ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25apr2300

Exploring Educational Systems: A Comparative Systematic Review of Costa Rica, the Philippines, and Singapore

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Publication Date: 2025/05/16

Abstract: This study systematically reviews the educational systems of Costa Rica, the Philippines, and Singapore, focusing on governance and management, curriculum development, learner development, teacher development, pedagogical approaches, community engagement, support systems, and the role of private schools. Utilizing a qualitative thematic approach, the paper synthesizes scholarly research, government publications, and policy reports to evaluate how these nations manage structural challenges and educational reforms. Findings indicate that while Costa Rica demonstrates relatively stable governance and proactive policy responses, the Philippines faces systemic constraints, and Singapore exemplifies how strategic investments and coherent policy alignment produce world-class outcomes. Comparative PISA scores from 2018 and 2022 reveal significant disparities in student achievement, with Singapore consistently excelling, Costa Rica achieving moderate results, and the Philippines demonstrating critical challenges. These insights contribute to the development of equity-driven and resilient education policy frameworks for developing and middle-income countries.

Keywords: *Costa Rica, Philippines, Singapore, Educational Systems, Governance, Curriculum, Learner Development, Teacher Development, Pedagogical Approaches, Support Systems, Community Engagement, Pisa Performance.*

How to Cite: Catherine E. Semila; Gladys S. Escarlos. (2025). Exploring Educational Systems: A Comparative Systematic Review of Costa Rica, the Philippines, and Singapore. *International Journal of Innovative Science and Research Technology*, 10(4), 3927-3930. https://doi.org/10.38124/ijisrt/25apr2300.

I. INTRODUCTION

Educational systems reflect the priorities, culture, and economic ambitions of a nation. For Costa Rica and the Philippines, both classified as middle-income countries, education serves as a crucial pathway for social mobility and national development. Singapore, a high-income economy, has emerged as a global model of educational excellence. Despite their varied socio-economic contexts, these nations display divergent educational outcomes and system structures, warranting a comparative review. This paper systematically examines key educational domains—governance and management, curriculum development, learner development, teacher development, pedagogical approaches, support systems, community engagement, and the role of private schools—to identify underlying disparities and potential growth pathways.

II. METHODOLOGY

This review employed a systematic qualitative approach, focusing on peer-reviewed journals, official policy reports, and statistical publications from 2000 to 2023. The study used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure transparency and replicability in the selection of relevant literature. Sources were identified via targeted searches in academic databases such as JSTOR, Scopus, and Google Scholar, using keywords like 'educational governance,' 'curriculum reform,' 'teacher development,' 'learner outcomes,' 'support systems,' 'PISA scores,' and 'private schools' in combination with the country names. Institutional archives such as the OECD, UNESCO, and national education ministries were also consulted. A thematic synthesis approach was employed to categorize findings across key educational domains.

III. RESULTS

A. Governance and Management

- *Costa Rica*

Costa Rica's centralized governance model allows for efficient policy implementation, though challenges persist due to resource disparities in rural regions. Recent reforms like the *Red de Innovación y Calidad Educativa* aim to address these disparities by integrating technology into classrooms.

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➢ *Philippines*

The Philippines operates a decentralized education system, which has resulted in significant disparities across regions. The K-12 reform, though promising, faces implementation challenges due to resource limitations and underprepared teachers, especially in rural areas.

➢ *Singapore*

Singapore's centralized governance ensures a high degree of policy coherence, with a strong investment in teacher selection, professional development, and career progression contributing to its world-class educational outcomes.

B. Curriculum Development

➢ *Costa Rica*

Costa Rica's curriculum has evolved to focus on competencies and critical thinking, though implementation has been slowed by inconsistent funding and political instability.

➢ *Philippines*

The Philippines introduced the K-12 Basic Education Curriculum in 2012, but challenges in teacher preparedness and resource availability have hindered the success of this reform.

➢ *Singapore*

Singapore's curriculum is renowned for its adaptability, integrating global citizenship, critical thinking, and 21st-century skills, ensuring students are equipped for modern challenges.

C. Learner Development

➢ *Costa Rica*

Despite universal access to education, socio-economic inequalities persist, especially in rural areas, where students lack access to digital tools and qualified teachers. In the 2018 PISA assessment, Costa Rica scored an average of 426 in reading, 416 in mathematics, and 439 in science, performing below the OECD average but showing steady improvement compared to previous cycles. In PISA 2022, Costa Rica's performance remained relatively stable, with scores of 415 in mathematics, 412 in reading, and 428 in science, indicating ongoing challenges in elevating academic outcomes to meet OECD standards.

➢ *Philippines*

The Philippines faces overcrowded classrooms and infrastructure deficits, exacerbated by the pandemic, which has left many students without access to necessary technology. The country's debut participation in PISA 2018 revealed critical gaps, with scores of 340 in reading, 353 in mathematics, and 357 in science, placing it among the lowest-performing participants. In PISA 2022, the Philippines showed slight improvements in mathematics (355) and science (356), but a marginal decline in reading (347), underscoring persistent challenges in achieving substantial educational progress.

➢ *Singapore*

Singapore's system emphasizes holistic learner development, ensuring students' academic, emotional, social, and physical well-being is supported. Consistently ranking at the top in international assessments, Singapore scored 549 in reading, 569 in mathematics, and 551 in science during the 2018 PISA. In PISA 2022, Singapore maintained its leading position with scores of 575 in mathematics, 543 in reading, and 561 in science, reflecting its commitment to excellence and equity in education.

D. Pedagogical Approaches

➢ *Costa Rica*

Costa Rica has made strides toward modernizing its pedagogy, with a shift toward critical thinking and competency-based learning, though teacher preparation remains inconsistent.

➢ *Philippines*

Traditional pedagogies like rote learning still dominate, despite reforms aimed at promoting inquiry-based learning.

➢ *Singapore*

Singapore's innovative pedagogies, such as inquiry-based learning and project-based learning, are complemented by continuous teacher development, making its system a global leader in education.

E. Teacher Development

➢ *Costa Rica*

Teacher development in Costa Rica is inconsistent, particularly in rural areas, although recent reforms have focused on improving training.

➢ *Philippines*

The Philippines has institutionalized professional development, but challenges like high teacher workloads and lack of institutional support hinder its effectiveness.

➢ *Singapore*

Singapore invests heavily in teacher development, with continuous professional learning and performance-based career progression ensuring educators are equipped to meet changing student needs.

F. Support Systems

➢ *Costa Rica*

Costa Rica provides basic support systems through programs like *Avancemos*, a conditional cash transfer initiative aimed at encouraging school attendance among low-income students. The Ministry of Public Education (MEP) also offers special education services, although gaps remain in rural access to mental health counseling, career guidance, and disability support services.

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➢ *Philippines*

Support systems in the Philippines are primarily delivered through programs like the School-Based Feeding Program (SBFP) and the Alternative Learning System (ALS) for out-of-school youth. However, the availability of mental health services, academic counseling, and special education support remains limited, particularly in public schools outside urban centers. Recent reforms, including the Mental Health Act, aim to strengthen student well-being, but full implementation faces resource constraints.

➢ *Singapore*

Singapore offers a comprehensive support system covering academic counseling, career guidance, psychological services, and special education support through its *Student Support Teams* in every school. Initiatives such as the *Financial Assistance Scheme* (FAS) ensure that no child is left behind due to financial hardship. Mental health programs, such as *Character and Citizenship Education (CCE)* lessons and peer support structures, are systematically embedded in school culture.

G. Community Engagement and Private Schools

➢ *Costa Rica*

Community engagement is a strength, with schools frequently partnering with local organizations, but access to private education remains limited.

➢ *Philippines*

Private schools play a significant role in urban areas but exacerbate inequalities by being out of reach for many families.

➢ *Singapore*

Private international schools cater to expatriates, but the majority of students attend high-quality public schools, with a focus on community engagement and character development.

To provide a concise comparison, Table 1 summarizes key educational indicators across Costa Rica, the Philippines, and Singapore. This highlights not only their systemic structures but also their learner outcomes as reflected in international assessments like PISA.

Table 1: Comparative Overview of Key Educational Indicators

Dimension	Costa Rica	Philippines	Singapore
Governance	Centralized; facing rural disparities	Decentralized; regional inequalities	Centralized; high policy coherence
Curriculum Focus	Competency and critical thinking	K-12 reform; traditional methods dominate	21st-century skills; adaptable
Teacher Development	Inconsistent, improving reforms	Institutionalized but resource-limited	Continuous professional development
Pedagogical Approach	Shift towards critical thinking	Predominantly rote learning	Inquiry-based and project-based
Support Systems	Conditional cash transfers; special education, limited mental health services	Feeding programs, limited mental health support	Comprehensive student support teams, financial aid, mental health integration
Community Engagement	Active partnerships with local groups	Private sector active in urban areas	Integrated into school programs
PISA 2018 (Reading/Math/Science)	426 / 416 / 439	340 / 353 / 357	549 / 569 / 551
PISA 2022 (Reading/Math/Science)	412 / 415 / 428	347 / 355 / 356	543 / 575 / 561
Key Challenges	Rural disparities, funding instability	Infrastructure gaps, learning poverty	Stress management, sustaining innovation

IV. DISCUSSION

The analysis reveals that Costa Rica, the Philippines, and Singapore each face distinct challenges and opportunities in their educational systems. Costa Rica benefits from centralized governance but struggles with resource disparities. The Philippines, with its decentralized system, faces systemic challenges to equitable education. Singapore exemplifies a cohesive, well-invested education system that balances modern pedagogies and teacher development with strategic governance.

The PISA 2018 and 2022 scores further underline the disparities among the three countries. Singapore's top-tier performance in reading, mathematics, and science contrasts sharply with Costa Rica's mid-level outcomes and the Philippines' urgent need for systemic educational reforms. These differences highlight how governance models, investment in teacher development, and curriculum adaptability directly influence student achievement at the international level. Furthermore, the contrast illustrates the necessity for countries like the Philippines and Costa Rica to invest more substantially in foundational skills and equitable access to learning resources.

While this systematic review provides valuable comparative insights into the educational systems of Costa Rica, the Philippines, and Singapore, it is not without limitations. The study relies primarily on secondary data sources such as published research articles, policy

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25apr2300

documents, and international assessment reports. Consequently, it may not capture the most recent grassroots-level developments or nuanced local practices that primary field research, interviews, or case studies could reveal. Additionally, differences in data reporting standards across countries may affect the comparability of certain findings. Future research could address these limitations by incorporating mixed methods approaches, including longitudinal fieldwork and stakeholder interviews, to enrich the analysis.

V. CONCLUSION

Costa Rica, the Philippines, and Singapore represent different approaches to education, shaped by their unique contexts. While Costa Rica emphasizes equity within its centralized system, the Philippines faces challenges in decentralization. Singapore's world-class system offers valuable lessons in governance, teacher development, and pedagogical innovation.

Future research could explore how middle-income nations can adapt Singapore's policy coherence and teacher development strategies to their contexts, and how public-private partnerships could improve educational outcomes. Additionally, continuous monitoring through international assessments like PISA can provide valuable benchmarks for progress and targeted reform initiatives.

ACKNOWLEDGMENT

The author would like to thank Dr. Gladys S. Escarlos of Central Mindanao University for their invaluable guidance and support throughout this research. Special thanks to the Department of Education – Graduate Studies at CMU for providing the necessary resources for this study. Above all, sincere gratitude to the Lord God for the strength, wisdom, and inspiration throughout this academic journey. The author also extends heartfelt thanks to family and friends for their constant encouragement and support.

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