integration of the Education Office, Bappeda, technical agencies, education units, and community stakeholders can transform SPM from an administrative obligation into a strategic instrument for realizing quality, equitable, and sustainable education services in North Aceh Regency. However, this study is limited by its single-case design, purposively selected informants, and focus on the institutional context of one district education office; therefore, the findings should not be statistically generalized to all local governments. The percentage summaries should also be interpreted as case-based analytic scores rather than statistical estimates. Future studies should compare several districts, involve more school-level actors, validate the scoring rubric across broader contexts, and integrate longitudinal monitoring of SPM indicators to assess whether the proposed strategic management model produces sustained improvements in educational service quality and equity.

References

- Aceh, D. P. (2024). *Laporan kinerja (LKj) Dinas Pendidikan Aceh tahun anggaran 2024*. Dinas Pendidikan Aceh. <https://disdik.acehprov.go.id>
- Ahida, R., Hanani, S., Rozi, S., Burhanuddin, N., Sesmiarni, Z., Ismail, Busyro, Asyari, Puteri, H. E., Hendri, N., Izmuddin, I., & Nofiardi. (2025). *Dialektika keilmuan dalam pendekatan lokalitas dan kontemporer*. Uwais Inspirasi Indonesia.
- Aulia, R. P., Suhardi, M., Sulistiawati, N., Angrani, J., Aprilian, I. D., & Solihin, M. (2025). Strategi perencanaan dan penganggaran pendidikan berbasis kinerja: Kajian literatur tentang efektivitas dan efisiensi penggunaan dana pendidikan. *Manajerial: Jurnal Inovasi Manajemen dan Supervisi Pendidikan*, 5(2), 497–507. <https://doi.org/10.51878/manajerial.v5i2.6394>

- Aya Pastrana, N., Beran, D., Somerville, C., Heller, O., Correia, J. C., & Suggs, L. S. (2020). The process of building the priority of neglected tropical diseases: A global policy analysis. *PLoS Neglected Tropical Diseases*, 14(8), e0008498. <https://doi.org/10.1371/journal.pntd.0008498>
- Bahrudin, Febriyani, N. A., & Sarnoto, A. Z. (2025). Pendekatan evaluasi pada Standar Pelayanan Minimal (SPM) bidang pendidikan perspektif Al-Qur'an. *Jurnal Pengabdian Masyarakat dan Riset Pendidikan*, 4(2), 10201–10206. <https://doi.org/10.31004/jerkin.v4i2.3617>
- Estede, S., Rustiyana, R., Lestari, E. K., Abae, I., Kusumastuti, S. Y., Muta'ali, L., Anitasari, M., Dwipatna, I. M. J. A., Juansa, A., & Zulkarnaen, A. (2025). *Ekonomi pembangunan daerah: Konsep, strategi dan inovasi*. Star Digital Publishing.
- Fatmawati, F., Nurchayati, N., Swastuti, E., & Suprapti, S. (2026). Determinan kinerja pegawai dalam reformasi birokrasi: Peran kepemimpinan transformasional, budaya organisasi, dan manajemen talenta. *Jesya*, 9(1), 12–27. <https://doi.org/10.36778/jesya.v9i1.2471>
- Fitriani, A., Maksadah, R., Islami, W., Amalien, C. A., Aslamiah, A., & Cinantya, C. (2025). Kepemimpinan dalam pendidikan: Model dan implementasi untuk meningkatkan kinerja sekolah. *MARAS: Jurnal Penelitian Multidisiplin*, 3(2), 715–722. <https://doi.org/10.60126/maras.v3i2.978>
- Fitriyah, S. N., Hadi, S., & Dewi, R. S. I. (2026). Analisis kebijakan desentralisasi pendidikan pada tingkat sekolah dasar: Kajian implementasi dan implikasi terhadap mutu pendidikan. *Jurnal Ilmiah Global Education*, 7(1), 482–499. <https://doi.org/10.55681/jige.v7i1.5243>
- Giordano, C., Brennan, M., Mohamed, B., Rashidi, P., Modave, F., & Tighe, P. (2021). Accessing artificial intelligence for clinical decision-making. *Frontiers in Digital Health*, 3, Article 645232. <https://doi.org/10.3389/fdgth.2021.645232>
- Gorjian, M. (2025). *Spatial economics: Quantitative models, statistical methods, and policy applications in urban and regional systems* [Preprint]. Preprints.org. <https://doi.org/10.20944/preprints202508.0404.v1>
- Hasibuan, A. T., Sianipar, M. R., Ramdhani, A. D., Putri, F. W., & Ritonga, N. Z. (2022). Konsep dan karakteristik penelitian kualitatif serta perbedaannya dengan penelitian kuantitatif. *Jurnal Pendidikan Tambusai*, 6(2), 8686–8692. <https://jptam.org/index.php/jptam/article/view/3730>
- Irwanzi, I., Priyona, A., Rahmanto, D., Ansori, M. A., & Zulfahmi, Z. (2025). Manajemen strategis pembiayaan pendidikan berbasis kinerja: Studi evaluasi terhadap penggunaan dana BOSDA dan BOSP SMA Negeri Kota Palangka Raya. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, 8(9), 11024–11032. <https://doi.org/10.54371/jiip.v8i9.9386>
- Khairani, H. (2025). Literature study: Implementation of performance-based budgeting in regional financial management. *Kajian Akuntansi*, 26(1), 40–46. https://doi.org/10.29313/kajian_akuntansi.v26i1.5885
- Kusuma, A., Yamin, A., & Dewi, G. (2024). Implementasi kebijakan dan capaian kinerja pelayanan publik: Studi kasus pada Standar Pelayanan Minimal bidang pendidikan di Kabupaten Sumbawa. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, 7(2), 1208–1218. <https://doi.org/10.54371/jiip.v7i2.3857>
- Ma'sum, A., Purwanto, H., & Nugraha, R. W. (2025). Tinjauan literatur: Dampak transformasi digital terhadap pengambilan keputusan di lembaga pemerintahan. *Jurnal Algoritma*, 22(2). <https://doi.org/10.33364/algoritma/v.22-2.3091>
- Mustabsyirah, M., & Yuspiani, Y. (2025). Analisis kebijakan desentralisasi sistem pendidikan nasional dan dampaknya terhadap pendidikan madrasah. *Jurnal Studi Guru dan Pembelajaran*, 8(3), 1692–1704. <https://doi.org/10.30605/jsgp.8.3.2025.6523>
- Muthalib, A., Abun, A. R., & Linda, R. (2025). Perencanaan berbasis data dalam meningkatkan kualitas layanan pendidikan di SMP Al Furqon dan SMP Asy Syafaah Kabupaten Jember. *Jurnal Bintang Pendidikan Indonesia*, 3(2), 138–151. <https://doi.org/10.55606/jubpi.v3i2.3718>
- Nurhafni, N. (2025). *Implementasi kebijakan pendidikan Islami*. Star Digital Publishing.
- Opara, M., Okafor, O. N., Ufodike, A., & Kalu, K. (2021). Institutional entrepreneurship: Collaborative change in a complex Canadian organization. *Accounting, Auditing & Accountability Journal*, 34(9), 284–314. <https://doi.org/10.1108/AAAJ-06-2020-4610>
- Peraturan Pemerintah Republik Indonesia Nomor 2 Tahun 2018 tentang Standar Pelayanan Minimal. (2018).
- Priskila, E., & Hukom, A. (2023). Evaluasi kinerja keuangan daerah melalui analisis perencanaan dan penganggaran pembangunan daerah. *Jurnal Penelitian Ekonomi Manajemen dan Bisnis*, 2(2), 173–183. <https://doi.org/10.55606/jekombis.v2i2.1555>
- Purba, B. C. (2024). Perencanaan strategis sarana dan prasarana penunjang proses pendidikan. *JIMAD: Jurnal*

Ilmiah Mutiara Pendidikan, 2(3), 62–77. <https://doi.org/10.61404/jimad.v2i3.101>

- Qomaruddin, Q., & Sa'diyah, H. (2024). Kajian teoritis tentang teknik analisis data dalam penelitian kualitatif: Perspektif Spradley, Miles dan Huberman. *Journal of Management, Accounting, and Administration*, 1(2), 77–84. <https://doi.org/10.52620/jomaa.v1i2.93>
- Rambe, A. M., Ritonga, A. H., Constantia, E. C., & Sumitro, S. (2025). Sinergi tata kelola pendidikan dasar di era desentralisasi: Model kolaborasi pemerintah daerah dan satuan pendidikan untuk peningkatan mutu berkelanjutan. *Fatih: Journal of Contemporary Research*, 2(2), 933–941. <https://doi.org/10.61253/tnn5ts54>
- Ravenska, N., Ginanjar, Y. R., Nugroho, A. B., & Nurmalia, E. (2025). Efektivitas anggaran berbasis kinerja: Studi tentang pengelolaan keuangan di RSUP Dr. Hasan Sadikin. *JAKUMA: Jurnal Akuntansi dan Manajemen Keuangan*, 6(1), 77–90. <https://doi.org/10.31967/jakuma.v6i1.1427>
- Rodin, R., Endang, Hidayah, J., Hamengkubuwono, & Istan, M. (2025). Urgensi penatausahaan anggaran pendidikan. *Tadbir Muwahhid*, 9(1), 1–34. <https://doi.org/10.30997/jtm.v9i1.16115>
- Setiawan, R., Sujarwanto, Wagino, Nursalim, M., & Rachmadyanti, P. (2026). Keadilan sosial dan distribusi akses pendidikan inklusif di Indonesia: Analisis Rawlsian terhadap ketimpangan fasilitas sekolah perkotaan dan pedesaan. *Paradigma: Jurnal Filsafat, Sains, Teknologi, dan Sosial Budaya*, 32(1), 183–189. <https://doi.org/10.33503/paradigma.v32i1.2929>
- Sugiyono. (2019). *Metode penelitian pendidikan: Kuantitatif, kualitatif, kombinasi, R&D dan penelitian tindakan*. Alfabeta.
- Utara, P. K. A. (2022). *Rencana pembangunan daerah Kabupaten Aceh Utara tahun 2023–2026*. Badan Perencanaan Pembangunan Daerah Kabupaten Aceh Utara.