



Comparative Analysis of Educational Financing Systems Across Countries

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ABSTRACT

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This study aims to analyze and compare education financing systems in Finland, Japan, the United States, and Indonesia, with a focus on identifying key characteristics, philosophical differences, and policy implications of each model. The research employs a systematic literature review combined with comparative analysis, using management-oriented indicators including equity, efficiency, governance, and sustainability. Findings indicate that Finland implements a full public funding model emphasizing equity, Japan operates a hybrid model with high transparency, the United States exhibits significant disparities due to property-tax-based decentralization, and Indonesia remains in a transitional phase with challenges in fiscal capacity and governance accountability. The study highlights that successful education financing depends on consistent policy implementation, clear funding distribution formulas, and integrity in governance systems. The results provide actionable policy implications for improving national education financing, including the adoption of needs-based funding formulas, digitalized accountability systems, and diversified funding sources through public-private partnerships. By integrating management and governance dimensions, this study contributes to a better understanding of effective and equitable educational funding practices across diverse contexts.

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INTRODUCTION

Education financing is a fundamental pillar in ensuring the quality, equity, and sustainability of educational systems globally (Bantekas, 2023). Adequate funding determines not only the provision of learning resources, infrastructure, and teacher quality but also ensures equitable access for all students, especially those from disadvantaged backgrounds (Zickafoose et al., 2024; Mutekwe, 2020). Variations in educational funding models reflect countries' socioeconomic contexts, political structures, and educational philosophies (Wu et al., 2025).

Reports from UNESCO (2020) and OECD (2021) emphasize the impact of funding allocation on inclusive education, highlighting how disparities in government investment can affect learning outcomes and national development. Efficient and well-managed funding systems promote transparency, accountability, and long-term sustainability in education management, aligning financial resources with strategic educational goals. Therefore, understanding comparative funding mechanisms and their management dimensions is essential for policymakers and educational leaders to develop evidence-based reforms that maximize equity, efficiency, and effectiveness in national education systems.

Despite its importance, many countries face persistent challenges in financing education, which undermines equitable learning opportunities and system sustainability. In decentralized or hybrid systems, such as the United States or developing countries, disparities arise due to differences in local revenue capacity, governance quality, and administrative capacity (Kemendikbud, 2022). Even in countries with high public investment, such as Finland, challenges remain in ensuring that resources are allocated efficiently across regions and educational levels (OECD, 2021). Indonesia, for instance, has implemented various mechanisms including BOS, DAK, and DAU funding schemes alongside a statutory 20% education budget allocation, yet issues of inequitable distribution, limited regional capacity, and governance constraints persist. These systemic problems underscore the need for comprehensive analyses of how educational financing can be strategically managed to enhance equity, efficiency, governance, and sustainability across different contexts (Rodrigues, et al., 2025).

Current phenomena in education financing reveal stark contrasts in policy implementation and management outcomes (Muthanna & Sang, 2023). Finland's full public funding model achieves broad equity, with centralized oversight ensuring that all students have access to high-quality services. In contrast, Japan's hybrid model combines government support with private contributions, demonstrating high transparency and effective monitoring mechanisms (Nishimura, 2020). The United States exhibits a highly decentralized, property-tax-based funding approach, which often results in significant disparities between wealthy and low-income districts. Meanwhile, Indonesia represents a developing, mixed model with challenges in governance, fiscal decentralization, and community participation. These variations illustrate how management practices, policy design, and institutional oversight play critical roles in determining the effectiveness and equity of educational financing systems, highlighting the importance of cross-national comparative studies that integrate management and policy dimensions.

Literature synthesis shows that previous research on comparative education financing often focuses on two or three countries or examines a single dimension, such as equity or efficiency, in isolation (OECD, 2021). Studies on Finland emphasize equitable access and resource allocation mechanisms,

whereas analyses of Japan highlight transparency and hybrid management structures (Nishimura, 2020). In the United States, research tends to focus on decentralization and its consequences for funding disparities. In Indonesia, prior studies have examined BOS and other funding schemes mainly in operational terms without fully integrating governance, management efficiency, and sustainability frameworks. The research gap lies in the absence of a simultaneous, multi-country comparative analysis that considers comprehensive indicators including funding sources, distribution mechanisms, governance roles, equity outcomes, and sustainability, which are crucial for informing policy and management practices in education.

Further literature review indicates the need to combine cross-country comparisons with a focus on management and policy dimensions to enhance applicability and relevance. While international reports provide descriptive statistics on funding allocation and outcomes (UNESCO, 2020; OECD, 2021), few studies integrate management frameworks such as efficiency, governance, and sustainability to evaluate how financial resources are effectively deployed. Additionally, there is limited research that synthesizes lessons across contrasting educational models—fully public, hybrid, decentralized, and developing/mixed systems—to extract actionable insights for countries like Indonesia. By addressing these gaps, this research contributes academically by proposing a comprehensive analytical model that incorporates equity, efficiency, governance, and sustainability dimensions, thereby advancing both the theoretical discourse and practical management of educational financing.

The novelty of this study lies in its simultaneous comparative analysis of four countries representing distinct financing models: Finland (Public Full Equity), Japan (High Transparency Hybrid), United States (Highly Decentralized Property-Based), and Indonesia (Developing/Mixed). By applying management-oriented indicators such as equity, efficiency, government role, and sustainability, the study moves beyond descriptive comparisons to evaluate how funding mechanisms are operationalized, monitored, and governed. This approach provides a holistic perspective on best practices, highlights systemic strengths and weaknesses, and generates evidence-based recommendations for policy interventions. The study also emphasizes the integration of financial governance, fiscal management, and strategic oversight as key dimensions in educational administration, demonstrating how management principles directly impact equitable and sustainable funding outcomes.

Based on the identified research gap and contextual challenges, this study focuses on three primary research questions: (1) What are the key characteristics and management features of education financing in Finland, Japan, the United States, and Indonesia? (2) What similarities and differences exist in terms of

equity, efficiency, governance, and sustainability? (3) What are the policy implications for Indonesia in improving its educational financing system? The research argues that understanding these dimensions through a multi-country, management-oriented lens can inform evidence-based policy design, optimize resource allocation, and enhance governance in national education systems. Consequently, the findings are expected to contribute both to scholarly discourse on education financing and to practical policy-making for developing countries facing equity and management challenges.

RESEARCH METHODS

This study employs a qualitative research design using a systematic literature review approach. The qualitative literature review method was selected because it allows an in-depth exploration and comparison of education financing systems across multiple countries while analyzing complex policy, governance, and equity issues. This design is appropriate for synthesizing information from diverse sources and generating insights into the relationships between funding mechanisms, government roles, and educational outcomes. The study focuses on understanding how different financing models contribute to equity, efficiency, governance, and sustainability in education systems (Nie et al., 2020).

The research scope is international, examining Finland, Japan, the United States, and Indonesia. These countries were chosen due to their distinct financing models representing a spectrum of approaches—from fully public and equitable systems to decentralized and mixed models—which provides a robust basis for comparative analysis. Data were collected from multiple sources, including peer-reviewed international journals indexed in Scopus and Web of Science, policy reports from UNESCO, OECD, World Bank, and IMF, as well as national education policy documents from the selected countries. The combination of these sources ensures a comprehensive and credible dataset for cross-country comparisons (Handoyo, 2023).

Data analysis involved four main steps to ensure rigor and transparency. First, data reduction was conducted by selecting literature based on relevance, publication date, and credibility. Second, information was categorized according to financing variables, including funding sources, distribution mechanisms, government involvement, community participation, and equity. Third, a comparative analysis across countries was performed using a comparative matrix technique to visualize similarities and differences systematically. Finally, conclusions were drawn through synthesis of findings, ensuring that the analysis reflects both management and governance dimensions of education financing while allowing verification and replication (Matveeva, 2023).

RESULTS AND DISCUSSION

Finland

Finland implements a fully public financing model through national and local taxes, ensuring that all education services—including textbooks, meals, health services, and transportation—are provided free of charge (OECD, 2021; Liu, 2025). This approach achieves the highest equity across regions, as funding allocation is determined using a needs-based formula. Local governments have operational autonomy but must comply with strict national. This model has successfully created an inclusive, egalitarian, and sustainable education system (World Bank, 2023). Finland's system demonstrates that equitable education financing requires a combination of formula-based allocation, strong governance, and consistent policy implementation, providing a benchmark for other countries seeking to enhance fairness in educational access.

Japan

Japan utilizes a hybrid financing model combining central and local government contributions with a high degree of transparency (Nishimura, 2020). The national government covers most costs for primary and secondary education, while local authorities manage operational matters. Community participation is facilitated through school committees that contribute to improving educational quality (Arumugam et al., 2023). Funding priorities focus on human resource development, curriculum modernization, and upgrading learning facilities (Hafid, 2024). The Japanese model highlights the importance of transparent governance, participatory oversight, and alignment between central and local authorities to achieve efficient and equitable education financing.

United States

The United States relies on a fully decentralized, property-tax-based funding system (Ruff, 2023). This model generates substantial disparities between wealthy and low-income districts (Musah et al., 2024). The federal government contributes only around 8–10% of total education funding, limiting its capacity to mitigate inequities. Schools in affluent areas benefit from well-resourced facilities and high-quality teaching staff, whereas underfunded districts face shortages in infrastructure and human resources (IMF, 2025). This system demonstrates the risks of localistic funding models, emphasizing the need for policy interventions to ensure minimum standards and equitable access.

Indonesia

Indonesia applies a mixed funding model dominated by central government contributions through programs such as BOS, DAK, and DAU, alongside the 20% education budget mandate (Law No. 20/2003) (Kemendikbud,

2019). Although the 20% budget allocation provides a degree of financial stability, challenges remain in governance, fiscal accountability, and equitable distribution (Sujaya, 2022). Fiscal disparities among regions directly affect education quality, particularly in remote and disadvantaged areas (Asyibli & Utami, 2025; Kartika et al., 2023). The Indonesian model underscores the importance of strengthening local management capacity, improving financial oversight, and implementing transparent allocation formulas to achieve more equitable education financing.

Comparative Analysis

From an equity perspective, Finland ranks highest due to fully public funding, Japan is relatively equitable with its hybrid system, Indonesia is progressing but constrained by regional capacity, and the United States exhibits the greatest disparities due to localized property-tax funding. In terms of efficiency, Japan leads with high transparency and budget management, followed by Finland's welfare-based approach, while Indonesia faces reporting inconsistencies and leakages, and the United States shows inefficiencies in low-income districts. Central government involvement is strongest in Finland and Japan, moderate in Indonesia, and minimal in the United States. Regarding sustainability, Finland and Japan maintain stable funding through strong tax and hybrid systems, Indonesia's funding is stable but unevenly distributed, and the United States heavily depends on local economic conditions, leading to instability in low-income areas (Kang, 2021).

Implications for Indonesia

The study recommends adopting evidence-based practices from successful international models to strengthen Indonesia's education financing system. First, implementing a needs-based funding formula similar to Finland can improve equity by considering poverty levels, regional disparities, teacher-student ratios, and minimum input standards for all schools. Second, enhancing transparency and accountability through digital monitoring and public dashboards, inspired by Japan, can reduce inefficiencies and increase public trust. Third, diversifying funding sources through philanthropic contributions, private sector partnerships, and community-based development funds can complement public financing and target disadvantaged areas. Lastly, strengthening school management capacity via training in financial accountability, guidelines based on international best practices, and mentorship programs for under-resourced districts will ensure effective use of funds. By adopting these measures, Indonesia can build a more equitable, efficient, and sustainable education financing system grounded in strong governance and evidence-based policy (Stratford & Wals, 2020).

CONCLUSION

The study reveals that the success of education financing systems is largely determined by consistent policies, equitable allocation, and transparent governance. Finland and Japan illustrate that well-planned public funding, combined with clear formulas and strong oversight, can achieve both equity and efficiency, whereas the highly decentralized system in the United States creates significant disparities between regions. Indonesia occupies an intermediate position, with sufficient budget allocations but ongoing challenges in governance, fiscal equity, and management capacity. The strength of this study lies in its systematic, multi-country comparative approach that integrates indicators of equity, efficiency, government role, and sustainability, offering empirical insights for evidence-based policy improvement. However, the research is limited by its reliance on secondary literature and reports, which may not fully capture local implementation nuances. Future studies should include field-based evaluations, stakeholder interviews, and longitudinal analysis to better understand the practical impact of financing policies and to support the development of more equitable, efficient, and sustainable education funding systems.

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