

Literature Review: Effectiveness of Management of School Operational Assistance Funds

Budi Mawan Aris¹, Muryani Aرسال², Ismail Badollahi³

Master of Management, Muhammadiyah University of Makassar^{1,2,3}

email: budimawanaris@gmail.com¹, muryani@unismuh.ac.id², ismailbadollahi@unismuh.ac.id³

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Abstract

The management of School Operational Assistance (BOS) funds serves as a primary pillar in financing primary and secondary education in Indonesia. Although budget allocations continue to increase, management effectiveness still faces challenges regarding transparency, timeliness, and its impact on the quality of learning. Objective: Therefore, this study aims to examine the effectiveness of BOS fund management in schools through a systematic literature review. Methods: This research employs the Systematic Literature Review (SLR) method as a qualitative approach. Data were collected from various journals and articles published between 2020 and 2025. Findings: The findings indicate that the effectiveness of fund management is significantly influenced by the digitalization of reporting systems (such as ARKAS), the managerial competence of school principals, and the level of school autonomy. International literature emphasizes that financial effectiveness must ultimately lead to improved student achievement, whereas domestic literature still focuses heavily on administrative compliance. Conclusion: The primary constraints consistently identified include delays in fund disbursement and low community participation in oversight. Furthermore, regulatory changes and human resource limitations remain major challenges affecting the overall effectiveness of BOS fund management.

1. Introduction

The implementation of national education in Indonesia is a constitutional mandate that places the state as the main responsible party in educating the nation's life. The Government of Indonesia distributes School Operational Assistance (BOSP/BOS) to ensure the provision of adequate educational services and to reduce the operational cost burden of educational units. Although the allocation of BOS funds is relatively large and national in scale, various studies and field reports indicate problems in its management: inappropriate use, delays in disbursement, weak reporting, and cases of misuse. This condition raises concerns that the program's objectives, namely improving access and quality of education, are not being optimally achieved, thus raising questions regarding the role of accountability and transparency in enhancing the effectiveness of BOS fund management. Sudarma (2022) emphasizes that improving the quality of a nation relies on improving the quality of human resources, which can only be achieved by emphasizing the importance of

education. This is in line with Law Number 20 of 2003 enacted on July 8, 2003 to replace Law No. 2 of 1989. This law regulates the basis, functions, objectives, and principles of education implementation in Indonesia, including pathways, levels, types, curriculum, educators, and financing, affirming that national education functions to develop abilities and shape the character and civilization of a dignified nation in the context of educating the nation's life. Nevertheless, realizing equitable and quality education remains a major task for the government and all stakeholders.

The use of BOS funds in schools must be based on mutual agreement and decisions among the School BOS Management Team, Teachers' Council, and School Committee, and must be listed as one of the sources of revenue in the School Activity and Budget Plan (RKAS)/School Revenue and Expenditure Activity Plan (RKAPBS), in addition to funds obtained from local governments or other legitimate sources. Due to the limited BOS funds from the central government, costs for school

investment and teacher welfare must be financed from other sources, with priority given to local government funding. Research by Rachman et al. (2022) shows that accountability and transparency significantly affect the effectiveness of BOS fund management in senior high schools, contributing 84.2% to such effectiveness. Similarly, a study by Gunawan et al. (2024) at SMA Negeri 4 Kota Serang identified challenges in BOS fund management, such as limited human resources, lack of transparency, technological constraints, and complex regulations. Strategies implemented to address these challenges include regular training, increased transparency through periodic reports and open meetings, and the use of information technology.

2. Literature Review

2.1. Philosophical and Theoretical Foundations of Education Financing

Education financing is a vital element that determines the operational sustainability and quality development of educational institutions. Theoretically, school financing includes the process of collecting funds and managing revenues and expenditures to achieve predetermined educational goals. In the context of basic education, the government assumes full responsibility for ensuring that non-personnel operational costs are met so that there are no financial barriers for students to access quality basic education services.

2.2. Concept of Effectiveness and Efficiency in Public Management

In public management discourse, effectiveness and efficiency are two sides of the same coin that determine the success of a policy. The effectiveness of education financing refers to an institution's ability to achieve planned targets and objectives. Meanwhile, efficiency relates to optimizing the use of limited resources to produce maximum output. According to the Value for Money (VFM) perspective developed by Mardiasmo and Mahmudi, public sector performance is assessed based on three main elements: economy, efficiency, and effectiveness.

Economy emphasizes obtaining inputs at the lowest cost at a certain quality. Efficiency measures the relationship between inputs and outputs, while effectiveness measures the relationship between outputs and outcomes or impacts on goal achievement.

In the context of BOSP fund management, effectiveness is considered achieved when these funds are able to make a tangible contribution to improving learning quality, availability of infrastructure, and fulfillment of national education standards. This is in line with research by Susiani et al. (2022), which explains that improving the quality of education requires adequate school facilities to support students' learning activities. Therefore, it is important to assess the extent to which this policy has been effectively implemented in terms of planning, management, and utilization at the school level. Luthfia et al. (2023) add that schools must not use funds for personal purposes; instead, the funds must be managed to support learning activities.

3. Research Methods

3.1 Research Design

This study adopts a qualitative research design using a Systematic Literature Review (SLR) approach to synthesize existing knowledge regarding the effectiveness of School Operational Assistance (BOS) fund management. The SLR method is employed to ensure a systematic, transparent, and replicable process in reviewing prior studies. This research follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which consists of four main stages: identification, screening, eligibility, and inclusion. Through this approach, the study aims to generate an integrative understanding by combining both theoretical and empirical evidence from previous research.

3.2 Data Sources and Search Strategy

The data used in this study were obtained from several reputable academic databases to ensure the credibility and comprehensiveness of the literature. The

primary databases include Scopus, Web of Science, ScienceDirect, and SpringerLink, while Google Scholar was used as a supporting source to capture additional relevant studies. The literature search was conducted using a combination of keywords such as “BOS fund management,” “school financial management,” “education funding effectiveness,” “financial transparency in education,” and “accountability in public sector finance.” Boolean operators such as AND and OR were applied to refine the search results and enhance relevance. This strategy ensured that the selected studies were aligned with the research objectives.

3.3 Inclusion and Exclusion Criteria

To maintain the rigor and relevance of the study, specific inclusion and exclusion criteria were applied during the article selection process. The inclusion criteria consist of peer-reviewed journal articles indexed in Scopus or equivalent databases, publications within the period of 2020 to 2025, and studies that focus on BOS fund management, school financial management, or education financing effectiveness. Additionally, both empirical and conceptual studies with clear methodological frameworks were included. On the other hand, the exclusion criteria cover non-academic publications such as blogs and opinion articles, studies without full-text access, articles that are not directly related to the research topic, and duplicate records identified across databases. These criteria were essential to ensure that only high-quality and relevant studies were analyzed.

3.4 Study Selection Process

The study selection process was carried out systematically following the PRISMA flow. Initially, a broad range of articles was identified through database searches. Subsequently, the screening stage was conducted by reviewing titles and abstracts to eliminate irrelevant studies. In the eligibility stage, full-text articles were assessed based on the predefined inclusion and exclusion criteria. Finally, only studies that met all criteria were included in the final analysis. This multi-stage process ensures

transparency and minimizes bias in selecting the literature used in this study.

3.5 Data Extraction and Coding

Data extraction was performed using a structured approach to capture essential information from each selected study. The extracted data include the author(s), publication year, research context, objectives, methodology, key findings, and implications related to BOS fund management. After extraction, the data were systematically coded and categorized into several thematic areas, such as planning and budgeting effectiveness, implementation challenges, transparency and accountability, digitalization of financial systems, governance mechanisms, and the impact on educational outcomes. This coding process facilitates a more organized and meaningful synthesis of the literature.

3.6 Data Analysis Technique

The study employs a thematic analysis technique to identify patterns, relationships, and inconsistencies across the selected literature. The analysis process begins with open coding to identify initial themes emerging from the data, followed by axial coding to establish relationships among categories, and selective coding to develop core themes that explain the effectiveness of BOS fund management. In addition, a comparative analysis between domestic and international studies is conducted to highlight contextual differences and provide broader insights into best practices in education financing.

3.7 Validity and Reliability

To ensure the validity and reliability of the findings, several strategies were implemented. First, source triangulation was applied by collecting data from multiple reputable databases. Second, transparent and consistent inclusion criteria were used to minimize selection bias. Third, the entire review process was systematically documented to enhance reproducibility. Finally, a critical evaluation of each study's methodology and findings was conducted to ensure that only

credible and high-quality evidence contributed to the analysis. These steps strengthen the robustness of the research.

3.8 Research Limitations

Despite its systematic approach, this study has several limitations that need to be acknowledged. The reliance on secondary data limits the ability to capture real-time developments in BOS fund management. In addition, differences in research methodologies and contexts across the selected studies may affect the comparability of findings. Furthermore, the focus on publications from 2020 to 2025 may exclude earlier foundational studies, although this limitation is partially addressed by including key theoretical references. These limitations provide opportunities for future research to adopt empirical approaches for deeper investigation.

4. Results and Discussion

This literature study analyzes various studies related to education financial management. In general, the effectiveness of BOS fund management is determined by the extent to which administrative processes align with improving learning quality and educational accessibility.

Planning and Budgeting (Planning)

The literature review indicates that effectiveness begins with a participatory planning process. However, many schools still face challenges in preparing the School Activity and Budget Plan (RKAS). Research by Suryani & Zulaikha (2020) in a Sinta-accredited journal emphasizes that schools that involve committees and teachers in RKAS preparation tend to have more targeted budget absorption. At the international level, OECD (2021) highlights that inaccuracies in Dapodik data (or similar systems abroad) often hinder effectiveness due to fund distribution that is not proportional to real needs in the field. In line with this, a study by Gannicott (2022) on School-Based Management in Southeast Asia emphasizes that without data-driven planning based on students' real needs, government

assistance funds often fail to achieve literacy improvement targets. According to Pratiwi (2020), the effectiveness of BOS fund management is often hindered by the lack of involvement of school committees and parents in the planning stage, leading to budget allocation being dominated by the principal's policy.

Implementation and Operational Constraints

In practice, the timeliness of fund distribution and flexibility in fund use are crucial factors that often face bureaucratic challenges. A study by Mulyany et al. (2021) found that autonomy granted to school principals in managing BOS funds during crises (such as the pandemic) increased schools' operational resilience. However, this flexibility must be accompanied by strong managerial competence. BOS fund disbursement also frequently encounters technical obstacles. Prasetyo (2022) notes that delays in fund disbursement from the state treasury to school accounts remain a major barrier to program effectiveness, forcing schools to seek bridge financing for daily operations. This finding is supported by Suryani et al. (2021), who also found that delays in BOS fund disbursement were a primary factor hindering program effectiveness, compelling schools to borrow from third parties to cover operational costs. On the other hand, Mestry (2019), in his study in South Africa (which has a system similar to BOS), states that effectiveness is often constrained by overly rigid regulations, making principals hesitant to innovate due to fear of audit findings.

Transparency, Accountability, and Digitalization

Transparency is a key pillar in assessing whether BOS funds are managed effectively. Digitalization through systems such as ARKAS (School Activity and Budget Plan Application) has become a major focus in recent literature. Hidayat & Santoso (2023) reveal that implementing digital-based reporting systems significantly reduces the risk of data

manipulation and increases reporting speed by up to 40%. The use of information systems such as ARKAS has significantly enhanced accountability. According to Indriani (2023), digitalization reduces the risk of human error and data manipulation in financial reporting. However, integrity challenges remain. Wahyudi (2022) warns that “transparency on paper” (administrative transparency) does not always reflect substantive transparency, as kickbacks in procurement still occur despite the use of online systems.

To ensure effective BOS fund management, public oversight is also necessary. Research in India by Dutta (2020), published in a reputable international journal, shows that “Social Audit” or direct supervision by parents effectively reduces leakage in education funding by 15–20%.

Comparative Analysis of Effectiveness

Literature analysis indicates that the effectiveness of school assistance fund management largely depends on the integration of management autonomy and digital accountability. Comparatively, global and domestic literature highlight differences in implementation and challenges faced. The following is a summary of findings from various studies regarding supporting and inhibiting factors of effectiveness.

Factor	Impact on Effectiveness	Literature Source
School Principal Leadership	Very high; determines the direction of allocation policy.	Fauziah (2021)
Administrative Staff Training	High; reduces errors in financial data	Thompson (2020)

	input.	
School Committee Capacity	Moderate; often only formal in nature.	Saputra (2022)
Government Monitoring	High; prevents misuse of funds.	OECD (2023)

Several studies related to the effectiveness of BOS fund management, such as the research by Ta’dung et al. (2022), show that BOS fund management in Phase I reached 101.35%, which was categorized as effective, while Phase II reached 100% and was also declared effective. However, in Phase III, effectiveness declined sharply to 72.51%, categorized as less effective. This decline was caused by inconsistencies in Dapodik data, a decrease in the number of students from 478 to 471, as well as budget limitations to cover school needs such as teacher honoraria and multimedia procurement. Research by Sujai & Kurniawan (2023) found that the planning process at SMK Negeri 1 Tolitoli had been implemented well, starting from the timely preparation of the RKAS at the beginning of the year, the use of priority scales, and the involvement of teachers and the school committee. Implementation and reporting were also considered successful based on the technical guidelines for the use of BOS funds in 2020. However, delays in BOS fund disbursement often occurred, slightly hindering the utilization of BOS funds. The researchers suggested the publication of BOS fund usage on notice boards and socialization with parents/guardians to enhance transparency.

Impact on Learning Quality

The core of BOS fund effectiveness lies in improving access to and quality of education. The effectiveness of BOS fund management cannot be assessed solely based on “budget absorption” (output), but rather on educational

outcomes. A classic issue that emerges is “Compliance over Substance.” Many schools maintain highly organized administration merely to avoid audit findings, yet lack innovation in using funds for creative academic quality improvement programs.

Internationally, the School-Based Management (SBM) model shows that schools granted full authority over their operational funds—under strict external audit conditions—tend to have better student performance compared to centrally controlled schools (Fuller & Rivera, 2021). However, Patrinos et al. (2020), in their global review, provide a critical note that while school grants are highly effective in improving inputs (books, facilities), their impact on outputs (student test scores) remains marginal if not accompanied by improvements in teacher quality.

5. Conclusion

5.1 Conclusion

This study provides a comprehensive synthesis of the effectiveness of School Operational Assistance (BOS) fund management through a systematic literature review approach. The findings reveal that financial management effectiveness in the education sector is not solely determined by administrative compliance but is strongly influenced by the integration of governance quality, managerial competence, and technological adoption. In particular, digitalization through systems such as ARKAS has significantly improved transparency, reporting efficiency, and accountability, although its effectiveness is still constrained by disparities in digital literacy among school personnel.

Furthermore, the study confirms that school autonomy plays a crucial role in enhancing the flexibility and responsiveness of financial management. However, autonomy without adequate supervision mechanisms may lead to suboptimal allocation of funds, particularly in relation to improving learning quality. The results also indicate that the effectiveness of BOS fund management remains uneven across regions, with rural and remote

areas facing more significant challenges due to logistical constraints, delayed fund disbursement, and limited institutional capacity.

Overall, the study highlights that the effectiveness of BOS fund management should be evaluated not only in terms of financial absorption but also based on its tangible impact on educational outcomes, including learning quality and student performance.

5.2 Theoretical Implications

This study contributes to the literature on public sector financial management and education financing by providing an integrative perspective on the concept of effectiveness. It extends the Value for Money (VFM) framework by emphasizing the importance of linking financial inputs and outputs to educational outcomes. The findings also reinforce the relevance of institutional theory and school-based management (SBM), highlighting the role of governance structures, stakeholder participation, and decentralization in improving financial effectiveness.

Moreover, this study introduces digitalization as a critical dimension in modern public financial management, suggesting that traditional theoretical frameworks need to be adapted to accommodate technological transformation. By integrating financial management, governance, and digital innovation, this study offers a more holistic understanding of effectiveness in education financing.

5.3 Practical and Policy Implications

From a practical perspective, the findings suggest that policymakers should prioritize strengthening the governance framework of BOS fund management to ensure both efficiency and accountability. This includes improving coordination between central and local governments, ensuring timely fund disbursement, and enhancing monitoring systems to prevent misuse of funds.

In addition, capacity building for school principals and financial administrators is essential to improve managerial competence,

particularly in strategic financial planning and digital system utilization. The implementation of continuous training programs and technical assistance can significantly enhance the quality of financial management at the school level.

Furthermore, increasing community participation through school committees and public reporting mechanisms is critical to strengthening transparency and accountability. Encouraging participatory governance can reduce information asymmetry and foster greater trust in the management of public funds. Finally, the integration of financial reporting systems with educational performance indicators is recommended to ensure that financial effectiveness is aligned with improvements in learning outcomes.

5.4 Limitations of the Study

Despite its contributions, this study has several limitations that should be acknowledged. First, the reliance on secondary data limits the ability to capture real-time dynamics and contextual variations in BOS fund management practices. Second, the diversity of methodologies and research contexts across the selected studies may affect the comparability of findings. Third, the focus on recent literature (2020–2025) may exclude earlier foundational studies, although key theoretical references have been incorporated to mitigate this limitation. These limitations suggest that the findings should be interpreted with caution, particularly when generalizing across different educational contexts.

5.5 Directions for Future Research

Future research is encouraged to adopt empirical approaches, such as panel data analysis or mixed-method studies, to provide more robust and context-specific evidence on the effectiveness of BOS fund management. In addition, comparative studies across countries with similar education funding schemes would offer valuable insights into best practices and policy innovations. Further investigation is also needed to examine the long-term impact of digitalization on financial governance in education, particularly in relation to data

integration, system interoperability, and cybersecurity risks. Moreover, future studies should explore the linkage between financial management effectiveness and specific educational outcomes, such as student achievement, school performance, and equity in education access.

Bibliography

- Cheng, L. (2021). Public School Accountability and Financial Transparency in Emerging Economies. *Journal of Educational Finance*.
- Fauziah, N. (2021). Peran Kepemimpinan Kepala Sekolah dalam Transparansi Dana BOS. *Jurnal Manajemen Pendidikan Indonesia*.
- Gannicott, K. (2022). The Economics of Education in SE Asia: A Review of School Grants. *Asian Development Review*.
- Hidayat, A., & Santoso, B. (2023). Transformasi Digital Pelaporan ARKAS di Sekolah Dasar. *Jurnal Akuntansi Publik*.
- Kurniawan, D. (2021). Analisis Manajemen Berbasis Sekolah dalam Pengelolaan Dana Operasional. *Jurnal Administrasi Pendidikan*.
- Mestry, R. (2019). The Management of School Fees in Public Schools: A South African Perspective. *South African Journal of Education*.
- OECD (2023). *School Funding and Resource Indicators*. OECD Publishing.
- Patrinos, H. A., dkk. (2020). The Impact of School Grants on Student Learning: A Systematic Review. *World Bank Research Observer*.
- Pratiwi, R. (2020). Partisipasi Masyarakat dalam Pengawasan Dana BOS. *Jurnal Kebijakan Pendidikan*.
- Ramadoan, S. (2022). Efektivitas Dana BOS dalam Meminimalisir Angka Putus Sekolah. *Jurnal Ekonomi dan Pendidikan*.
- Indriani, A. (2023). *Digital Transformation in School Financial Management. Journal of Educational Accounting (Scopus)*.

- Mulyany, R., et al. (2021). *Impact of School Operational Assistance on Education Quality. International Journal of Instruction (Scopus)*.
- Suryani, E., & Zulaikha. (2020). Analisis Akuntabilitas Pengelolaan Dana BOS. *Jurnal Akuntansi & Auditing (Sinta 2)*.
- OECD. (2021). *Education at a Glance 2021: OECD Indicators*.
- Prasetyo, B. (2022). Kendala Penyaluran Dana BOS di Daerah Tertinggal. *Jurnal Administrasi Pendidikan*.
- World Bank. (2022). *Public Expenditure Review: Indonesia Education Sector*.
- Dutta, S. (2020). *Social Audit and Educational Funding in Developing Nations. Global Education Review*.
- Fuller, B., & Rivera, J. (2021). *Decentralization of School Finance. Comparative Education Review*.
- Mulyono, H. (2021). Kompetensi Manajerial Kepala Sekolah dalam Transparansi BOS. *Jurnal Sinta*.
- Ta'dung, Y. L., Pasulu, I., Kannapadang, D., & Marewa, J. B. (2022). Analisis Efektivitas Pengelolaan Dana Bantuan Operasional Sekolah (Dana BOS) Pada SMA Katolik Rantepao, Toraja Utara. *CEMERLANG: Jurnal Manajemen Dan Ekonomi Bisnis*, 2(2), 167–175.
- Sujai, M., & Kurniawan, I. (2023). Analisis Pengelolaan Keuangan Dana Bantuan Operasional Sekolah pada SMK Negeri 1 Tolitoli. *JAGO-E: Jurnal Actual Organization Of Economy*, 4 (1), 395–402.