

Development of Elementary School Administration Strategies toward SMART School

Patchara Dechhome

Assistant Professor in Program in Educational Administration Faculty of Education
Bansomdejchaopraya Rajabhat University

Teerawat montaisong*

Assistant Professor in Program in Educational Administration Faculty of Education Phranakhon Si
Ayutthaya Rajabhat University

*Corresponding author, E-mail: teerawatmontaisong@gmail.com

Abstract

The objectives of this research were 1) to study the current situation and desired conditions of primary school administration in moving toward SMART Schools and 2) to develop of elementary school administration strategies toward SMART School. There were 6 following aspects: 1) Instructional effectiveness of teachers; 2) Professional school leadership; 3) Student-centered learning; 4) Curriculum suited to learners and the local community; 5) Learning environment and school climate; and 6) Exemplary school. The sample group in this research was 390 administrators from primary schools under the Office of the Basic Education Commission (OBEC) in four regions and the experts for interview were 12 administrators. The experts for focus group discussion were 9 administrators. The research instruments were document analysis, questionnaire, se-mi structure interview and focus group discussion form. The statistics to analyze the data were percentage, mean, standard deviation, and content analysis.

The results found that 1) the current situation of primary school administration in moving toward SMART Schools in 6 aspects was at a high level, desired conditions were at a highest level and the curriculum suited to learners and the local community recorded the highest PNI (modified) value, followed by Learning environment and school climate, and Student-centered learning was the lowest PNI value. 2) The development of elementary school administration strategies toward SMART School includes 6 aspects, with a total of 18 main strategies, 36 sub-strategies, and 72 implementation methods: 1) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Instructional effectiveness of teachers; 2) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Professional school leadership; 3) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Student-centered learning; 4) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Curriculum suited to learners and the local community; 5) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Learning environment and school climate; and 6) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Exemplary school.

Keywords: Strategy, SMART School, Elementary School

Introduction

Education is a critical instrument for developing people, society, and the nation. It is the main mechanism for cultivating a high-quality workforce capable of living harmoniously with others. In the fast-changing 21st-century world, education underpins a country's comparative advantage and its capacity to compete and remain resilient amid dynamic socio-economic shifts. Consequently, nations worldwide invest in human capital so that citizens can keep pace with transformations at national, regional, and global levels while preserving national identity (Office of the Education Council [OEC], 2017). The increasingly networked nature of knowledge, easier access to information, and the rapid rise of educational technology and learning innovation are key drivers of change. These trends pose challenges that require school leaders, teachers, and educational stakeholders at all levels to exercise vision and craft policies and management approaches aligned with this evolving context (Chaemchoi, 2018).

Thailand's reform efforts—enshrined in the National Education Act B.E. 2542 (1999) and the National Education Plan B.E. 2560–2579 (2017–2036)—articulate a vision in which all Thais receive quality, lifelong learning and live well in accordance with the Sufficiency Economy Philosophy and the demands of the 21st century. The Plan specifies four purposes: (1) improve the quality and efficiency of educational provision and processes; (2) develop Thai citizens as good, competent, and constitution-aligned citizens with

essential skills and competencies; (3) build a learning society grounded in morality, ethics, solidarity, and sustainable development; and (4) help Thailand escape the middle-income trap while reducing inequality. Achieving these goals depends on the managerial capacity of school administrators—key gears in driving the education system—who must continuously adapt and upskill to meet global change.

The Quality School idea emerged from the need to improve educational quality systematically so that every child receives equitable provision and schools reduce disparities in learner outcomes. IIEP-UNESCO's early framing emphasized a systems view of quality, providing criteria for "what constitutes a quality school" (IIEP-UNESCO; Grisay & Mählck, 1991). In practice, a quality school is one with a supportive social climate and learning environment; adequate resources (technology, budget, and personnel); effective management and teaching; and learner development that meets standards—producing "good, capable, and happy" learners who can learn independently, think critically and creatively, and live ethically. Such a school is responsive to community needs, wins community trust, and serves as a model that supports surrounding schools (Chantavanich, 2004).

The digital transition and the advent of AI further shift primary schools from content transmission to competency development (e.g., critical thinking, communication, teamwork, and digital citizenship). Global guidance urges education systems to adopt responsible technology use, learner-centered approaches, data protection, and teacher capacity building—so that technology amplifies quality and equity, not replaces teachers (UNESCO, 2023). At the same time, international evidence highlights Thailand's learning challenges: PISA 2022 shows only 32% of Thai 15-year-olds reached at least Level 2 in mathematics (OECD average 69%); performance in science at Level 2 and above also trails the OECD average—signaling urgent quality and equity issues (OECD, 2023). Post-COVID, learning loss and widening gaps persist; the World Bank (2023) therefore calls for learning recovery and acceleration coupled with regular assessment and data-informed school-level management—underscoring the need to strengthen innovation in teaching and the use of evidence for decisions.

Policy directions in Thailand align with these demands. The MOE Policy & Priorities for FY 2024 and the rollout of Quality Schools emphasize learner competencies, safety, digital readiness, community engagement, and school governance, providing implementable and auditable frameworks for schools (Ministry of Education [MOE], 2024; Quality Schools Action Plan, 2024). In parallel, Thailand is advancing competency-based school curricula. The OEC (2024) reports on pilot processes and outcomes, underscoring the need for flexible curricula linked to local contexts and assessment systems aligned with learner competencies.

Against this backdrop, developing administrative strategies for primary schools to become SMART Schools—integrating six dimensions: (1) teachers' instructional effectiveness, (2) professional school leadership, (3) learner-centered teaching and learning, (4) a curriculum responsive to learners and local contexts, (5) learning environment and school climate, and (6) the school as a role model—is both academically and policy-significant. Such strategies can drive learning recovery and acceleration, raise competencies, reduce inequities, and prepare learners for a digital world ethically and sustainably. Given these reasons—together with persistent problems in implementing learner-centered education, including curriculum analysis, learning-unit design, and classroom enactment, which have not yet achieved the desired effectiveness—the researcher is interested in studying the development of administrative strategies for primary schools to become SMART Schools. The intent is to use the resulting information to improve and further develop such strategies for greater efficiency and effectiveness. Upon completion, the research is expected to yield actionable knowledge on strategic administration for primary schools moving toward SMART School status—providing a practical pathway for more efficient and effective basic education institutions, while raising quality, reducing inequality, and preparing learners to meet the digital world ethically and sustainably.

Objectives

1. To study the current situation and desired conditions of primary school administration in moving toward SMART Schools
2. To develop elementary school administration strategies toward SMART School.

Scope of the Research

1. Scope of Content
 - 1.1 Concept strategy for developing
 - 1.2 Concept of a quality school (SMART School)
2. Scope of Population

1. To study the current situation and desired conditions of primary school administration in moving toward SMART Schools. The population included 20,440 administrators. According to the sampling table of population, the sample group of this research was 390 administrators from primary schools under the Office of the Basic Education Commission (OBEC) in four regions and the experts for interview were 12 administrators Using purposive sampling, we selected three respondents per region (four regions in total) whose questionnaire results showed the highest average scores for current implementation.

2. To develop elementary school administration strategies toward SMART School. The experts for focus group discussion of this research were 9 administrators in undergraduate universities in Guangxi. The qualifications of experts are as follows: 1) 2 experts/scholars or university faculty in Educational Administration, 2) 1 administrator from the Office of the Basic Education Commission (OBEC), 3) 1 Educational Service Area Office (ESAO)-level administrator or educational specialist, 4) 3 school administrators at the basic education level, and 5) 2 classroom teachers.

Research Framework

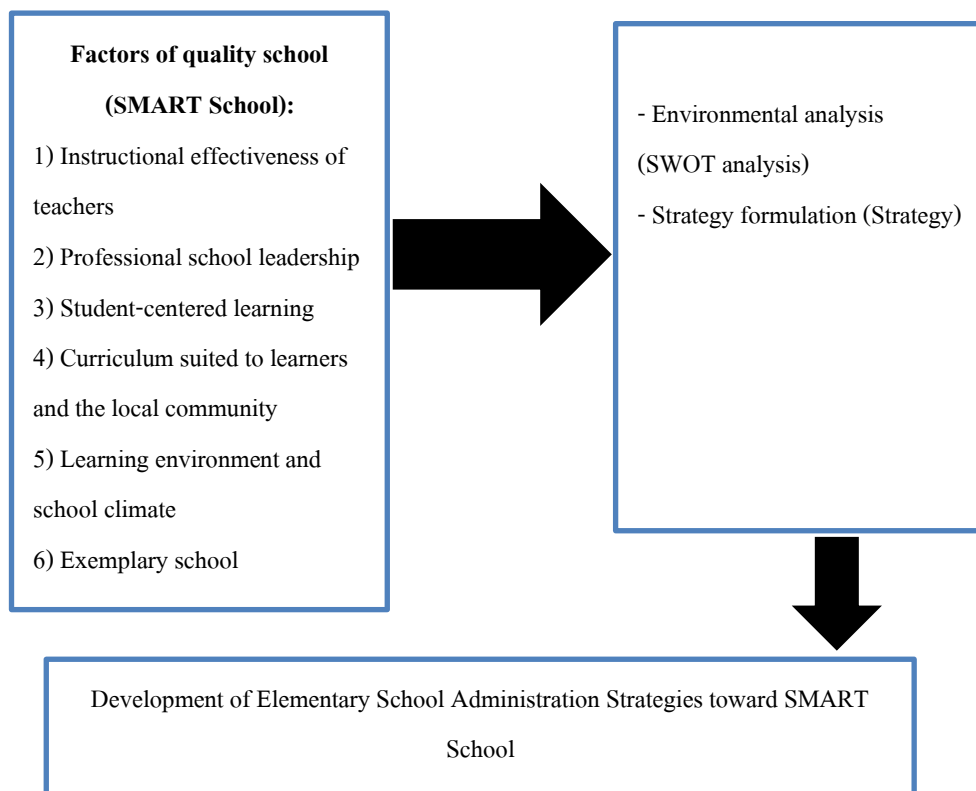


Figure 1 Research Framework

Research Methodology

Phase 1: To study the current situation and desired conditions of primary school administration in moving toward SMART Schools.

Phase 2: To develop elementary school administration strategies toward SMART School. This research is mixed methods research. The research method is divided into 2 steps as follows

Phase 1: To study the current situation and desired conditions of primary school administration in moving toward SMART Schools.

The Population / Sample Group

1) The population included 20,440 administrators from primary schools under the Office of the Basic Education Commission (OBEC). According to the sampling table of population, the sample group of this research was 390 administrators from primary schools under the Office of the Basic Education Commission (OBEC) in four regions. Determining the number of samples according to the

table of Krejcie and Morgan (Krejcie & Morgan, 1970) and by using Stratified random sampling and proportion random sampling.

2) The experts for interview were 12 administrators Using purposive sampling, we selected three respondents per region (four regions in total) whose questionnaire results showed the highest average scores for current implementation.

Research Instruments

1) The instrument to collect the data for objective one, to analyze the current situation and desired conditions of primary school administration in moving toward SMART Schools was a questionnaire. The questionnaire was designed based on quality school (SMART School) in 6 following aspects: 1) Instructional effectiveness of teachers; 2) Professional school leadership; 3) Student-centered learning; 4) Curriculum suited to learners and the local community; 5) Learning environment and school climate; and 6) Exemplary school. The questionnaire has a reliability value of 0.921.

2) The se-mi structure interview following 6 aspects: 1) Instructional effectiveness of teachers; 2) Professional school leadership; 3) Student-centered learning; 4) Curriculum suited to learners and the local community; 5) Learning environment and school climate; and 6) Exemplary school. IOC =1.00

Data Collection Method

1) The researcher requested a requirement letter from the Faculty of Education, Bansomdejchaopraya Rajabhat University for collecting the data from 390 administrators from primary schools under the Office of the Basic Education Commission (OBEC) in four regions. A total of 390 questionnaires with 100 percent.

2) The researcher requested a requirement letter from the Faculty of Education, Bansomdejchaopraya Rajabhat University for collecting the data from 12 experts. An appropriate date/time was then arranged for the in-person interviews.

Data Analysis

1) The current situation and desired conditions of primary school administration in moving toward SMART Schools in 6 following aspects: 1) Instructional effectiveness of teachers; 2) Professional school leadership; 3) Student-centered learning; 4) Curriculum suited to learners and the local community; 5) Learning environment and school climate; and 6) Exemplary school, was analyzed by Mean and standard deviation.

2) This needs assessment employed a questionnaire as the data-collection instrument. Data were analyzed in accordance with the nature of the data. Specifically, to determine the level of needs across dimensions regarding the administration of primary schools toward becoming SMART Schools, the PNImodified (Modified Priority Needs Index) was utilized.

3) The interview data were analyzed using content analysis.

Phase 2: To develop elementary school administration strategies toward SMART School.

The Key informant

The experts for focus group discussion in this research were 9 administrators in undergraduate universities in Guangxi. The qualifications of experts are as follows: 1) 2 experts/scholars or university faculty in Educational Administration, 2) 1 administrator from the Office of the Basic Education Commission (OBEC), 3) 1 Educational Service Area Office (ESAO)-level administrator or educational specialist, 4) 3 school administrators at the basic education level, and 5) 2 classroom teachers.

Research Instruments

The instrument to collect the data for objective two, to develop elementary school administration strategies toward SMART School was a Focus Group Discussion form. The focus group discussion form was designed based on the provided outline of development of elementary school administration strategies toward SMART School.

Data Collection Method

The researcher requested a requirement letter from the Faculty of Education, Bansomdejchaopraya Rajabhat University for collecting the data from 9 experts. The researcher organized a focus group discussion at Faculty of Education, Bansomdejchaopraya Rajabhat University.

Data Analysis

The focus group discussion about development of elementary school administration strategies toward SMART School was analyzed by content analysis.

Research Findings

1. The analysis results about the current situation and desired conditions of primary school administration in moving toward SMART Schools.

Table 1 Mean and standard deviation of the current situation and desired conditions of primary school administration in moving toward SMART Schools in six aspects

The primary school administration in moving toward SMART Schools	current situation			desired conditions			Needs assessment	
	\bar{x}	S.D.	level	\bar{x}	S.D.	level	PNI modified	Order
1. Instructional effectiveness of teachers	3.8	0.7	High	4.6	0.6	Highest	0.21	3
2. Student-centered learning	3.9	0.7	High	4.6	0.6	Highest	0.17	5
3. Professional school leadership	3.9	0.7	High	4.6	0.6	Highest	0.20	4
4. Curriculum suited to learners and the local community	3.8	0.7	High	4.6	0.7	Highest	0.24	1
5. Learning environment and school climate	3.8	0.7	High	4.6	0.5	Highest	0.23	2
6. Exemplary school	3.8	0.8	High	4.7	0.5	Highest	0.21	3
Mean	3.8	0.7	High	4.6	0.6	Highest	0.21	
	7	6		7	2			

According to Table 1, the current situation of primary school administration in moving toward SMART Schools in six aspects was at a high level ($\bar{X} = 3.87$). Considering the results of this research, ranging from the highest to lowest level were as follows: the highest mean was Student-centered learning ($\bar{X} = 3.94$), followed by Professional school leadership ($\bar{X} = 3.90$), Curriculum suited to learners and the local community was the lowest mean ($\bar{X} = 3.80$).

The desired conditions of primary school administration in moving toward SMART Schools in six aspects were at a highest level ($\bar{X} = 4.67$). Considering the results of this research, aspects ranging from the highest to lowest level were as follows: the highest mean was Exemplary school ($\bar{X} = 4.70$), followed by Learning environment and school climate ($\bar{X} = 4.69$), user Student-centered learning was the lowest mean ($\bar{X} = 4.62$).

The priority needs in administering primary schools toward SMART Schools are curriculum suited to learners and the local community recorded the highest PNI (modified) value, followed by Learning environment and school climate, and Student-centered learning was the lowest PNI value.

2. The development of elementary school administration strategies toward SMART School includes 6 aspects, with a total of 18 main strategies, 36 sub-strategies, and 72 implementation methods: 1) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Instructional effectiveness of teachers; 2) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Professional school leadership; 3) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Student-centered learning; 4) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Curriculum suited to learners and the local community; 5) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Learning environment and school climate; and 6) 3 main strategies, 36 sub-strategies, and 12 implementation methods for Exemplary school, shown as Tabel 2-7 and figure 1.

Table 2 The development of elementary school administration strategies toward SMART School in Instructional effectiveness of teachers

Main Strategy	Sub-strategy	Methods
1. Continuous teacher capacity development through technology and innovation	1.1 Organize workshops on Digital Teaching and Active Learning	1) Co-training with external agencies2) Host knowledge-sharing forums
	1.2 Promote digital content creation and instructional innovation	1) Allocate budget and provide equipment2) Hold teaching-media contests
2. Develop supervision and instructional quality monitoring	2.1 Coaching & Mentoring for teachers	1) Appoint mentor teachers2) Implement Lesson Study
	2.2 Develop a teaching evaluation system	1) Co-develop evaluation criteria with teachers2) Use evaluation results for continuous improvement
3. Build motivation and a professional teacher culture	3.1 Recognize role-model teachers	1) Present outstanding-teacher awards2) Provide appropriate welfare/benefits
	3.2 Strengthen Professional Learning Communities (PLCs)	1) Establish teacher PLCs2) Use online platforms for exchange

Table 3 The development of elementary school administration strategies toward SMART School in Professional school leadership

Main Strategy	Sub-strategy	Methods
1. Develop instructional/academic leadership	1.1 Train administrators in educational innovation	1) Send to trainings/seminars2) Build exchange networks
	1.2 Promote data-use skills	1) Use dashboards and data-driven systems2) Prepare strategic analysis reports
2. Develop systems-management skills	2.1 Apply strategic planning	1) Develop a school plan with SMART Goals2) Monitor and evaluate the plan
	2.2 Promote good governance	1) Establish internal audit systems2) Hold stakeholder communication forums
3. Strengthen ethics and administrator credibility	3.1 Cultivate ethical leadership	1) Run ethical-leadership programs2) Lead by example
	3.2 Build a quality organizational culture	1) Establish shared values2) Team-building activities

Table 4 The development of elementary school administration strategies toward SMART School in Student-centered learning

Main Strategy	Sub-strategy	Methods
1. Promote Active Learning	1.1 Use PBL, project-based, and STEM/STEAM	1) Train teachers2) Pilot innovation classrooms
	1.2 Use digital technology to support learning	1) Use digital media/platforms2) Promote e-Learning
2. Develop diverse student assessment	2.1 Authentic assessment	1) Use portfolios2) Assess projects
	2.2 Formative assessment	1) Provide ongoing feedback2) Use online tools to collect data
3. Promote life skills and learner competencies	3.1 Develop 21st-century skills	1) Integrate life-skills activities2) Organize student-development activities

	3.2 Strengthen social responsibility	1) Organize volunteer/service projects 2) Implement community-integrated projects
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Table 5 The development of elementary school administration strategies toward SMART School in Curriculum suited to learners and the local community

Main Strategy	Sub-strategy	Methods
1. Develop a flexible, learner-responsive curriculum	1.1 Competency-based curriculum	1) Align the curriculum with life skills 2) Use integrated learning
	1.2 Specialized/targeted curricula	1) Supplementary programs for special-needs learners 2) Enrichment/skill-building activities
2. Develop curricula linked to the local context	2.1 Local curriculum	1) Study local wisdom 2) Invite community experts to co-teach
	2.2 Curriculum building school identity	1) Develop signature activities (e.g., languages/arts/sports) 2) Hold student work showcases
3. Continuous curriculum evaluation and improvement	3.1 Monitoring and evaluation system	1) Establish a curriculum review committee 2) Use learning outcomes to refine the curriculum
	3.2 Use technology for curriculum management	1) Develop a curriculum database 2) Use an e-Curriculum

Table 6 The development of elementary school administration strategies toward SMART School in Learning environment and school climate

Main Strategy	Sub-strategy	Methods
1. Develop a physical environment conducive to learning	1.1 Modernize classrooms	1) Smart Classroom 2) Provide adequate media/equipment
	1.2 Create creative spaces	1) Digital library 2) Learning Space
2. Build a safe and friendly school climate	2.1 Safety systems	1) CCTV 2) Student support and care system
	2.2 Clean and green environment	1) Green School activities 2) Instill environmental discipline
3. Promote a digital environment	3.1 Wi-Fi and online platforms	1) Provide high-speed Internet 2) Provide Google Workspace or an LMS
	3.2 Information systems for learning	1) Create an e-Library 2) Student database system

Table 7 The development of elementary school administration strategies toward SMART School in Exemplary school

Main Strategy	Sub-strategy	Methods
1. Promote ethics and organizational culture	1.1 Moral-education activities	1) Prayer/meditation, volunteer service, Zero Waste 2) Outstanding-student programs
	1.2 Strengthen organizational values	1) Ethical internal supervision 2) Define SMART School values
2. Develop SMART-School model schools	2.1 Create model instructional innovations	1) Innovation showcase projects 2) Disseminate Best Practices
	2.2 Build a network of model schools	1) Collaborate with neighboring schools 2) MOUs for teacher-student exchanges
3. Public relations and image building	3.1 Use digital media	1) School website, Facebook, TikTok 2) Produce public-relations media

	3.2 Organize academic dissemination events	1) Open House 2) Innovation exhibitions
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SMART School: Strategic Plan for Administering Primary Schools

Summary of 18 Main Strategies • 36 Sub-strategies • 72 Methods

<div style="background-color: #0070c0; color: white; padding: 5px; text-align: center;">Dimension 1: Instructional effectiveness of teachers</div> <ul style="list-style-type: none"> • Develop teacher capacity (Digital Teaching / Active Learning) <ul style="list-style-type: none"> – Training with external agencies • Knowledge-sharing forums – Produce digital content • Budget & equipment • Teaching-media contests • Supervision & quality assurance <ul style="list-style-type: none"> – Coaching & Mentoring (mentors, Lesson Study) – Joint evaluation criteria • Use results for continuous improvement • Professional culture & motivation <ul style="list-style-type: none"> – Awards / welfare benefits • PLC + on line platforms 	<div style="background-color: #00a68a; color: white; padding: 5px; text-align: center;">Dimension 2: Professional School Leadership</div> <ul style="list-style-type: none"> • Instructional leadership <ul style="list-style-type: none"> – Training/seminars in educational innovation • Leadership networks <ul style="list-style-type: none"> – Data dashboard • Strategic analysis reports • Systemic administration <ul style="list-style-type: none"> – School plan with SMART Goals • Monitoring & evaluation – Good governance: internal audit • Stakeholder communication forums • Ethics & credibility <ul style="list-style-type: none"> – Ethical-leadership program • Lead by example – Shared values + team building
<div style="background-color: #6a3d9a; color: white; padding: 5px; text-align: center;">Dimension 3: Student-centered learning</div> <ul style="list-style-type: none"> • Active Learning (PBL/Project/STEM–STEAM) <ul style="list-style-type: none"> – Teacher training • Pilot innovation classrooms • Digital technology for learning <ul style="list-style-type: none"> – Digital media/platforms • e-Learning • Diverse assessment <ul style="list-style-type: none"> – Authentic assessment (Portfolio/Projects) – Formative assessment: ongoing feedback • Online tools • Life skills & competencies <ul style="list-style-type: none"> – 21st-Century Skills / student development activities – Service learning / community-integrated projects 	<div style="background-color: #008000; color: white; padding: 5px; text-align: center;">Dimension 4: Curriculum suited to learners and the local community</div> <ul style="list-style-type: none"> • Flexible, competency-based curriculum <ul style="list-style-type: none"> – Align with life skills • Integrated learning • Targeted/specialized curricula <ul style="list-style-type: none"> – Programs for special-needs learners • Enrichment activities • Local linkage & school identity <ul style="list-style-type: none"> – Study local wisdom • Invite community experts to co-teach – Language/Arts/Sports • Student work showcases • Ongoing review & improvement <ul style="list-style-type: none"> – Curriculum review committee • Use learning outcomes for refinement – e-Curriculum / curriculum database
<div style="background-color: #e67e22; color: white; padding: 5px; text-align: center;">Dimension 5: Learning Environment & School Climate</div> <ul style="list-style-type: none"> • Physical environment <ul style="list-style-type: none"> – Smart Classroom • Adequate media & equipment – Digital library • Learning Space • Safe & friendly school <ul style="list-style-type: none"> – CCTV • Student support & care system – Green School • Environmental discipline • Digital environment <ul style="list-style-type: none"> – High-speed Internet • Google Workspace / LMS – e-Library • Student information database 	<div style="background-color: #e67e22; color: white; padding: 5px; text-align: center;">Dimension 6: Exemplary school</div> <ul style="list-style-type: none"> • Ethics & organizational culture <ul style="list-style-type: none"> – Prayer/meditation • Service & volunteer • Zero Waste • Outstanding students <ul style="list-style-type: none"> – Ethical internal supervision • SMART School core values • SMART School model development <ul style="list-style-type: none"> – Showcase innovations • Share Best Practices – Model-school network • MOUs for teacher–student exchanges • Image & public communication <ul style="list-style-type: none"> – Website/Facebook/TikTok • Media production & sharing – Open House events

Findings

with a clear vision and digital leadership who can leverage technology to support teaching and learning can drive change in a systematic way—echoing findings by Truong and Dang (2021) that digital leadership encourages teachers’ adoption of educational technologies and innovations. By contrast, the curriculum responsive to learners and the local context had the lowest mean, which may stem from constraints in developing curricula that truly reflect community contexts and learner needs. This remains

a priority area, because SMART Schools must not only use technology but also design locally relevant curricula that cultivate essential life skills. Evidence from Nilmana (2022) indicates that integrating local context into the school curriculum enhances primary students' pride in their communities and helps them transfer knowledge to real-life situations; likewise, Alvarez et al. (2022) argue that curriculum adaptation and contextualization to local needs advances sustainable learning. In sum, primary schools' movement toward SMART School status is progressing well—especially in learner-centered instruction and professional leadership—yet it still requires strengthened curriculum design and localization to ensure results that are authentic and sustainable.

2. Desired conditions in Primary School Administration toward Becoming a SMART School. The research findings revealed that the desired state in primary school administration toward becoming a SMART School is at the highest level overall. This indicates the expectations of stakeholders who wish to see schools develop toward the highest standards in terms of student quality, teachers, and management. It also reflects the direction of Thailand's educational reform and global educational trends that emphasize technology integration, innovation, and sustainable learning. When considered by dimension, it was found that the school as a role model received the highest mean score. This reflects respondents' emphasis on the importance of schools serving as exemplary models in educational management, ethics, morality, and community engagement. The primary reason is that schools are not only places of knowledge transfer but also public organizations that must play a role in generating value for society. A model school (Best Practice) is often seen as an indicator of SMART School success, as it reflects credibility, quality, and leadership in teaching and management practices. Therefore, expectations in this area are the highest. This aligns with the research of Thanakrit Sangmanee (2022), who studied exemplary education management for quality school development and found that schools serving as role models can inspire and effectively expand success to other schools. It is also consistent with the concept of Best Practice in Education, which focuses on disseminating and elevating educational quality on a broader scale. The next highest was the dimension of curriculum suitability to learners and the local context, reflecting the need for schools to design flexible curricula that meet students' needs while connecting with the community. This ensures that learning is meaningful and applicable to real life. Stakeholders desire curricula that are flexible, contextually relevant, and linked to learners' daily lives and local environment. This is central to creating meaningful learning. Research by Prasit Nilmanat (2022) on the development of local-context-based school curricula for elementary students found that integrating local wisdom into school curricula fosters community pride and enhances key learner competencies. Similarly, Alvarez, Salinas, and Leon (2022) confirmed that curricula adapted to the local context play a significant role in promoting sustainable learning. Overall, expectations for school development toward becoming SMART Schools are at the highest level in all dimensions, especially in becoming model schools and developing localized curricula. This reflects the aspiration to create Thai education that is high-quality, equitable, and sustainable. However, there remain challenges in driving learner-centered education, which should be prioritized for development.

3. The Needs for Primary School Administration toward Becoming a SMART School. The findings revealed that the highest level of need in primary school administration toward becoming a SMART School was in the dimension of the curriculum suited to learners and the local community. This result indicates that stakeholders place the greatest expectations on the development of curricula that align with students and local communities. Since the curriculum is considered the heart of educational management, a SMART School must not only employ technology or modern teaching methods but also connect knowledge to everyday life and local contexts, enabling students to apply what they learn in real situations. Research by Kanita Thanawat (2020) on the development of school curricula based on local wisdom to strengthen the life skills of elementary students found that such curricula promote life skills and instill community pride among learners. Similarly, Sukri, Hassan, and Nor (2020), in their study in Malaysia, revealed that curricula designed to reflect local communities significantly enhance students' problem-solving abilities and contextual learning. The next highest level of need was found in the dimension of learning environment and atmosphere. This reflects the importance of creating both physical and psychological environments conducive to learning. Schools in the 21st century must provide modern, flexible classrooms supported by technology, while also fostering a warm and safe atmosphere to enhance students' motivation. Research by Warangkana Boonsri (2021) on classroom atmosphere and learning engagement among primary students, published in the *Journal of Education Studies*, found that a friendly classroom environment directly influenced students' learning engagement and confidence to express themselves. Additionally, Barrett, Davies, Zhang, and Barrett (2019), in a multi-country study of primary schools, confirmed that environmental design factors—such as lighting, color, and learning spaces—significantly affect students' academic achievement. In contrast, the learner-centered teaching and learning process had the lowest level of need. Although learner-centered education is at the heart of

effective teaching, this result suggests that schools have already implemented it at a relatively strong level, and thus stakeholders do not perceive it as an urgent area compared with other aspects. Nevertheless, Bruner's (1966) theory of Discovery Learning, which emphasizes learning through exploration, and Knowles' (1984) concept of Andragogy, which highlights active learner participation, remain essential foundations that should be continuously developed to ensure meaningful and sustainable learning. Overall, if curricula and learning environments can be adjusted to meet these identified needs, SMART Schools will be strengthened and made more sustainable in the future.

4. The development of elementary school administration strategies toward SMART School. The researcher proposes the strategic discussion on curriculum suitability to learners and the local context, which received the highest level of identified needs. The proposed plan consists of 3 main strategies, 6 sub-strategies, and 12 methods. Main Strategy: Developing Flexible and Responsive Curricula. The strategy of developing flexible and responsive curricula, with an emphasis on competency-based curricula and specialized curricula, represents an authentic pathway toward building SMART Schools. Such strategies address life skills, integrated learning, and personalized support for learners, which not only enhance learning quality but also promote educational equity. Flexible and responsive curricula are at the heart of SMART Schools, as education in the 21st century must equip students with skills applicable to daily life and future careers. Flexible curriculum design also addresses learner diversity, creating opportunities for all learners to succeed. This view is consistent with Dewey (1938), who argued that curricula should be connected to learners' real-life experiences to foster meaningful learning. Sub-strategy 1: Competency-based Curriculum. Curriculum aligned with life skills emphasizes competencies and prepares students to adapt to and cope with challenges in a changing world. Research by Suwanna Punyawat (2022) found that competency-based curricula improve students' analytical thinking, problem-solving, and quality of life skills. Integrated learning is also critical. Cross-disciplinary curriculum integration enables students to connect knowledge from multiple domains to solve real-world problems. Drake and Reid (2020) showed that curriculum integration increases learners' motivation, deepens understanding, and enhances their appreciation of learning. Sub-strategy 2: Specialized Curriculum. Supplementary curricula for special needs and gifted learners ensure that these students receive development tailored to their full potential. This aligns with Gardner's (1993) Multiple Intelligences theory, which highlights individual differences and unique capacities. Research by Siriporn Wattanakul (2022) demonstrated that specialized curricula enhance the confidence and social skills of students with special needs. Skill enrichment activities—such as coding, robotics, arts, and sports—broaden learning opportunities and build new competencies, extending beyond the core curriculum. According to the OECD (2021), countries that promote school-based enrichment activities significantly improve students' creative thinking, teamwork, and readiness for future employment, thereby preparing them effectively for both the labor market and real-life challenges.

Recommendations

Recommendations in implementation

1. Teacher Instructional Effectiveness, Research findings revealed that self-development and instructional innovation represent the highest level of need, with an emphasis on enhancing competencies that connect the curriculum to real-life contexts. Therefore, school administrators should take the following urgent actions: Establish Individual Development Plans (IDPs) for all teachers, focusing on two key dimensions: (a) Active/Project-based pedagogy and (b) Integration of real-life and local contexts. Organize monthly Lesson Study/Professional Learning Community (PLC) sessions to develop model lesson plans that link curriculum standards and indicators with daily life challenges in the community.

2. Student-centered learning, Research findings showed that positive classroom management and learner-focused assessment are the most urgent needs. Accordingly, school administrators should act quickly by: Establishing a whole-school Positive Classroom Policy (including shared rules, agreements, and positive reinforcement strategies). Providing teacher training on Formative Assessment methods (e.g., rubrics, portfolios, self-assessment, and peer assessment).

3. Professional School Leadership, Research indicated that strengthening academic leadership is the top priority. Thus, school administrators should urgently: Develop a School Dashboard (covering student learning outcomes, behavior, literacy/numeracy, attendance, and punctuality) to be used in monthly teacher meetings. Create a Shared Vision Forum with teachers,

parents, and the community to align the SMART School direction and establish measurable success criteria.

4. Curriculum suited to learners and the local community, Research findings highlighted that updating curricula to meet economic and social demands is the most critical need. Therefore, administrators should: Establish a School Curriculum Development Committee (comprising teachers from all subject areas together with community, local, and parent representatives). Define the Graduate Competency Profile at the end of each learning stage, then apply backward design to translate these competencies into units and subject lesson plans.

5. Learning environment and school climate, Findings showed that expanding internal and external learning resources is the most pressing requirement. Accordingly, administrators should: Create a Learning Resource Map of the school and community, indicating locations, responsible persons, and partner organizations. Establish Mobile Learning Corners (in buildings or outdoor shaded areas) for reading, experimenting, and creative activities.

6. Exemplary school, Research found that regular supervision and monitoring are the highest needs in this area. Thus, administrators should urgently: Announce the school's SMART School Core Values (Service mind, Morality, Achievement, Responsibility, and Technology) along with measurable behavioral indicators. Implement a values-based internal supervision system: monthly supervision cycles combined with short, clear, compassionate, and transparent feedback tools.

Recommendations for further research

1. This study was conducted within the scope of primary school administration. Therefore, future research should examine the context of secondary schools or other educational levels in order to compare whether the strategies for managing primary schools toward becoming SMART Schools differ across levels. Such a comparison would enhance the effectiveness of applying primary school administration strategies for SMART Schools.

2. This study demonstrated that effective strategy formulation must be research-based (Research-Based Strategy Formulation). By employing multiple research methods, also known as the mixed-research method, the study highlighted that strategy development can be enriched through a combination of approaches. Future research on strategy formulation should consider applying mixed-method research alongside other methodological designs appropriate to the specific conditions and contexts of the research problem.

3. This study presented strategies for primary school administration toward becoming SMART Schools in the form of main strategies, sub-strategies, and methods only. Therefore, future studies should investigate the implementation process of these strategies: how they function in practice, which strategies may need revision or adjustment, and what factors influence the success of SMART School administration strategies. Furthermore, the study should include mechanisms for monitoring and evaluating the strategies. This would contribute to making the strategies more comprehensive and practical.

References

- Alvarez, H., Salinas, J., & Leon, M. (2022). Localized curriculum design and its impact on sustainable learning in primary education. *International Journal of Education and Development*, 48(2), 112–124.
- Alvarez, M., et al. (2022). *Curriculum adaptation and contextualization for local needs in basic education: A pathway to sustainable learning*. [Add journal/publisher & DOI if available].
- Barrett, P., Davies, F., Zhang, Y., & Barrett, L. (2019). The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis. *Building and Environment*, 89, 118–133. <https://doi.org/10.1016/j.buildenv.2015.02.013>
- Boonsri, W. (2021). Classroom atmosphere and learning engagement of primary school students. *Journal of Education Studies*, 14(2), 77–92.
- Bruner, J. S. (1966). *Toward a theory of instruction*. Harvard University Press.
- Chaemchoi, S. (2018). *[Educational leadership and management in the era of change]*. (In Thai).
- Chantavanich, A. (2004). *[Quality school administration: Characteristics and practices]*. (In Thai).
- Dewey, J. (1938). *Experience and education*. Macmillan.
- Drake, S. M., & Reid, J. L. (2020). Integrated curriculum as an effective strategy for deep learning: A research-based perspective. *Frontiers in Education*, 5(1), 1–12. <https://doi.org/10.3389/educ.2020.00020>

- Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences* (10th anniversary ed.). Basic Books.
- International Institute for Educational Planning (IIEP-UNESCO), Grisay, A., & Mählck, L. O. (1991). *Indicators of the quality of education*. IIEP-UNESCO.
- Knowles, M. S. (1984). *The adult learner: A neglected species* (3rd ed.). Gulf Publishing.
- Maneechot, S. (2021). *Active learning for improving academic achievement and thinking skills of primary school students*. [Add journal/thesis information; in Thai].
- Ministry of Education (Thailand). (2024). *Policy and priorities for fiscal year 2024*. Bangkok: MOE..
- Nilmana, P. (2022). *Development of a school curriculum aligned with the local context to foster community pride among primary students*. [Add journal/thesis information; in Thai].
- Nilmanat, P. (2022). The development of school-based curricula aligned with the local context to enhance community pride among primary school students. *Journal of Educational Research and Innovation*, 15(1), 55–72.
- OECD. (2021). *OECD future of education and skills 2030: OECD learning compass*. OECD Publishing.
- OECD. (2023). *PISA 2022 results (Vols. I–II): The state of learning and equity in education*. OECD Publishing.
- Office of the Education Council (Thailand). (2017). *Education in Thailand 2017*. Author.
- Office of the Education Council (Thailand). (2024). *Processes and outcomes of competency-based school curriculum development (pilot report)*. Bangkok: OEC.
- Piaget, J. (1977). *The development of thought: Equilibration of cognitive structures*. New York, NY: Viking Press.
- Punyawat, S. (2022). Competency-based curriculum for life skills development of primary school students. *Journal of Educational Innovation and Research*, 15(2), 65–80.
- Quality Schools Action Plan. (2024). *Operational framework for the Quality Schools initiative*. (Thai government document; in Thai).
- Sangmanee, T. (2022). Exemplary education management for quality school development. *Journal of Education Administration*, 13(3), 89–104.
- Sukri, S., Hassan, R., & Nor, M. M. (2020). Local community-based curriculum design and its effects on students' problem-solving skills in Malaysian primary schools. *Journal of Curriculum and Teaching*, 9(3), 15–27. <https://doi.org/10.5430/jct.v9n3p15>
- Thanawat, K. (2020). Development of school-based curriculum integrating local wisdom to promote life skills of elementary students. *Journal of Curriculum and Instruction*, 11(1), 33–49.
- Truong, T., & Dang, X. (2021). *Digital leadership in education: Impacts on teachers' adoption of technology for teaching and learning*. [Add journal/conference & DOI if available].
- UNESCO. (2023). *Guidance for generative AI in education and research*. UNESCO.
- Vygotsky, L. S. (1986). *Thought and language* (A. Kozulin, Ed. & Trans.). Cambridge, MA: MIT Press.
- Wattananukul, S. (2022). The impact of specialized curricula on confidence and social skills of students with special needs. *Journal of Special Education Studies*, 9(1), 45–59.
- World Bank. (2023). *Learning recovery to acceleration: A global update on country efforts to improve learning and reduce inequalities*. World Bank.