

Education sandbox policy management strategy for developing the quality of education sustainably

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ABSTRACT

This research aimed to study, develop, and evaluate an education sandbox policy management strategy for sustainable educational quality development. A mixed-methods research design was employed, conducted in three phases. Phase 1 investigated current policy management conditions through document analysis and synthesized strategic issues using an inductive approach. Phase 2 focused on strategy formulation using SWOT and TOWS matrix analyses. The draft strategies were validated for appropriateness and consistency through a focus group discussion with nine experts, followed by verification with three experts and a sustainability assessment by five experts. Phase 3 involved evaluating the developed strategies' appropriateness and feasibility using a questionnaire administered to 120 participants, including provincial education officers, educational service area directors, and pilot school directors in education sandbox areas. Data were analyzed using mean, standard deviation, and content analysis. The findings revealed that the education sandbox policy management strategy comprises six main strategic dimensions and 31 sub-strategies, covering key areas such as educational innovation development, inequality reduction, area-based management, and decentralization. The overall evaluation indicated that the developed strategies hold the highest level of appropriateness and feasibility. These findings provide a practical framework for policymakers and educational administrators to enhance school autonomy and educational quality in sandbox areas.

Keywords: Education sandbox, policy management, decentralization, strategic management, sustainable educational quality.

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INTRODUCTION

The Constitution of the Kingdom of Thailand, Section 54, and the National Education Act of 1999 (amended in 2002) stipulate that the state must ensure twelve years of free, quality education aimed at holistic citizen development (Ministry of Education, 2017; Office of the National Education Commission, 1999, 2002; Office of the Secretariat of the House of Representatives, 2019). To achieve this, the Ministry of Education has implemented numerous policies aligned with 21st-century frameworks to enhance educational quality and reduce inequality (Ministry of Education, 2019; OECD, 2016). However, despite substantial budget allocations often higher than other government sectors, national and international assessments, such as PISA, consistently indicate that

Thai students underperform in essential skills like reading comprehension and problem-solving (Kittiyanawisit et al., 2021; Office of Education Sandbox Administration, 2020; World Bank, 2018). These persistent challenges highlight a critical discrepancy between policy intent and practical outcomes, largely attributed to structural disparities and factors beyond students' control, such as socioeconomic status and location (Tangkitvanich, 2019).

Previous education reforms have failed to yield desired outcomes primarily due to the limitations of centralized policy models. These structures have historically hindered integration among agencies, restricted school autonomy, and lacked effective mechanisms for scaling innovations (Ministry of Education, 2021). As noted by Tangkitvanich

(2019), a key structural weakness is the lack of accountability and decentralization. A shift towards area-based reform is therefore essential, requiring a system that empowers local actors, enhances administrative flexibility, and strengthens direct accountability to the community (Office of the Education Council, 2019, 2020; Thailand Development Research Institute [TDRI], 2019, 2020).

To address these structural rigidities, the "Education Sandbox" initiative was established under the *Education Sandbox Act B.E. 2562* (2019). Unlike previous area-based reforms, the Education Sandbox represents a paradigm shift towards legalized decentralization, granting designated areas the authority to innovate in curriculum, personnel management, and budget utilization to fit specific local contexts (*Education Sandbox Act B.E. 2562*, 2019; Office of the Basic Education Commission, 2023; Office of Education Sandbox Administration, 2021, 2022). Currently, Thailand has designated 20 education sandbox areas aimed at creating bottom-up changes to reduce inequality and improve management efficiency (Office of the Basic Education Commission, 2023).

Despite the enactment of the *Education Sandbox Act*, the practical implementation of this policy faces significant hurdles. Reports indicate that policy flexibility has primarily occurred in academic administration, while personnel and budget management remain relatively rigid (TDRI, 2021). Furthermore, geographically isolated areas, such as islands and remote highlands, continue to struggle with infrastructure constraints and a lack of resources, threatening the long-term viability of these innovations (Chiang Mai Provincial Education Office, 2022). This creates a critical while the legal framework for the Sandbox exists, there is a lack of comprehensive, evidence-based management strategies that ensure these initiatives can be implemented effectively and sustainably across diverse contexts.

Research objectives

The primary objective of this research was to develop and evaluate an education sandbox policy management strategy for sustainable educational quality development. To achieve this, the study first examined current policy conditions and synthesized strategic issues to establish an empirical foundation. These findings were then utilized to formulate the strategy through SWOT and TOWS matrix analyses. Finally, the developed strategy was rigorously evaluated by experts and key stakeholders to assess its appropriateness and feasibility for practical implementation.

RESEARCH METHODOLOGY

This study employed a mixed-methods research design, specifically an exploratory sequential design, conducted in

three phases. This approach allowed for the comprehensive exploration of strategic issues through qualitative methods before validating the developed strategies quantitatively.

Phase 1: Study and synthesis of strategic issues

The objective of this phase was to examine the contextual framework and identify critical challenges in education sandbox management to establish a foundational framework for strategy development. The research procedure consisted of two main steps:

1. The researchers collected and analyzed data from relevant legal and policy documents to understand the current state of policy implementation. Key documents included the Constitution of the Kingdom of Thailand, the National Education Act, the Education Sandbox Act B.E. 2562, and operational reports from the Office of Education Sandbox Administration.
2. Data were analyzed using content analysis to categorize key concepts and variables. Subsequently, an inductive approach was utilized to synthesize these findings into core "Strategic Issues. These issues served as the empirical basis for the SWOT analysis and expert interviews in the subsequent phase.

Phase 2: Strategy development

This phase focused on formulating and validating the strategies based on the empirical findings from Phase 1. The procedure comprised four steps:

1. Interviews were conducted with key informants, consisting of policymakers and educational administrators involved in the sandbox areas. The objective was to gain deeper insights into the practical gaps in policy implementation and to gather qualitative data for environmental analysis.
2. Based on the interview data, a SWOT analysis was performed to assess internal strengths/weaknesses and external opportunities/threats. Subsequently, a TOWS Matrix was utilized as a strategic tool to systematically generate actionable strategies by matching these internal and external factors. This approach ensured that the formulated strategies were not only theoretically grounded but also practical for addressing specific contexts within the education sandbox.
3. The draft strategies were validated for appropriateness and consistency through a focus group discussion with nine experts. These experts were purposively selected based on their qualifications, including expertise in educational administration, strategic planning, and direct experience in driving education sandbox policies.
4. To ensure long-term viability, the refined strategies were

further evaluated specifically for sustainability by five experts selected from the initial focus group panel.

Phase 3: Strategy evaluation

This phase focused on the quantitative evaluation of the developed strategies to verify their suitability for practical implementation.

1. Participants: The sample consisted of 120 key stakeholders selected through purposive sampling. The respondents included provincial education officers, directors of educational service area offices, and directors of pilot schools currently operating within the education sandbox areas. These participants were selected based on their direct involvement and expertise in policy management within the innovation areas.
2. Research instrument: A structured questionnaire was developed based on the strategic dimensions formulated in Phase 2. The instrument assessed the strategies in terms of appropriateness and feasibility using a 5-point Likert scale (5 = Highest, 4 = High, 3 = Moderate, 2 = Low, 1 = Lowest). To ensure instrument quality, content validity was verified by five experts, yielding Item-Objective Congruence (IOC) indices between 0.60 and 1.00, which indicate acceptable validity. Furthermore, the reliability of the questionnaire was tested, yielding a Cronbach's alpha coefficient of 0.95, indicating a high level of internal consistency.
3. Data analysis: Quantitative data were analyzed using descriptive statistics, including mean (*M*) and standard deviation (*S.D.*). The interpretation criteria for the mean scores were established as follows: 4.51–5.00 (Highest), 3.51–4.50 (High), 2.51–3.50 (Moderate), 1.51–2.50 (Low), and 1.00–1.50 (Lowest). Additionally, content analysis was employed to synthesize qualitative feedback from the open-ended section of the questionnaire.

Ethical approval

COA No.TSU 2025_036 REC No.0071
 The Thaksin University Ethics Committee on Human Research
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RESULTS

The findings of this study are presented in two parts: the development of the strategy (Phase 2) and the evaluation of its appropriateness and feasibility (Phase 3).

1. The Education Sandbox Policy Management Strategy based on the synthesis of strategic issues and expert validation, the developed education sandbox policy management strategy for sustainable educational quality development comprises 6 main strategic dimensions and 31 sub-strategies, as follows:

1.1. Educational Innovation Development to Enhance Learner Quality: Consisting of 6 sub-strategies focused on curriculum flexibility and modern learning processes.

1.2. Reduction of Educational Inequality and Expansion of Educational Opportunities: Consisting of 6 sub-strategies aimed at bridging the gap for underprivileged students.

1.3. Area-Based Management and Quality Assurance: Consisting of 5 sub-strategies to elevate local educational standards.

1.4. Collaboration and Partnership Networking: Consisting of 5 sub-strategies to foster cross-sector cooperation.

1.5. Decentralization of Educational Administration for Sustainability: Consisting of 4 sub-strategies to empower local decision-making.

1.6. Development of Teachers' and Educational Personnel's Potential: Consisting of 5 sub-strategies to upskill human resources.

2. The quantitative evaluation was conducted with 120 stakeholders, including provincial education officers, administrators, and pilot school directors. The results revealed that the developed strategies are highly suitable for practical implementation.

As shown in Table 1, the overall assessment indicated that the strategies demonstrated the highest level of appropriateness ($M = 4.64$, $S.D. = 0.17$) and the highest level of feasibility ($M = 4.68$, $S.D. = 0.16$). When considering each dimension, Collaboration and Partnership Networking received the highest rating for appropriateness ($M = 4.75$), while both Collaboration and Partnership Networking and Decentralization of Educational Administration received the highest ratings for feasibility ($M = 4.76$).

Table 1. Summary of evaluation results for appropriateness and feasibility of the strategies (n = 120).

Main strategic dimensions	Appropriateness	Feasibility	Interpretation
	<i>M (S.D.)</i>	<i>M (S.D.)</i>	
1. Educational innovation development	4.60 (0.30)	4.63 (0.28)	Highest
2. Reduction of educational inequality	4.58 (0.29)	4.60 (0.29)	Highest
3. Area-based management & QA	4.60 (0.38)	4.66 (0.34)	Highest
4. Collaboration and partnership	4.75 (0.23)	4.76 (0.23)	Highest
5. Decentralization of administration	4.73 (0.23)	4.76 (0.22)	Highest
6. Development of personnel	4.62 (0.28)	4.64 (0.27)	Highest
Overall average	4.64 (0.17)	4.68 (0.16)	Highest

DISCUSSION

The findings indicate that the developed strategy aligns with existing research on educational innovation, equity enhancement, area-based management, and decentralization, with the overall evaluation demonstrating the highest levels of appropriateness and feasibility. A primary aspect of these findings is the alignment with global decentralization trends and School-Based Management (SBM). The high feasibility of the Decentralization of Educational Administration strategy supports international literature, such as the World Bank's framework, which emphasizes that transferring decision-making authority to local schools significantly enhances resource allocation efficiency and accountability. Similarly, comparative studies on school decentralization indicate that local autonomy is a critical factor for educational success in diverse contexts. However, unlike traditional SBM, this study's strategy addresses a specific gap identified in Thailand: the rigidity of personnel and budget regulations. By incorporating specific sub-strategies for budget support and decision-making power, this research offers a concrete mechanism to operationalize the legal framework of the Education Sandbox Act, ensuring that decentralization is practically executable. Furthermore, the role of innovation ecosystems is evident in the emphasis on Collaboration and Partnership Networking, which reflects the concept of Regulatory Sandboxes used globally to foster innovation. As noted in OECD studies on digital innovation, sandboxes provide a safe space for experimentation. This study confirms that for educational sandboxes to succeed, they require a similar ecosystem that integrates government, the private sector, and civil society. These findings support Klapsong Na Phatthalung et al. (2020), who found that participatory management strategies are essential for school quality. This implies that sustainable educational quality in sandbox areas depends less on top-down directives and more on horizontal networks that support continuous learning and adaptation. Finally, a critical contribution of this study is the strategy for

the Reduction of Educational Inequality through context-specific approaches. While previous reforms failed due to a one-size-fits-all model, this research proposes flexible learning formats and individual learner care systems. This aligns with the findings of Namsonti (2024) and Santhan (2020), who highlighted the need for context-sensitive management in small rural schools. By validating these strategies with experts and stakeholders in pilot areas, this study provides empirical evidence that area-based management is the most viable path to closing the achievement gap in Thailand's disparate educational landscape.

Conclusion

The study successfully established that the Education Sandbox Policy Management Strategy for sustainable educational quality development possesses the highest level of appropriateness and feasibility. These robust findings are attributed to the rigorous mixed-methods design employed, which ensured validity through meticulous instrument development, multi-stage expert validation, and investigator triangulation via focus group discussions (Vehachart, 2022). Furthermore, the results are strongly supported by and consistent with existing literature on educational quality development. For instance, Klapsong Na Phatthalung et al. (2020) highlighted that participatory management strategies (S-CoMP) are essential for enhancing school quality. Similarly, research by Namsonti (2024) and Santhan (2020) confirms that sustainable management in specific contexts, such as small or rural schools, relies on key strategic pillars creating learning networks, optimizing budget management, strengthening personnel competencies, and developing sustainable learning resources. Consequently, the strategies developed in this study provide a scientifically sound and practically viable framework for driving sustainable quality improvements in Thailand's education sandbox areas.



Figure 1. The education sandbox policy management strategy for developing the quality of education sustainably.

RECOMMENDATIONS

Policy recommendations

1. The Ministry of Education should urgently revise existing laws, regulations, criteria, and bylaws that currently hinder the flexibility and management of educational innovation areas in the provinces. Special attention must be given to removing bureaucratic obstacles to facilitate agile implementation.
2. The Ministry must ensure the practical and effective decentralization of authority to educational service areas and schools, strictly adhering to the intent and provisions of the Education Sandbox Act B.E. 2562 (2019).

Operational recommendations for provincial educational agencies

1. The Provincial Education Office, Educational Service Area Offices, and Private Education Offices should collaboratively develop a unified strategic plan. This plan must translate national policy into concrete, practice-oriented actions tailored to the specific provincial context.
2. Provincial Education Offices should propose to the Provincial Governor the establishment of Provincial and District Education Assemblies. These assemblies should serve as multi-stakeholder platforms comprising government, private sector, and civil society representatives—to collectively plan and drive integrated educational innovations in a unified manner.

Practical recommendations for educational institutions

1. Educational institutions should adopt the developed

"Education Sandbox Policy Management Strategy" as a comprehensive framework for formulating their strategic and annual operational plans, ensuring alignment with specific community contexts.

2. School administrators must actively empower the Basic Education School Board by fostering knowledge and understanding of their roles. Parents and community partners should be engaged as strategic collaborators to drive integrated educational innovations for sustainable quality improvement.

REFERENCES

- Chiang Mai Provincial Education Office (2022). *Education management report in remote and special areas*. Chiang Mai Provincial Education Office.
- Education Sandbox Act B.E. 2562 (2019). *Government Gazette*, Vol. 136, Part 56a. Government Gazette Office.
- Kittiyawisit, S., et al. (2021). Structural problems and limitations of Thailand's education reform. *Journal of Educational Administration Research*, 13(2), 45–60.
- Klapsong Na Phatthalung, P., Chairueng, N., & Chuchuausuan, J. (2020). Strategies for educational quality development of schools under the Krabi Primary Educational Service Area Office. *Journal of Social Sciences and Anthropology*, 5(9), 247–248.
- Ministry of Education (2017). *Education reform policy in Thailand*. Ministry of Education.
- Ministry of Education (2019). *National education development plan (2017–2036)*. Ministry of Education.
- Ministry of Education (2021). *Annual budget allocation report*. Bureau of the Budget.
- Namsonti, A. (2024). *Strategies for developing sustainable quality small-sized primary schools* [Doctoral dissertation, Thaksin University].
- OECD (2016). *PISA 2015 results: Excellence and equity in education*. OECD Publishing.
- OECD (2019). *Digital innovation: Seizing policy opportunities*. OECD Publishing.
- Office of Education Sandbox Administration (2020). *Guidelines for education sandbox implementation*. Ministry of Education.
- Office of Education Sandbox Administration (2021). *Operational framework for education sandbox areas*. Ministry of Education.
- Office of Education Sandbox Administration (2022). *Education sandbox*

- policy implementation manual*. Ministry of Education.
- Office of the Basic Education Commission (2023). *Report on education sandbox areas in Thailand*. Office of the Basic Education Commission.
- Office of the Education Council (2019). *Area-based education reform framework*. Office of the Education Council.
- Office of the Education Council (2020). *Policy recommendations for educational reform*. Office of the Education Council.
- Office of the National Education Commission (1999). *National Education Act B.E. 2542*. Ministry of Education.
- Office of the National Education Commission (2002). *National Education Act (No. 2) B.E. 2545*. Ministry of Education.
- Office of the Secretariat of the House of Representatives (2019). *The Constitution of the Kingdom of Thailand*. Office of the Secretariat of the House of Representatives.
- Santhan, K. (2020). Strategies for managing small primary schools in rural areas to enhance educational quality based on learner-centered approaches. *Journal of Educational Administration and Development*, 12(3), 85–98.
- Tangkitvanich, S. (2019). Accountability and decentralization in Thai education reform. *TDR Quarterly Review*, 34(3), 1–8.
- Thailand Development Research Institute (TDRI) (2019). *Education reform and accountability*. TDRI.
- Thailand Development Research Institute (TDRI) (2020). *Policy brief: Improving school accountability in Thailand*. TDRI.
- Thailand Development Research Institute (TDRI) (2021). *Evaluation of education sandbox policy implementation*. TDRI.
- Vehachart, R. (2022). *Strategies for developing innovative school administration*. Tem Printing.
- World Bank (2008). *The World Bank annual report 2008: The year in review*. World Bank.
- World Bank (2018). *Thailand education public expenditure review*. World Bank.

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