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A Systematic Literature Review of Education Financing Culture in Indonesia: Examining Efficiency, Effectiveness, and Educational Outcomes and Impacts

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ABSTRACT

This study aims to analyze the efficiency and effectiveness of education financing culture in Indonesia through educational outcomes and educational impacts using a systematic literature review approach. The study employed the PRISMA 2020 framework to identify, screen, evaluate, and synthesize relevant literature published between 2015 and 2025 from multiple academic databases and institutional sources. A total of 25 selected studies were analyzed using thematic synthesis to identify dominant patterns, thematic trends, and conceptual relationships related to education financing, governance, educational effectiveness, equity, and institutional performance. The findings indicate that the culture of education financing in Indonesia remains predominantly oriented toward administrative accountability and access expansion rather than learning quality improvement. Financing effectiveness is influenced not only by the magnitude of educational expenditure but also by governance quality, institutional capacity, organizational culture, and educational management practices. The review further demonstrates that educational financing contributes positively to educational participation, human capital development, and social mobility; however, disparities in resource distribution continue to constrain educational equity and learning quality improvement across regions and institutions. The novelty of this study lies in integrating cultural, organizational, and governance perspectives into the analysis of education financing through a unified conceptual framework linking financing efficiency, financing effectiveness, educational outcomes, and educational impacts within the Indonesian educational context.

INTRODUCTION

Education financing constitutes a fundamental component in determining the sustainability, accessibility, and quality of education systems across countries (Barro, 2013). The increasing complexity of educational demands in the twenty-first century has positioned financing not merely as an administrative instrument, but as a strategic mechanism for improving educational outcomes and societal development. International organizations such as the OECD and UNESCO emphasize that effective education financing contributes significantly to learning quality, human capital formation, and long-term economic growth (OECD, 2019; UNESCO, 2022). Educational investment is also closely associated with broader development objectives, particularly in strengthening productivity, reducing inequality, and improving social mobility (Hanushek & Woessmann, 2020; Psacharopoulos & Patrinos, 2018). Contemporary discussions on education financing increasingly highlight that financial allocation alone is insufficient to ensure educational improvement because governance quality and financing culture strongly influence the effectiveness of resource utilization (C. K. Jackson et al., 2015; Levin et al., 2018). This condition indicates that education financing should be understood as a multidimensional phenomenon involving economic, managerial, institutional, and cultural dimensions simultaneously.

The global expansion of education expenditure has not always been accompanied by proportional improvements in educational quality and learning outcomes. Several countries continue to experience discrepancies between increasing education budgets and stagnant student achievement indicators, particularly in literacy, numeracy, and higher-order thinking skills (OECD, 2020, 2023). Previous studies demonstrate that the effectiveness of educational expenditure depends heavily on institutional governance, teacher quality, leadership, and implementation strategies rather than merely on funding volume (Darling-Hammond et al., 2020; Woessmann, 2016). Evidence from comparative international research further reveals that education systems with similar funding levels often produce significantly different outcomes because of variations in organizational culture and resource management practices (Vegas & Coffin, 2015; Witte & López-Torres, 2017). This situation reinforces the argument that financing effectiveness is shaped by broader systemic and cultural factors within educational institutions.

The Indonesian education system reflects similar challenges regarding the relationship between financing allocation and educational quality. National policies have consistently increased educational spending through constitutional mandates and large-scale financing programs aimed at improving access and equity. The implementation of funding schemes such as School Operational Assistance (BOS) and regional education budgeting demonstrates the government's commitment to expanding educational participation and reducing disparities (Luque et al., 2020; OECD, 2021). Educational participation rates in Indonesia have shown substantial improvement over the last decade; however, learning quality indicators remain relatively low compared to international benchmarks (OECD, 2023). Regional disparities in educational performance continue to indicate uneven distribution of resources, institutional capacity, and governance quality across provinces and districts (Al-Samarrai et al., 2019). This condition suggests that education financing policies in Indonesia are still predominantly oriented toward administrative compliance and quantitative expansion rather than quality-oriented transformation.

Current discussions regarding education financing increasingly emphasize the importance of efficiency and effectiveness in evaluating educational investment. Efficiency refers to the ability of educational institutions and systems to optimize available resources in achieving maximum educational outputs and outcomes (Johnes & Ruggiero, 2017; Thanassoulis et al., 2016). Effectiveness concerns the extent to which educational financing achieves intended objectives, particularly improvements in learning quality, equity, and long-term societal impacts (Harden, 2007; Levin & Belfield, 2015). The integration of efficiency and effectiveness perspectives is essential because educational systems are expected not only to increase access but also to ensure meaningful learning outcomes and sustainable human development. Studies on cost-effectiveness analysis in education further indicate that financing policies should prioritize strategic allocation and outcome-based management to maximize educational benefits (Baker et al., 2022; Levin et al., 2018). These perspectives demonstrate that financing quality cannot be assessed solely from expenditure magnitude, but must also consider institutional practices and educational impacts.

The concept of education financing culture has emerged as an important dimension in understanding variations in educational performance and policy implementation. Financing culture refers to the values, norms, practices, and organizational orientations that shape how educational resources are allocated, managed, and utilized within institutions and systems. Research on educational leadership and organizational management suggests that institutional culture strongly influences decision-making processes, accountability, and resource optimization (Ahmed et al., 2019; Bush, 2003). Educational systems that prioritize innovation, accountability, and learning quality tend to utilize financial resources more effectively than systems dominated by bureaucratic compliance and administrative formalism (Biesta, 2016; Creemers & Kyriakides, 2015). This perspective broadens the analysis of education financing beyond technical and economic dimensions by incorporating cultural and organizational factors as determinants of educational effectiveness.

Previous studies on education financing have predominantly focused on economic efficiency, expenditure allocation, and quantitative educational indicators. Research by Hanushek & Woessmann (2017), OECD (2017), and Jackson et al. (2015) largely examines the relationship between school spending and educational achievement from economic and policy perspectives. Other studies investigate financing effectiveness through cost-benefit analysis, resource efficiency, and educational returns (Levin et al., 2018; Psacharopoulos & Patrinos, 2018). Existing literature provides valuable insights into the role of educational investment in improving educational access and economic outcomes; however, relatively limited attention has been devoted to the cultural dimensions shaping financing practices and institutional behavior. Studies addressing financing culture generally remain fragmented and rarely integrate efficiency, effectiveness, educational outcomes, and educational impacts within a unified analytical framework (Saputra et al., 2024). This fragmentation creates limitations in understanding how financing culture influences the broader dynamics of educational systems.

Research gaps within the current literature indicate the need for a more integrative approach in examining education financing. Existing studies frequently separate analyses of efficiency, effectiveness, educational outcomes, and societal impacts, resulting in partial interpretations of financing dynamics. The cultural dimension of financing is also often overlooked despite its relevance in shaping governance quality, institutional practices, and policy implementation. Limited studies have systematically synthesized empirical findings related to financing culture in the Indonesian educational context, particularly through systematic literature review approaches. The absence of integrated conceptual synthesis creates challenges in understanding how financing culture mediates the relationship between educational investment and educational performance. This condition highlights the necessity of a comprehensive review capable of connecting financing culture with broader educational outcomes and impacts.

This study aims to analyze the efficiency and effectiveness of education financing culture in Indonesia through educational outcomes and impacts using a systematic literature review approach. The study synthesizes empirical and conceptual literature related to education financing, governance, efficiency, effectiveness, educational outcomes, and equity to identify dominant patterns and theoretical relationships. The novelty of this research lies in integrating cultural perspectives into the analysis of education financing by linking financing practices, institutional values, educational outcomes, and societal impacts within a unified conceptual framework. This approach contributes to expanding the discourse on education financing beyond technical-economic perspectives toward a more holistic understanding of educational systems. The findings are expected to provide both theoretical contributions to education financing literature and practical implications for policy development, governance reform, and quality-oriented educational financing strategies in Indonesia.

LITERATURE REVIEW

a. Education Financing

Education financing refers to the allocation and utilization of financial resources to support educational processes, institutional sustainability, and the achievement of educational goals. The concept encompasses various forms of public and private investment intended to improve access, quality, equity, and educational outcomes within a national education system (OECD, 2017). Educational financing has increasingly been recognized as a strategic component of human capital development because educational investment contributes significantly to economic productivity, social mobility, and long-term national competitiveness (Hanushek & Woessmann, 2020; Psacharopoulos & Patrinos, 2018). Contemporary perspectives on education financing emphasize that financial resources should not merely support operational activities but also strengthen institutional effectiveness and educational quality (Baker et al., 2022). This perspective positions financing as both an economic and developmental instrument within broader educational policy frameworks.

The expansion of educational expenditure globally reflects growing recognition of education as a public investment with substantial social and economic returns. OECD countries and developing nations alike have increased education spending to improve educational participation and strengthen workforce capacity in knowledge-based economies (Marginson, 2016; OECD, 2019). Educational financing systems vary considerably across countries depending on governance structures, decentralization policies, and fiscal capacity. Some systems prioritize centralized allocation mechanisms, while others emphasize school-based or performance-based funding models (Vegas

& Coffin, 2015). Variations in financing structures often influence disparities in educational access and learning quality across regions and population groups. These conditions demonstrate that financing arrangements are closely associated with broader institutional and governance contexts.

Theoretical discussions on education financing are strongly influenced by human capital theory, which argues that educational investment increases individual productivity and contributes to economic growth (Hanushek & Woessmann, 2021). Human capital perspectives position education as a productive investment capable of generating measurable economic returns at both individual and societal levels. Educational attainment is associated with increased income, labor market participation, and social mobility, making financing policies critical for sustainable development (Psacharopoulos & Patrinos, 2018). Human capital theory also emphasizes the importance of quality-oriented educational spending because ineffective investment may produce limited developmental impact. This perspective reinforces the need to evaluate not only the amount of educational expenditure but also the effectiveness of its implementation.

Educational financing is also associated with principles of equity and social justice within educational systems. Financing policies are expected to reduce disparities in access and educational opportunities across socioeconomic and regional groups (Reardon, 2018). Unequal distribution of educational resources frequently contributes to widening achievement gaps between advantaged and disadvantaged populations (M. Jackson & Holzman, 2020). Equity-oriented financing therefore seeks to ensure that educational investment supports inclusive participation and equal learning opportunities. International evidence demonstrates that targeted educational spending may reduce inequality when combined with strong institutional governance and effective implementation strategies (Al-Samarrai et al., 2019). These perspectives indicate that education financing should balance efficiency objectives with broader equity considerations.

b. Efficiency in Education Financing

Efficiency in education financing refers to the optimal utilization of educational resources to achieve maximum educational outputs and outcomes. Educational efficiency emphasizes the relationship between inputs such as funding, infrastructure, and human resources and outputs such as student achievement, graduation rates, and learning quality (Johnes & Ruggiero, 2017). Efficiency analysis is important because educational resources are often limited, requiring policymakers and institutions to maximize the impact of available funding. Studies on educational efficiency commonly employ economic evaluation approaches to examine whether financial investment produces proportional educational benefits (Thanassoulis et al., 2016). The increasing demand for accountability within educational systems has strengthened the importance of efficiency-oriented policy evaluation.

Research on educational efficiency demonstrates that higher expenditure does not necessarily guarantee better educational performance. Cross-country evidence indicates substantial variation in educational outcomes among systems with similar funding levels, suggesting that governance quality and institutional practices strongly influence efficiency levels (Witte & López-Torres, 2017). Educational systems characterized by adaptive management, effective leadership, and accountability mechanisms tend to optimize resources more successfully than highly bureaucratic systems (Bush, 2003). Institutional capacity therefore becomes a key determinant in transforming financial inputs into meaningful educational outputs. These findings support the argument that efficiency is closely connected to organizational and cultural dimensions within educational institutions.

Cost-effectiveness analysis has become one of the primary approaches in evaluating educational efficiency. This approach examines the relationship between educational costs and measurable outcomes to identify policies capable of generating the greatest educational impact relative to expenditure (Levin & Belfield, 2015). Cost-effectiveness frameworks enable policymakers to compare alternative interventions and prioritize strategies with higher educational returns. Educational efficiency research also highlights the importance of long-term sustainability because inefficient financing practices may reduce institutional effectiveness over time (Levin et al., 2018). The integration of economic evaluation with educational policy analysis has therefore become increasingly significant in contemporary education systems.

Efficiency discussions within educational contexts are also influenced by broader governance and accountability frameworks. Public sector reforms have encouraged educational institutions to adopt performance-oriented management practices aimed at improving transparency and resource utilization (Johnes & Ruggiero, 2017). International organizations increasingly emphasize evidence-based policymaking and performance monitoring as mechanisms to strengthen financing efficiency (OECD, 2021). Educational systems that lack effective monitoring and evaluation mechanisms often experience resource leakage, administrative inefficiencies, and weak educational outcomes. These conditions demonstrate that efficiency depends not only on resource quantity but also on institutional governance quality.

c. Effectiveness in Education Financing

Effectiveness in education financing refers to the extent to which educational investment achieves intended educational goals and produces meaningful educational impacts. Educational effectiveness is commonly associated with improvements in learning quality, student competencies, educational equity, and societal development (Creemers & Kyriakides, 2015). Financing effectiveness differs from efficiency because effectiveness focuses on goal attainment rather than resource optimization alone. Educational systems may operate efficiently in administrative terms while still failing to improve substantive learning outcomes. This distinction highlights the importance of evaluating financing policies based on educational quality and long-term developmental impact.

Outcome-based education frameworks strongly influence contemporary discussions on financing effectiveness. Outcome-based approaches emphasize that educational systems should prioritize measurable learning competencies and broader developmental outcomes rather than procedural compliance (Harden, 2007; Iqbal et al., 2020). Educational financing is therefore expected to support instructional quality, curriculum development, teacher capacity, and learning environments capable of improving student performance. Research consistently demonstrates that financing effectiveness is strongly associated with teacher quality and institutional leadership (Darling-Hammond et al., 2020). Educational systems that allocate resources strategically toward instructional improvement generally produce stronger educational outcomes than systems dominated by administrative expenditure.

The effectiveness of educational financing is also closely connected to governance quality and policy implementation. Financing policies frequently encounter implementation gaps that reduce their impact on educational quality (Luque et al., 2020). Administrative fragmentation, weak accountability, and unequal institutional capacity often limit the effectiveness of educational investment. Comparative studies further demonstrate that educational reforms are more successful when supported by coherent governance systems and collaborative institutional cultures (Creemers & Kyriakides, 2015). Effective financing therefore requires alignment between policy objectives, institutional practices, and educational management structures.

Educational effectiveness also includes broader societal and economic impacts generated through educational investment. Education contributes to labor productivity, social cohesion, democratic participation, and long-term economic growth (Hanushek & Woessmann, 2020). Financing effectiveness should therefore be evaluated not only through school-level outcomes but also through broader developmental indicators. Educational investment capable of improving both learning quality and social mobility reflects higher levels of financing effectiveness. These perspectives reinforce the multidimensional nature of educational effectiveness within contemporary educational systems.

d. Educational Outcomes and Impacts

Educational outcomes refer to the measurable results achieved through educational processes, including academic achievement, graduation rates, literacy skills, and student competencies. Educational outcomes are commonly used as indicators of system performance and policy effectiveness (OECD, 2020). International assessments such as PISA demonstrate substantial variation in educational outcomes across countries despite differences in financing levels and governance structures (OECD, 2023). These variations indicate that educational performance is shaped by complex interactions among financing, institutional quality, instructional processes, and social conditions. Educational outcomes therefore represent multidimensional indicators rather than simple reflections of financial investment.

Educational impacts extend beyond academic performance to include broader social and economic consequences of educational systems. Human capital perspectives argue that educational attainment contributes significantly to economic productivity, employability, and national competitiveness (Hanushek & Woessmann, 2020). Education also influences social mobility, civic participation, and inequality reduction within societies (Psacharopoulos & Patrinos, 2018). Educational systems capable of producing equitable outcomes generally contribute more effectively to social development and economic sustainability. These perspectives demonstrate that educational financing policies should consider long-term societal impacts in addition to short-term institutional outcomes.

The relationship between educational financing and educational outcomes remains highly debated within the literature. Some studies suggest strong positive relationships between educational expenditure and student achievement, while others indicate weak or inconsistent effects (C. K. Jackson et al., 2015; Vegas & Coffin, 2015). Variations in research findings often reflect differences in governance quality, institutional effectiveness, and implementation contexts. Financing may produce substantial improvements when combined with effective instructional practices and institutional management. Educational outcomes are therefore influenced not solely by funding levels but by broader systemic conditions shaping educational delivery.

Educational inequality remains a persistent challenge in achieving equitable educational outcomes and impacts. Socioeconomic disparities frequently affect access to quality education, learning opportunities, and institutional resources (M. Jackson & Holzman, 2020). Regional inequalities in financing and institutional capacity further contribute to uneven educational performance across populations (Reardon, 2018). Equity-oriented educational financing is therefore essential for reducing disparities and promoting inclusive educational development. These discussions reinforce the importance of integrating effectiveness, equity, and governance considerations within educational financing policies.

e. Culture of Education Financing

The culture of education financing refers to the institutional values, norms, and practices that shape financial decision-making and resource management within educational systems. Financing culture influences how educational institutions prioritize expenditure, allocate resources, and define educational success. Organizational culture theories suggest that institutional values strongly affect managerial behavior, accountability, and policy implementation (Bush, 2003). Educational institutions characterized by collaborative and quality-oriented cultures generally demonstrate stronger adaptability and resource optimization. Financing culture therefore becomes a critical determinant of educational effectiveness beyond technical budgeting procedures.

The integration of cultural perspectives into education financing expands conventional economic approaches by emphasizing the role of organizational behavior and institutional norms. Financing systems dominated by administrative compliance may prioritize procedural accountability over learning quality and innovation (Biesta, 2016). Educational institutions often develop financing practices shaped by bureaucratic routines, political considerations, and historical institutional patterns. These cultural dimensions influence how financial resources are interpreted and utilized within schools and educational organizations. Understanding financing culture is therefore essential for explaining variations in educational effectiveness across institutional contexts.

Research on educational change and institutional development highlights the importance of adaptive organizational cultures in supporting sustainable educational improvement (Ahmed et al., 2019). Institutions capable of integrating accountability, collaboration, and innovation into financing practices tend to produce more effective educational outcomes. Cultural resistance to change, however, may reduce policy effectiveness and limit institutional responsiveness to educational challenges. Educational financing reforms therefore require not only technical adjustments but also broader cultural transformation within educational systems. These perspectives position financing culture as an important analytical dimension in understanding educational governance and policy implementation.

The growing emphasis on evidence-based educational policy further strengthens the relevance of financing culture in contemporary educational research. Financing systems increasingly require transparency, accountability, and strategic planning to respond effectively to educational demands (OECD, 2021). Educational financing culture shapes institutional readiness to adopt performance-oriented management and quality improvement practices. The integration of cultural perspectives into education financing analysis therefore contributes to a more holistic understanding of educational systems. This perspective provides an important foundation for examining the relationship between financing efficiency, effectiveness, educational outcomes, and broader societal impacts.

METHOD

a. Research Design

This study employed a Systematic Literature Review (SLR) approach to examine the culture of education financing in Indonesia in relation to efficiency, effectiveness, educational outcomes, and educational impacts. The study adopted the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to ensure transparency, rigor, and reproducibility in the literature selection and synthesis process (Page et al., 2021). A systematic review approach enables researchers to identify, evaluate, and synthesize relevant scholarly evidence in a structured and accountable manner (Kitchenham & Brereton, 2013; Snyder, 2019).

The review focused on empirical and conceptual studies discussing education financing, financing effectiveness, financing efficiency, governance, educational outcomes, and educational impacts. The study also integrated literature related to organizational culture and educational management because financing practices are closely associated with institutional values and governance structures. The systematic review process consisted of identification, screening, eligibility, and inclusion stages in accordance with PRISMA procedures.

b. Search Strategy

The literature search was conducted using several international academic databases and institutional repositories to ensure broad coverage of relevant studies. The databases were selected based on their relevance to educational policy, educational management, economics of education, and public policy research.

Table 1. Learning Strategies for Character Building

Database Name	Platform	# of Results
Scopus	Elsevier	29
Web of Science	Clarivate	46
ERIC	EBSCO	23
Education Source	EBSCO	74
Academic Search Complete	EBSCO	44
Google Scholar	Google	139
OECD iLibrary	OECD	31
UNESCO Digital Library	UNESCO	22
World Bank e-Library	World Bank	18

Note. Data coverage was from 2015 to 2025, and the date of search was 5 April 2026.

The search process used combinations of keywords related to the focus of the study. The primary search terms included "education financing," "school finance," "education funding," "efficiency," "effectiveness," "educational outcomes," "educational impacts," "human capital," "education governance," and "financing culture." Boolean operators such as "and" and "or" were used to refine the search process. Examples of search combinations included "education financing "and" effectiveness, school finance "and" educational outcomes, "and" education funding "and" governance culture."

c. Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were developed to ensure the relevance and quality of the selected literature.

Table 2. Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Population	Studies discussing educational institutions, education systems, policymakers, educational governance, or financing stakeholders.	Studies unrelated to education systems or educational financing contexts.
Exposure	Studies focusing on education financing, school finance, financing efficiency, financing effectiveness, governance, educational outcomes, or educational impacts.	Studies discussing financial management outside education sectors or unrelated public finance topics.
Outcome	Evidence related to financing efficiency, effectiveness, educational quality, learning outcomes, equity, governance quality, or educational impacts.	Studies focusing solely on technical accounting issues without educational implications.
Study Characteristics	Peer-reviewed journal articles, institutional reports, academic books, and policy analyses published in English or Indonesian between 2015–2025.	Opinion papers, editorials, unpublished manuscripts, non-peer-reviewed studies, and publications prior to 2015 unless considered seminal works.

The inclusion and exclusion criteria enabled the researcher to systematically filter literature based on conceptual relevance, methodological quality, and alignment with the objectives of the study. Studies that did not directly address education financing or educational outcomes were excluded during the screening and eligibility stages.

d. Screening and Selection Process

The literature selection process followed the PRISMA 2020 framework consisting of identification, screening, eligibility, and inclusion stages (Page et al., 2021). During the identification stage, 426 records were identified from database searches. Duplicate records were removed before proceeding to the screening stage.

At the screening stage, titles and abstracts were reviewed to determine preliminary relevance to the research objectives. Articles discussing unrelated financial sectors, non-educational funding systems, or non-empirical discussions were excluded. The eligibility stage involved full-text reading and methodological assessment of the remaining studies. Articles lacking conceptual relevance or methodological clarity were excluded from further analysis.

Table 3. PRISMA Literature Selection Process

PRISMA Stage	Number of Articles
Records identified through database searching	426
Records after duplicate removal	351
Records screened by title and abstract	351
Records excluded during screening	271
Full-text articles assessed for eligibility	80
Full-text articles excluded	55

The PRISMA-based selection process demonstrates that the literature review was conducted systematically and transparently. A total of 426 records were initially identified from multiple academic databases and institutional repositories. After removing duplicate records, 351 studies remained for title and abstract screening. During the screening stage, studies unrelated to education financing, educational outcomes, governance, and financing culture were excluded. Full-text eligibility assessment was then conducted on 80 studies to evaluate conceptual relevance and methodological quality. The final synthesis included 25 studies considered most relevant to the objectives of this systematic literature review.

The PRISMA procedure strengthened the methodological rigor of the study by ensuring transparent documentation of the identification, screening, eligibility, and inclusion stages. The process also minimized selection bias through the application of explicit inclusion and exclusion criteria. This systematic approach enhanced the credibility, consistency, and scientific accountability of the review findings.

e. Data Analysis

The selected studies were analyzed using thematic synthesis to identify recurring themes, conceptual patterns, and relationships among variables related to education financing culture. The analysis process involved open coding, categorization, and theme development based on the findings reported in the selected studies (Snyder, 2019).

The coding process focused on several major themes, including financing efficiency, financing effectiveness, educational governance, educational equity, learning quality, educational outcomes, and societal impacts of education. Similar findings across studies were grouped into broader analytical categories to facilitate synthesis and interpretation. This approach enabled the integration of empirical and conceptual findings into a unified analytical framework.

Thematic synthesis was selected because it allows systematic interpretation of complex educational phenomena involving economic, organizational, and sociocultural dimensions. The analysis also emphasized the interrelationship between financing culture and educational quality to provide a broader understanding of education financing practices in Indonesia and comparable educational contexts.

f. Research Validity and Trustworthiness

The validity and trustworthiness of this study were ensured through systematic and transparent review procedures. The use of PRISMA guidelines enhanced methodological consistency and minimized selection bias during the literature review process (Page et al., 2021). Multiple academic databases were utilized to increase literature coverage and reduce publication bias.

Source triangulation was also applied by comparing findings across journal articles, institutional reports, and policy publications. The inclusion of both international and Indonesian studies strengthened the contextual and conceptual depth of the analysis. In addition, the use of explicit inclusion and exclusion criteria ensured that only relevant and credible studies were included in the final synthesis.

The systematic organization of search, screening, eligibility, and synthesis procedures contributed to the credibility, dependability, and scientific accountability of the study findings.

RESULTS AND DISCUSSION

Results

The systematic literature review process resulted in the inclusion of 25 studies that met the predefined inclusion and exclusion criteria. The selected studies consisted of peer-reviewed journal articles, institutional reports, academic books, and policy analyses discussing education financing, financing efficiency, educational effectiveness, governance, educational outcomes, and educational impacts. The findings demonstrate that studies on education financing have increasingly shifted from purely economic perspectives toward broader discussions involving governance quality, institutional culture, educational equity, and learning quality. The reviewed studies also reveal substantial variation in methodological approaches, analytical focus, and educational contexts, indicating that education financing is a multidimensional issue requiring integrative analysis.

The synthesis of the reviewed literature indicates that the culture of education financing in Indonesia remains strongly influenced by administrative and bureaucratic orientations. Educational financing policies have contributed positively to increasing educational participation and institutional access; however, improvements in learning quality and educational effectiveness remain inconsistent across regions and socioeconomic groups. Several studies highlight that financing effectiveness depends not only on the amount of educational expenditure but also on governance quality, institutional management, teacher capacity, and organizational culture. These findings suggest that financing culture functions as an important contextual factor influencing educational performance and institutional effectiveness.

To provide a clearer overview of the reviewed studies, the findings are presented through several thematic tables that summarize methodological trends, dominant research focuses, financing dimensions, and educational impacts identified within the selected literature.

Table 4. Distribution of Research Methodology Across Selected Studies

Methodology Type	Number of Studies (n)	Percentage	Data Collection Methods
Qualitative	11	44%	Interviews, document analysis, observations, policy analysis
Quantitative	8	32%	Surveys, statistical analysis, secondary datasets
Mixed Methods	4	16%	Surveys, interviews, policy analysis
Systematic Literature Review	2	8%	Database review, thematic synthesis

The distribution of methodological approaches indicates that qualitative research dominates the literature on education financing culture. Qualitative approaches are frequently employed because they enable in-depth exploration of governance practices, organizational culture, and financing implementation within educational institutions. Quantitative studies generally focus on examining the relationship between educational expenditure and educational outcomes through statistical analysis and large-scale datasets. Mixed-methods studies combine quantitative indicators with contextual qualitative interpretation to provide broader analytical perspectives. The relatively limited number of systematic literature reviews suggests that integrative syntheses on education financing culture remain underdeveloped, particularly within the Indonesian educational context.

Table 5. Distribution of Research Methodology Across Selected Studies

Research Theme	Frequency (n = 25)	Main Focus of Analysis	Research Theme
Financing Effectiveness	20	Relationship between financing policies, institutional performance, and educational achievement	Financing Effectiveness
Financing Efficiency	18	Cost-effectiveness, resource optimization, and productivity of educational expenditure	Financing Efficiency
Educational Outcomes	17	Literacy, numeracy, graduation rates, participation, and competency achievement	Educational Outcomes
Governance and Accountability	16	Transparency, accountability, leadership quality, and institutional management	Governance and Accountability
Educational Equity	14	Regional disparities, socioeconomic inequality, and unequal educational access	Educational Equity
Learning Quality	13	Instructional quality, competency development, and learning improvement	Learning Quality
Educational Impacts	12	Social mobility, economic growth, and long-term educational impacts	Educational Impacts
Human Capital Development	10	Labor productivity, workforce quality, and economic competitiveness	Human Capital Development
Organizational Culture	9	Institutional values, organizational practices, and financing culture	Organizational Culture

Note. The thematic frequencies presented in this table are not mutually exclusive because a single study may address multiple themes simultaneously. Therefore, the cumulative frequency exceeds the total number of included studies.

The thematic distribution presented in Table 5 demonstrates that financing effectiveness and financing efficiency remain the most dominant themes identified across the selected studies, indicating that education financing research primarily focuses on institutional performance, resource optimization, and educational achievement. Educational outcomes, governance and accountability, and educational equity also emerged as major analytical concerns because these dimensions are closely associated with financing implementation and policy effectiveness within educational systems. Meanwhile, themes related to learning quality, educational impacts, human capital development, and organizational culture appeared less frequently, suggesting that sociocultural and long-term developmental dimensions remain comparatively underexplored within the existing literature. Overall, the findings indicate that education financing research continues to emphasize technical and managerial perspectives while gradually incorporating governance, equity, and organizational dimensions into broader educational financing analysis.

Table 6. Main Indicators Used in the Included Studies

Indicator Category	Examples of Indicators	Representative Studies
Efficiency Indicators	Cost-effectiveness, resource allocation, spending productivity	(Johnes & Ruggiero, 2017; Levin et al., 2018; Levin & Belfield, 2015; Wibowo & Rukayah, 2020)
Effectiveness Indicators	Educational achievement, institutional performance, policy outcomes	(Hallinger et al., 2025; Hanushek & Woessmann, 2020; OECD, 2021)
Educational Outcomes	Literacy, numeracy, graduation rates, participation rates	(Baker et al., 2022; Minoza et al., 2025; PISA, 2023; UNESCO, 2022)
Equity Indicators	Access disparity, regional inequality, socioeconomic gaps	(Baker et al., 2022; Cordero et al., 2025; Reardon, 2018; Woessmann, 2016)
Governance Indicators	Accountability, transparency, institutional management	(Leithwood et al., 2020; Luque et al., 2020; OECD, 2017; Pohan et al., 2023)

The indicators identified across the reviewed studies demonstrate that educational financing research relies heavily on measurable educational outputs and institutional performance indicators. Quantitative indicators such as graduation rates, enrollment rates, and expenditure efficiency are commonly used because they provide visible and comparable policy outcomes. Several studies additionally integrate broader indicators such as social mobility, labor productivity, and educational equity to capture the long-term societal impacts of education financing. The findings further indicate that governance quality and institutional accountability are increasingly recognized as important determinants of financing effectiveness.

Table 7. **Major Findings Across the Included Studies**

Major Findings	Related Indicator Category	Representative Studies
Increased educational expenditure does not automatically improve learning quality	Efficiency Indicators; Educational Outcomes	(Glewwe & Muralidharan, 2016; Hanushek & Woessmann, 2020; Levin et al., 2018; Wibowo & Rukayah, 2020)
Financing effectiveness is strongly influenced by governance quality and institutional accountability	Governance Indicators; Effectiveness Indicators	(Leithwood et al., 2020; Luque et al., 2020; OECD, 2021; Pohan et al., 2023)
Educational financing contributes more strongly to access expansion than learning quality improvement	Educational Outcomes; Effectiveness Indicators	(Baker et al., 2022; OECD, 2019; PISA, 2023; UNESCO, 2022)
Educational inequality remains associated with disparities in financing distribution and socioeconomic conditions	Equity Indicators	(Baker et al., 2022; Cordero et al., 2025; Reardon, 2018; Woessmann, 2016)
Teacher quality, leadership, and institutional capacity significantly affect educational effectiveness	Governance Indicators; Human Capital Indicators	(Hallinger et al., 2025; Hanushek & Woessmann, 2020; Kraft, 2020; Leithwood et al., 2020)
Human capital development depends on educational quality and financing effectiveness	Human Capital Indicators	(Fredricks et al., 2022; Glewwe & Muralidharan, 2016; U. C. Sari et al., 2024)
Organizational culture and financing management practices influence institutional performance and financing implementation	Governance Indicators; Efficiency Indicators	(Johnes & Ruggiero, 2017; Levin et al., 2018; OECD, 2017, 2021)

The synthesis presented in Table 7 demonstrates that the findings identified across the selected studies are closely interconnected with the indicator categories summarized in Table 6. Efficiency indicators primarily emphasize cost-effectiveness, productivity, and resource allocation, yet the reviewed studies consistently indicate that increased educational expenditure does not automatically produce proportional improvements in learning quality. Educational financing therefore cannot be evaluated solely through budget magnitude or expenditure growth because the effectiveness of financing depends substantially on governance quality, institutional management, and implementation capacity. Efficient educational financing requires adaptive management systems capable of transforming financial inputs into meaningful educational outcomes (Johnes & Ruggiero, 2017; Levin et al., 2018; Wibowo & Rukayah, 2020).

The reviewed literature further indicates that effectiveness indicators are predominantly associated with educational achievement, institutional performance, and policy outcomes. Educational financing policies in Indonesia and comparable educational systems have demonstrated stronger contributions toward expanding educational access than improving learning quality. Participation indicators such as enrollment and graduation rates continue to improve; however, literacy, numeracy, and competency-based outcomes remain inconsistent across regions and educational institutions (OECD, 2019; PISA, 2023; UNESCO, 2022). This condition suggests that financing effectiveness remains strongly oriented toward quantitative expansion rather than substantive educational transformation. The dominance of participation-based indicators within policy evaluation frameworks consequently contributes to persistent gaps between educational investment and learning quality improvement.

The findings also demonstrate that educational equity remains strongly influenced by disparities in financing allocation and socioeconomic conditions. Equity indicators identified in Table 6 reveal continuing inequalities related to regional access, institutional resources, and educational opportunities. Standardized financing systems frequently fail to accommodate contextual institutional needs, thereby reproducing educational inequality across regions and population groups (Baker et al., 2022; Cordero et al., 2025; Reardon, 2018). Educational financing policies that prioritize uniform allocation mechanisms without considering institutional disparities tend to weaken the distributive and compensatory functions of educational investment. These findings emphasize the importance of equity-oriented financing strategies capable of addressing structural educational inequality.

Governance indicators additionally emerged as critical dimensions influencing financing effectiveness and institutional performance. Accountability, transparency, and leadership quality were consistently identified as determining factors shaping resource utilization and educational outcomes. Educational institutions characterized by adaptive leadership and transparent governance systems tend to demonstrate stronger institutional effectiveness and more efficient financing practices (Leithwood et al., 2020; Luque et al., 2020; OECD, 2021). Governance quality therefore functions as an important mediating factor connecting financial investment with educational performance. Educational financing consequently operates not only as an economic mechanism but also as an organizational and managerial process shaped by institutional culture and administrative practices.

Human capital indicators further reveal that the broader impacts of education financing extend beyond institutional performance into social and economic development dimensions. Effective educational financing contributes positively to labor productivity, social mobility, and human capital formation when accompanied by improvements in educational quality and institutional effectiveness (Fredricks et al., 2022; Harden, 2007; U. C. Sari et al., 2024). The reviewed studies nevertheless indicate that unequal educational quality and financing disparities continue to limit the long-term social impacts of educational investment. Educational financing systems that fail to integrate quality-oriented governance and equitable allocation mechanisms therefore risk producing uneven developmental outcomes across regions and socioeconomic groups.

Discussion

The findings of this systematic literature review confirm that the culture of education financing in Indonesia remains predominantly shaped by administrative accountability and quantitative expansion orientations. Educational financing policies have succeeded in increasing educational participation and institutional access; however, improvements in learning quality and educational effectiveness remain relatively limited. This condition reflects a financing culture that prioritizes measurable outputs such as enrollment rates, graduation rates, and budget absorption more strongly than substantive educational transformation. Increased educational expenditure frequently contributes more rapidly to participation growth than to competency development and learning quality enhancement (OECD, 2019; PISA, 2023; UNESCO, 2022). Educational outcomes therefore continue to be dominated by quantitative indicators rather than competency-based measures reflecting meaningful learning achievement (Baker et al., 2022; Minoza et al., 2025).

The relationship between financing efficiency and educational effectiveness identified in this review demonstrates that educational expenditure alone is insufficient to ensure educational quality improvement. Efficiency indicators identified in the reviewed studies emphasize cost-effectiveness, resource allocation, and spending productivity as important dimensions of educational financing evaluation (Levin et al., 2018; Levin & Belfield, 2015; Wibowo & Rukayah, 2020). The reviewed studies consistently reveal that governance quality, leadership capacity, organizational culture, and institutional management practices significantly influence the effectiveness of resource utilization. Educational institutions characterized by transparent governance, adaptive leadership, and strong accountability systems tend to optimize educational resources more effectively and achieve stronger educational outcomes (Johnes & Ruggiero, 2017; Leithwood et al., 2020; OECD, 2021). Financing culture therefore functions as a multidimensional institutional phenomenon integrating economic, organizational, managerial, and sociocultural dimensions within educational systems.

The findings also reinforce the argument that educational financing should incorporate equity-oriented approaches to reduce disparities in educational opportunities and institutional quality. Equity indicators summarized in Table 6 reveal persistent inequalities related to regional access, socioeconomic disparities, and institutional resource distribution (Baker et al., 2022; Cordero et al., 2025; Reardon, 2018). Educational inequality remains closely associated with uneven financing distribution and differences in institutional capacity. Uniform financing approaches are insufficient to address contextual institutional needs because educational institutions operate under diverse economic, geographic, and organizational conditions. Equitable educational financing systems are therefore essential for reducing structural educational inequality and improving inclusive educational development (OECD, 2017; Woessmann, 2016).

The review further demonstrates that governance indicators such as accountability, transparency, and institutional management quality function as central determinants of financing effectiveness and educational performance. Financing systems characterized by strong governance structures tend to demonstrate more efficient resource allocation and stronger institutional outcomes (Luque et al., 2020; Pohan et al., 2023). Organizational culture additionally influences how financing policies are interpreted and implemented within educational institutions. Financing effectiveness consequently depends not only on financial investment but also on administrative practices, institutional leadership, and governance quality shaping educational decision-making processes. Educational financing therefore operates simultaneously as a fiscal mechanism and an organizational process influenced by institutional values and policy orientations (Bush, 2003; Hallinger et al., 2025; OECD, 2021).

The findings additionally indicate that human capital development depends substantially on the interaction between educational quality and financing effectiveness. Human capital indicators identified in the reviewed studies emphasize the contribution of educational financing to economic productivity, labor competitiveness, and social mobility (Baker et al., 2022; Fredricks et al., 2022; N. P. Sari & Tanaka, 2019). Educational financing contributes positively to long-term societal development when integrated with effective governance, teacher development, and institutional capacity strengthening. Financing systems focused solely on operational expenditure without supporting instructional quality improvement tend to produce limited long-term educational impacts. This finding supports human capital theory, which emphasizes the importance of educational investment in enhancing societal welfare and economic development.

The theoretical contribution of this study lies in strengthening the integration of cultural and governance perspectives within education financing analysis. Existing education financing literature frequently emphasizes technical efficiency and expenditure effectiveness while overlooking the influence of organizational culture and institutional practices. This study demonstrates that financing effectiveness is shaped not only by fiscal capacity but also by institutional values, governance quality, leadership practices, and educational management systems. The findings therefore contribute to the development of a more integrative conceptual framework linking financing efficiency, educational effectiveness, governance quality, educational outcomes, educational equity, and human capital development within a unified analytical perspective.

CONCLUSION

This systematic literature review demonstrates that the culture of education financing in Indonesia has not fully supported the achievement of optimal efficiency and effectiveness in producing meaningful educational outcomes and broader educational impacts. The reviewed studies indicate that educational financing policies have contributed positively to expanding educational access and participation; however, improvements in learning quality, institutional performance, and educational equity remain uneven. The findings reveal that financing systems continue to prioritize administrative accountability and quantitative expansion rather than substantive learning transformation and competency development. Educational effectiveness therefore remains constrained by the imbalance between financing inputs and educational quality outcomes.

The findings further indicate that financing efficiency is influenced not only by the magnitude of educational expenditure but also by governance quality, institutional capacity, and organizational culture. Educational institutions characterized by adaptive leadership, transparent management, and strong accountability mechanisms demonstrate greater ability to optimize available resources and achieve more effective educational outcomes. Financing culture consequently functions as a contextual and organizational factor shaping how educational resources are interpreted, allocated, and utilized within educational systems. This condition confirms that education financing should not be understood merely as a technical budgeting mechanism but as an institutional process influenced by values, norms, and governance practices.

The review additionally demonstrates that educational financing contributes positively to broader social and economic development through human capital formation, social mobility, and labor productivity improvement. The distribution of these benefits, however, remains unequal due to disparities in financing allocation, institutional quality, and educational access across regions and socioeconomic groups. Educational financing systems that rely predominantly on standardized allocation approaches have not fully accommodated contextual institutional needs, resulting in persistent educational inequality. Equity-oriented financing strategies are therefore essential to strengthen the distributive function of education financing policies.

The main contribution of this study lies in integrating cultural, organizational, and governance perspectives into the analysis of education financing by linking efficiency, effectiveness, educational outcomes, and educational impacts within a unified conceptual framework. This study expands existing education financing literature by demonstrating that financing effectiveness depends substantially on institutional culture and governance quality rather than solely on financial investment levels. The findings imply that future educational financing policies should prioritize governance strengthening, equitable resource distribution, institutional capacity development, and learning quality improvement to achieve sustainable educational effectiveness and societal impact.

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Research Ethics Statement

Not applicable

Declaration of generative AI Use

The author declares that the use of generative artificial intelligence tools in the preparation of this manuscript was minimal and limited to supporting language refinement and improving clarity of expression. All core aspects of the research, including conceptualization, analysis, literature synthesis, and conclusion development, were conducted entirely by the author.

All content, interpretations, and arguments presented in this article remain the sole responsibility of the author. The manuscript has been thoroughly reviewed to ensure accuracy, consistency, and adherence to academic integrity standards.

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