School Administration Management Strategy for Innovative Schools Under the Office of the Commission on Basic Education

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Abstract

This study aimed to develop strategies for school administration toward becoming innovative schools using a mixed-methods approach. The research was conducted in two phases. In Phase 1 examined the current and desired conditions, as well as approaches to innovative school administration. The sample included 395 school principals under the Office of the Basic Education Commission, selected using Taro Yamane's formula and stratified random sampling. In-depth interviews were also conducted with experts from three model schools chosen through purposive sampling. Phase 2 involved developing the strategies through focus group discussions with 11 experts from higher education institutions and schools. Data analysis employed descriptive statistics, including percentage, mean, standard deviation, and the modified Priority Needs Index ($PNI_{modified}$). Findings showed that the overall current conditions were at a high level, while the desired conditions were at the highest level, with a $PNI_{modified}$ value of 0.335. Six strategic components were identified: (1) establishing a challenging vision, (2) empowering innovation teams, (3) promoting sustainable innovation, (4) enhancing organizational management efficiency, (5) strengthening innovation-driven leadership, and (6) advancing digital technology quality. The overall evaluation indicated that the strategies were highly appropriate, feasible, and beneficial.

Keywords: school administration, strategies, innovative school

Introduction

Education in the 21st century focuses on preparing learners with the knowledge and skills necessary for the future, based on the concept of "Education for Change." At its core is the creative development of modern learners, enabling them to adapt and innovate in a rapidly changing world (Areesoponpichet, 2023). This concept aligns with the National Education Plan B.E. 2020–2040, which envisions that all Thai citizens will receive quality lifelong education and be able to live happily, by the philosophy of Sufficiency Economy and the transformations of the 21st century. Accordingly, the framework for educational development has shifted toward "Education 4.0: Learners as Innovators" (Manokan, 2020).

In an era marked by rapid technological and societal change, education management must adapt by introducing innovations to meet the evolving needs of learners and society. Key educational innovations include the integration of modern technology to enhance learning, the restructuring of teaching methods to emphasize Science, Technology, Engineering, and Mathematics (STEM) skills, and the development of problem-solving abilities. Furthermore, there is an increasing focus on emotional skills, collaboration, critical thinking, and

communication skills essential for success in all professions. Lifelong learning opportunities are also important to support individuals in their continual development (Areesophonpichet, 2023). Thus, the implementation of educational innovations not only enhances learning quality but also responds to the needs of both learners and the nation. Ultimately, it serves as a strategic approach to advancing Thailand toward stability, prosperity, and sustainability under national development goals.

However, educational development in Thailand from 20015 to 2020 reveals several urgent areas for improvement, particularly regarding educational quality. Learning outcomes remain unsatisfactory, as seen in basic education achievement scores that are significantly below the average and far behind other countries in Asia. These results include both the National Educational Test (O-NET) and Programme for International Student Assessment (PISA) assessments, where average scores remain below 50% across all subjects (Office of the Education Council, 2022). Moreover, there are significant disparities in educational opportunities, especially between small and large schools. Additionally, the existing quality assurance and evaluation systems have not yielded the desired results and have imposed excessive burdens on teachers and schools.The issues indicate that a key reason for the lack of educational quality in Thailand is the current educational system's inability to effectively foster 21st century skills, especially learner-driven innovation. To address this challenge, it is crucial to develop strategic school management approaches toward becoming an innovative school under the jurisdiction of the Office of the Basic Education Commission. These strategies are designed to serve as practical management guidelines for innovative schools, taking into account the real context of Thai educational institutions. They focus on the development of appropriate and high-quality strategic components that enable schools to reach their full potential as innovation-driven institutions (Bateman & Snell, 2021). Ultimately, these efforts aim to raise the quality of Thai education to meet the demands of today's and tomorrow's world.

Given the previously discussed challenges, it is evident that the root cause of the low quality of Thai educational management lies in the current system's failure to support the development of essential 21st century skills, particularly learners' ability to innovate. Therefore, this present study aimed to develop strategic school management approaches toward becoming innovative schools for institutions under the jurisdiction of the Office of the Basic Education Commission. These strategies were designed to serve as practical administrative guidelines that truly reflect the context of Thai schools. The strategy framework incorporated essential and high-quality components, enabling schools to reach their full potential as centers of innovation. Ultimately, this initiative aimed to elevate the quality of Thai education to effectively meet the needs of both the present and the future world.

The development of strategies for achieving future educational success is an important process that enables organizations to effectively accomplish their goals. Key steps in this process include understanding and preparing relevant data, conducting SWOT analysis, defining a clear vision and objectives, evaluating and analyzing available resources, formulating concrete strategies and action plans, creating a flexible strategic framework, regularly reviewing and improving plans, and—most importantly—building internal understanding and support from personnel. These elements ensure the smooth and successful implementation of strategic plans in line with organizational objectives (Chansirisira, 2020). Strategic management thus empowers administrators to adapt their organizations to a changing environment and continuously enhance performance outcomes (Wonganutaroj, 2021).

Given these circumstances and problem significance, School Administration Management Strategy to Innovative Schools Under the Office of the Commission Basic Education holds paramount importance in determining direction and developing educational quality, particularly

in contexts where schools in different areas vary in size, personnel numbers, and work experience—all factors affecting school administrator performance and influencing leadership styles and approaches employed in educational institution management. Therefore, these researchers were interested in studying School Administration Management Strategy in Innovative Schools under the Office of the Commission on Basic Education to provide data and guidelines for more effective educational development. This study consisted of two significant objectives as follows:

1. To investigate the current and desired states, as well as strategies for managing educational institutions toward becoming innovative schools.

2. To develop strategic school management approaches toward becoming innovative schools under the Office of the Basic Education Commission.

In this research, the researchers studied and determined the conceptual framework consisting of independent variables for study using the criteria for synthesizing concepts and theories of scholars, considering the frequency of components consistent with the concepts of scholars.

The components of the school administration strategies for transforming schools into innovative schools were synthesized by the researcher from relevant literature and previous studies. Figure 1 illustrates the conceptual framework of this research.
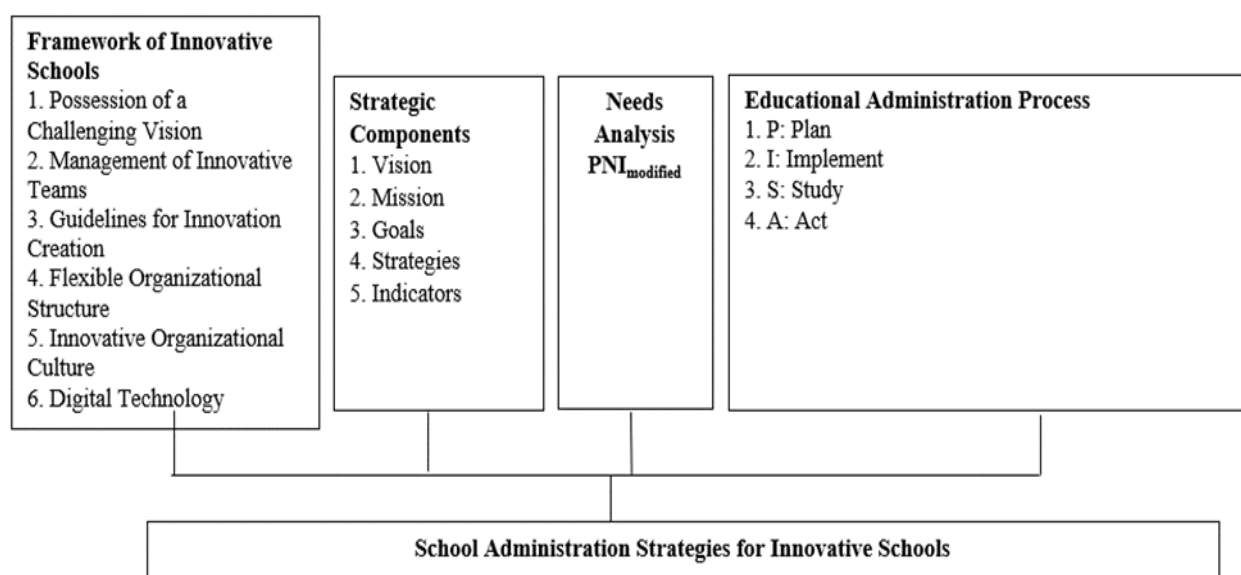

Figure 1

Illustrates the conceptual framework of the study.

The management of educational institutions to become innovative schools is a complex endeavor, especially within the current education system which is not conducive to promoting 21st century skills, particularly in the area of student innovation creation. For this reason, theories that address the management of schools toward innovation have been widely applied. One such theory is Disruptive Innovation, proposed by Christensen (2020), Harvard Business School (2020), Cook (2021), Rattana (2023), Saengthannang (2020), Duangudom (2020), Chaemchoi (2020) which has been adapted for use in the context of educational management.

The quality cycle of Edwards Deming (1986) has also been applied. The researcher studied and adapted this model into the PISA (Plan-Implement-Study-Act) cycle, which can be used to solve problems in educational management for innovative schools. This is a system of steps derived from the value of learning and the interconnectedness of knowledge gained from process

improvement. Additionally, the researcher used the Needs Assessment Technique, which employs various analytical methods to prioritize necessary needs. The researcher chose to use the Modified Priority Needs Index (Wongwanich, 2020) to examine the necessary needs of managing educational institutions toward innovative schools in the following areas 1) Possession of a Challenging Vision 2) Management of Innovative Teams 3) Guidelines for Innovation Creation 4) Flexible Organizational Structure 5) Innovative Organizational Culture 6) Digital Technology.

Method

Identify Subsections

The components of the school administration strategies for transforming schools into innovative schools were synthesized by the researchers from relevant literature and previous studies. by Christensen (2020), Harvard Business School (2020), Cook (2021), Rattana (2023), Saengthannang (2020), Duangudom (2020) and Chaemchoi (2020) .

Participant (Subject) Characteristics

The population of this study consisted of school administrators and teachers. The total population was 2,9303, including school principals, deputy principals, and teachers under the Primary Educational Service Area Offices in the Office of the Basic Education Commission, Region 14. The sample size was determined using Yamane's formula (Yamane. 1973), and stratified random sampling was employed, resulting in a sample of 395 participants.

Sampling Procedures

The population consisted of school administrators, deputy school administrators, teachers, and educational personnel in schools under the Office of the Basic Education Commission, totaling 29,303 institutions. The sample size was determined using Yamane's formula (Yamane, 1973), and stratified random sampling was employed. The sample consisted of 395 institutions selected from teachers and school administrators under the Primary Educational Service Area Offices in the Office of the Basic Education Commission, Region 14.

Table 1

Population and Sample Size Determination

Primary Educational Service Area Offices in the Office of the Basic Education Commission, Region 14	Number of Population and Sample (Persons)	
	Population	Sample Size Determination
Government Teachers and School Administrators under the Office of the Primary Educational Service Area	29,303	395
Total	29,303	395

Research Instrument Design

The instruments used for data collection were as follows: (1) A general information questionnaire designed in a checklist format to gather background information about the respondents, including their positions, years of work experience, and school size; (2) a questionnaire on the development of school administration management strategy to innovative schools, using a five-point Likert scale, covering various aspects of instructional leadership development; (3) an open-ended questionnaire to allow for additional opinions or suggestions; and (4) a structured interview form focused on approaches to developing school administration management strategy for innovative schools. In this study, the researchers developed the research instruments through the following steps:

Phase 1: Study of the Current Conditions, Desired Conditions, and Guidelines for Managing Schools toward Innovative Schools

The researchers analyzed and synthesized related literature, theories, and previous studies to establish the conceptual framework for developing school administration strategies for innovative schools. The draft questionnaire was developed and reviewed by five experts to assess content validity using the Index of Item Objective Congruence (IOC), with values ranging from 0.80 to 1.00. The reliability of the full questionnaire was tested through a try-out with a group outside the research sample using Cronbach's Alpha Coefficient (α). The results showed high reliability with 0.998 for the current conditions and 0.983 for the desired conditions.

Phase 2: Development of School Administration Strategies for Innovative Schools

The researchers synthesized the findings from Phase 1 to draft the school administration strategies. The draft was then evaluated for suitability and feasibility through focus group discussions with 11 experts, selected based on the following criteria: 1. Three university lecturers holding a doctoral degree in educational administration, each with at least 5 years of teaching experience. 2. Three educational administrators and personnel holding a doctoral degree in educational administration or a related field, each with at least 5 years of experience in educational management. 3. Five school administrators with experience in school management and holding a professional rank of "Specialist Expert" or higher. The evaluation results were analyzed using the mean ($\bar{x}$) and standard deviation (S).The strategy draft was revised according to the experts' feedback. Subsequently, the appropriateness of the strategy implementation manual was assessed by the same expert group, followed by analysis and revision based on their recommendations, resulting in a finalized manual deemed highly suitable.

Data Collection and Analysis

The finalized questionnaire was distributed via electronic document management systems (E-office) to the target population consisting of school directors, deputy directors, and teachers under the Primary Educational Service Area Offices in the Office of the Basic Education Commission, Region 14, totaling 29,303 individuals. Sample size was determined using Taro Yamane's formula (Yamane, 1973), and stratified random sampling was applied to select 395 respondents. Data on priority needs between current and desired conditions were analyzed using mean ($\bar{x}$), standard deviation (S), and the Modified Priority Needs Index ($PNI_{modified}$) (Mark Rey .2022). The researcher used SWOT analysis and the SWOT matrix to formulate six strategies: 1) Enhancing the effectiveness of possessing a challenging vision; 2) Empowering innovative teams; 3) Elevating innovation creation; 4) Building an efficient and flexible organization; 5) Developing an innovative organizational culture; and 6) Improving digital technology quality. Additionally, the best practice study was conducted at three model schools under the Office of the Basic Education Commission . Selection Criteria for Innovative Schools: An Academic PerspectiveThe identification of exemplar educational institutions for strategic analysis must adhere to rigorous criteria to ensure relevance and demonstrable impact. For the purpose of this study, institutions will be selected based on the following prerequisites: 1. Formal Recognition and Certification: The school must hold official accreditation or certification as an "Innovative School" (or equivalent designation) granted by governing bodies such as the Office of the Basic Education Commission (OBEC) or the Ministry of Education in Thailand. This criterion ensures the institution's status is validated at the systemic level. 2. Widespread Acclaim and Award-Winning Performance: The institution must possess a track record of receiving prestigious awards and generating innovative outputs whose quality and effectiveness have gained widespread recognition within the educational community and the broader public domain. 3. Evidenced and Observable Innovation Outcomes: The school must present verifiable and manifest evidence of its innovation output. This requires not only the creation of innovations but

also demonstrable success and impact, confirming that their strategic practices have led to concrete, observed, and publicly acknowledged achievements. In essence, the selection process is focused on identifying schools that demonstrate success in translating innovative strategy into measurable and accredited results, positioning them as high-fidelity models for strategic emulation.—Ban Nong Na Wiang School, Wet Wan Wittaya School, and Ban Thung Nang Ok (On Amnuay Sin) School—using purposive sampling. Structured interviews were held with school directors, deputy directors, and teacher representatives, focusing on strategic goals, indicators, implementation methods, and successful outcomes. The researchers analyzed data through content analysis.

Findings

The researcher developed a five-point rating scale questionnaire and submitted it to five experts to assess content validity. The Index of Item–Objective Congruence (IOC) was calculated, and only items with IOC values of 0.60 or higher were retained. Revisions were made in accordance with the experts' suggestions. The revised questionnaire was then pilot-tested with 100 participants, comprising school administrators, deputy school administrators, and teachers from the Na Krasang–Thung Thoeng School Network under the Ubon Ratchathani Primary Educational Service Area Office 5. Reliability was analyzed for each section and for the questionnaire as a whole using statistical software and Cronbach's alpha coefficient (α), yielding a reliability value of 0.998

Table 2

Demographic Information of the Respondents

No.	Status	Number	Percentage
1.	Position		
	School Director	185	46.84
	Deputy School Director	20	5.06
	Teach	190	48.10
	Total	395	100.00
2.	Highest Educational Qualification		
	Bachelor's Degree	185	46.83
	Master's Degree	204	51.65
	Doctoral Degree	6	1.52
	Total	395	100.00
3.	Experience in Current Position		
	Less than 5 years	7	1.77
	5–10 years	94	23.80
	More than 10 years	294	74.43
	Total	395	100.00

The analysis of the respondents' general information revealed that the majority held the position of teacher, accounting for 190 persons (48.10%), followed by school directors, accounting for 185 persons (46.85%), and deputy school directors, accounting for 20 persons (5.06%).

Regarding the respondents' highest educational qualifications, it was found that most of them held a bachelor's degree, totaling 204 persons (58.9%), followed by those with a master's degree, totaling 138 persons (39.9%), and a doctoral degree, totaling 6 persons (1.2%).

Table 3

Overall Data on the Current Conditions, Desired Conditions, and Guidelines for School Administration Toward Becoming an Innovative School

No.	Aspects of Strategies for School Administration Toward Becoming an Innovative School	Current Condition (D)			Ideal Condition (I)			PNI$_{modified}$	Rank
		$\bar{x}$	S	Interpretation	$\bar{x}$	S	Interpretation		
1.	Establishing a Vision that Inspires Challenge and Growth	3.25	0.57	High	4.88	0.39	High	0.334	3
2.	Management of the Innovator Team	3.26	0.59	High	4.89	0.37	High	0.333	6
3.	Guidelines for Creating Innovation	3.24	0.58	High	4.89	0.37	High	0.337	2
4.	Flexible Organizational Structure	3.24	0.59	High	4.87	0.39	High	0.334	3
5.	Culture of Innovation in the Organization	3.23	0.54	High	4.88	0.38	High	0.338	1
6.	Digital Technology	3.25	0.60	High	4.88	0.37	High	0.334	3
	Overall	3.25	0.58	High	4.88	0.378	High	0.335	

As shown in Table 1, overall, the necessity of needs for the current conditions and desired conditions in school administration toward innovative schools showed that the current conditions were at a high level (mean, $\bar{x}$ = 3.25), while the desired conditions were at the highest level (mean, $\bar{x}$ = 4.88). The evaluation of the priority needs index (PNI$_{modified}$) for school administration toward innovative schools revealed an overall value of 0.335. When examined by aspect, the innovative organizational culture had the highest priority needs index (PNI$_{modified}$ = 0.338), while the management of innovative teams had the lowest priority needs index (PNI$_{modified}$ = 0.333).

Guidelines for School Administration Management Strategy to Innovative Schools Under the Office of the Commission on Basic Education

Development of School Administration Strategies for Innovative Schools The strategies developed by the researchers, based on synthesis from Phase 1 and expert review, consist of the following:

1) Vision: Reforming schools into innovative schools that cultivate students as innovators.
2) Mission: Developing school administration using modern technology systems toward an efficient digital school and comprehensive innovative school administration covering all target groups equally; creating innovations for learning based on models; and enhancing learners' competencies to achieve excellence according to their potential.
3) Goals: Schools manage efficiently, transparently, and accountably, ensuring equitable and quality access for

All target groups are assessed according to standards; schools implement innovative management practices; learners achieve excellence according to their potential; and schools utilize modern technology.

4) Strategies

Six strategies emerged, including establishing a challenging vision, empowering innovative teams, enhancing innovation development, improving organizational management efficiency, driving a strong innovation-driven organization, and enhancing the quality of digital

technology.

Regarding establishing a challenging vision, the indicators included:

(1) Stakeholders receive clear explanations and understand the policies, vision, and mission of the school administration; (2) A hundred percent of stakeholders are informed and understand the policies, vision, and mission. The methods consisted of:

(1) The educational institution formulates strategies that clearly define objectives and policies related to innovation, providing opportunities for teachers to participate actively. It also ensures that all stakeholders are informed and that the implementation can be measured and evaluated effectively

(2) The institution sets specific objectives, analyzes, and evaluates both internal and external factors, enabling the measurement and assessment of the outcomes of the implementation; (3) Modern management concepts are systematically applied in school administration to achieve maximum efficiency

(4) The institution promotes and supports the continuous creation of innovations

(5) School administrators employ a speed strategy, leveraging the strengths of teachers to foster and accelerate innovation.

The indicators for empowering innovative teams included: (1) Teachers enhance their innovation work processes via training or study visits to innovative model schools; and (2) A hundred percent of teachers receive such capacity-building opportunities. The methods consisted of:

(1) The educational institution supports and promotes teacher training to enhance their knowledge and skills, thereby increasing their teaching potential

(2) The institution encourages and facilitates teachers to visit model innovative schools to further develop their knowledge

(3) The institution promotes and supports teachers in applying their knowledge and skills to create innovations in teaching and learning

(4) The institution strengthens knowledge, skills, and processes for further development and creation of innovations

(5) The institution conducts meetings and monitoring sessions to enhance understanding of innovation usage

(6) The institution continuously evaluates the implementation and effectiveness of innovations.

For enhancing the development of innovation, the indicators included: (1) Schools manage challenges that lead to transformative change toward innovative schools, and (2) a hundred percent of personnel perform to their full potential and drive transformation. The methods are as follows:

(1) The educational institution analyzes weaknesses and opportunities, setting directions and goals for innovation creation while providing opportunities for all stakeholders to participate in determining the school's direction.

(2) The institution supports teachers in creating innovations in education that can be developed into classroom research aligned with social changes and educational policies.

(3) The institution fosters a shift in mindset and collaborative work among teachers and all stakeholders to become leaders of change, aiming to achieve systemic transformation.

(4) The administrators create challenges that inspire stakeholders in educational management to excel, driving transformative breakthroughs.

Then, enhancing organizational management efficiency included the indicators as follows:

(1) Schools have efficient and effective structures that support innovation and new services with flexible, adaptable organizational design; and (2) 100% alignment of organizational

Structure with school objectives. The methods of this strategy consisted of:

(1) The institution implements a One Stop Service management system for school

administration and public service to visitors,

(2) School administrators create a supportive atmosphere within the institution that fosters the development of an innovative organization,

(3) The institution operates with cross-functional teams and provides opportunities for teachers, staff, students, and school committees to participate in teams that develop new innovations, design processes, and innovate,

(4) The institution establishes partnerships and networks to foster innovation in teaching management, processes, and strategic management through inter-organizational collaboration,

(5) The institution has an effective and efficient organizational structure designed to support innovation creation and new services, including innovations in teaching, management, and administrative management.

(6) The institution continually adjusts its administrative structure to align with educational management tasks, maintaining flexibility to adapt easily to changes and decentralizing authority,
and

(7) Administrators systematically and continuously apply management innovations while encouraging the generation of innovations within the school.

Moreover, driving a strong innovation-driven organization, the indicators included:

(1) Schools establish shared values as common practice toward becoming innovative schools, and (2) A hundred percent of school personnel uphold these shared values. The methods are as follows:

(1) The institution implements good practices to foster shared values in the workplace within the school.

(2) The institution aims to cultivate behaviors of courage in thinking, acting, and practicing to build a desirable culture that enhances the innovation capacity of personnel in the school.

(3) Teachers accept and adhere to work procedures and guidelines collectively until they become part of the school culture by fostering mutual understanding within the institution.

(4) Administrators motivate personnel by rewarding them for their achievements, thereby establishing a culture of innovation within the school.

(5) The institution creates a positive and creative image.

(6) The institution fosters a positive culture of courage in thinking, acting, and practicing to build a desirable culture that supports enhancing the innovation capacity of school personnel.

(7) Administrators continuously develop innovative school work to ensure sustainability.

(8)Administrators and teachers provide encouragement and motivation for change in school management.

For enhancing the quality of digital technology, the indicators included: (1) Schools utilize digital technology comprehensively in organizational management, and (2) A hundred percent of teachers use digital technology in organizational management. The methods of this strategy consisted of the following:

(1) The institution utilizes digital technology to develop and create innovations in the overall education management system.

(2) The institution has a support system that enables teachers to use digital technology in teaching to maximize student potential.

(3) Administrators promote the use of digital technology by teachers in classroom management, organizing activities for knowledge exchange, and sharing among personnel to continuously develop innovations.

Figure 2
Strategy for Innovative Schools Under the Office of the Commission on Basic Education

The results of the assessment of the appropriateness and feasibility of the school administration strategies towards becoming an innovative school, conducted through an expert focus group discussion, revealed that, overall, the strategies were rated as highly appropriate and highly feasible. Based on the provided expert opinions, here is a cohesive academic presentation of the strategic framework for managing educational institutions toward becoming innovative schools: 1. Establishing a Clear Vision and Direction :The foundational step involves defining the institutional trajectory. This necessitates Shared Vision Development, where school administrators must articulate and transmit a clear vision of an innovative school, ensuring all stakeholders participate in setting the direction. This collective engagement is crucial for fostering mutual understanding and joint ownership of the transformation. Concurrently, a rigorous Current State Analysis must be conducted, employing techniques such as $PNI_{Modified}$ or SWOT analysis, to assess the school's strengths, weaknesses, opportunities, and threats, thereby identifying the genuine needs (necessity requirement) for innovation. 2. Cultivating and Promoting an Innovative Organizational Culture: The second domain focuses on embedding innovation within the school's DNA. This involves fostering a culture of Risk-Taking and Experimentation, encouraging an environment open to trials, learning from failures, and Challenging the Status Quo. Furthermore, Collaborative Work and Knowledge Sharing are paramount; strategies must promote networking and teamwork, emphasizing Participation and the "5Js" principles (Joint Exploration, Joint Strengthening, Joint Creation, Joint Success, Joint Reflection) to facilitate the exchange of ideas and knowledge. Critically, the focus should shift to Process Over Quantity of Innovation, prioritizing the evaluation of the effectiveness and value of the developed learning innovations rather than merely quantifying the output. 3. Developing Innovative Leadership: Effective transformation hinges on the school's leadership. Administrators must embody Transformational Leadershipand Innovative Leadership, capable of inspiring, visualizing, and motivating teachers and staff to become "Educational Innovators". This requires an Open Innovation Mindset, where leaders actively seek and accept new ideas from both internal and external sources, acting as a Boundary Spanner to link and integrate knowledge. Finally, Decentralizationis key, leveraging distributed authority to enable operational agility and granting teachers the autonomy necessary for creative work. 4. Continuous Human Resource Development and Learning :The final core strategy involves empowering the human capital. Skill Development initiatives must provide continuous upskilling and training for administrators and teachers, with a particular focus on digital literacy and Innovative Problem-Solving Skills (e.g., applying the Innovator's DNA framework). This development trajectory aims at building Teacher Innovatorship, supporting teachers to professionally evolve into

educational innovators through professional development that is deeply integrated with the school's innovative culture. The strategic transformation of an educational institution into an innovative school requires a systemic approach, integrating four core strategic domains: Visionary Direction, Cultivating an Innovative Culture, Innovative Leadership, and Continuous Human Resource Development

Discussion

Based on the research findings on the strategies for school administration toward innovative schools, several key points can be discussed as follows.

The first research objective examined the current status, desired status, and necessary conditions for school administration toward innovative schools. The analysis of the Priority Needs Index (PNI$_{modified}$) based on current and desired conditions of school administration under the Office of the Basic Education Commission revealed that the overall current and individual aspect conditions were at a high level, while the expected conditions were at the highest level. The top three ranked aspects by priority needs index were 1) Innovative organizational culture, 2) Guidelines for creating innovation, and 3) Flexible organizational structure. The rapid technological advancement in the 21st century has led to what is called "Technology Disruption," causing swift changes that make innovation a crucial tool in managing both the economy and education Lawang, 2022). In response, Thailand has revised its National Education Plan and standards in alignment with the 20-year National Strategy (2020–2040), aiming to develop learners with continuous learning skills, redesign learning systems, redefine teacher roles, and improve educational management efficiency (Office of the National Economic and Social Development Council, 2020).

Consequently, the National Education Standards of 2018 defined the "Desired Educational Outcomes" or the characteristics of Thai people 4.0 into three domains: lifelong learners, innovation co-creators, and resilient citizens, to accelerate the development of basic education management. However, despite numerous innovations in learning management, the lack of systematic administration—such as insufficient training support, budget, or the formation of innovative teams—has hindered successful innovation implementation (Lawang, 2022). Therefore, to ensure more systematic innovation management, innovation administration must include 1) Strategic planning, 2) Innovation creation processes, 3) Cultivation of a creative culture, 4) Evaluation of innovation capability, and 5) Rewarding innovators (De Bes et al., 2011). This aligns with the concept that a good school must establish clear goals, vision, mission, implementation guidelines, and systematic performance evaluation (Wonganutaroj , 2021).

The research findings for the second objective revealed that the strategy for school administration toward innovative schools consists of five components: 1) Vision, 2) Mission, 3) Goals, 4) Strategy, and 5) Indicators. The main strategy comprises six key strategic areas. The results from the focus group discussion with experts, who reviewed the draft strategy, showed that the overall appropriateness and feasibility of the strategy for school administration toward innovative schools were rated at the highest level. These findings align with the research of Chonnithi's (2021) study, which studied strategic planning consisting of five interrelated components: 1) Vision refers to the school's medium- to long-term success goals (approximately 3–10 years); 2) Mission represents the fundamental purpose explaining why the strategy must be implemented, serving as the basis for decision-making, goal setting, objectives, and strategies; 3) Goals mean what the school aspires to achieve by considering the strategic issues; it also identifies who will benefit and how if each strategic issue is successfully implemented 4) The educational institution has modern technology. 5) Strategy refers to the approach to achieving school success; and 6) Indicators are measurable units or indices used to assess the success of

implementation. These indicators should be quantifiable and relate to the operational goals to ensure clarity in monitoring and evaluating performance across various aspects. Furthermore, this corresponds with the study by Jansirisiri (2023), which found that the components of educational management strategy include 1) Vision, 2) Mission, 3) Objectives, 4) Strategies, and 5) Success indicators. To obtain current and relevant data for strategic planning, it is necessary first to define the vision, mission, and primary objectives to set the direction of the institution. Subsequently, the mission, objectives, goals, strategies, projects/activities, and indicators should be established to guide the implementation and evaluation of the strategies (Nadirzada, 2022).

Conclusions and Recommendations

The research findings indicate that the management of educational institutions toward innovative schools, in terms of organizational innovation, has the highest level of the Modified Need Index ($PNI_{modified}$). Educational institutions should urgently implement proactive strategies to develop an innovative organizational culture within the school. This culture involves not only encouraging personnel to create new ideas but also fostering an environment that is open, flexible, and supports ongoing learning, experimentation, and adaptation. Such efforts will lead to the delivery of quality education, which requires dedicated effort and commitment from all sectors. The resulting benefits are schools that can adapt, compete, and produce high-quality learners capable of innovation and sustainable growth in an era of constant change.

Declarations

Ethics approval and consent to participate: The present study obtained ethical approval for human research from Ubon Ratchathani Rajabhat University and was conducted in accordance with the International Conference on Harmonisation – Good Clinical Practice (ICH-GCP) guidelines, as documented in Appendix A.

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Appendix A. Human Research Ethics Certification and ICH GCP for the study: "Strategy for Innovative Schools Under the Office of the Basic Education Commission"Issued by: Ubon Ratchathani Rajabhat University, Thailand.

Appendix B. PNI$_{modified}$ (Priority Needs Index) (Wongwanich, 2020)

Needs Assessment Analysis Methodology

The analysis of priority needs for transforming educational institutions into innovative schools will involve determining and ranking essential requirements using the Priority Needs Index (PNI) method.

The PNI method is based on calculating the difference (gap) between the Current State (Actual Condition) and the Desired State (Ideal Condition). The resulting index quantifies the magnitude of the need, thereby allowing for a prioritized ranking of administrative strategies.

Formula for Calculation:

The core formula used to calculate the PNI is as follows:

$$PNI = \text{Mean of Desired State} - \text{Mean of Current State}$$

Where:

- PNI = Priority Needs Index (The value used to rank the needs)
- Mean of Desired State = The average score of the ideal condition (what should be) as perceived by the respondents.
- Mean of Current State = The average score of the actual condition (what is) as perceived by the respondents.

Note: A higher PNI value indicates a **greater need or urgency** for intervention in that particular area of school administration.

Appendix C. Research Instruments

Questionnaire: Strategy for Innovative Schools Under the Office of the Basic Education Commission

(Current State, Desired State, and Management Guidelines for Innovative Schools Under the Office of the Basic Education Commission)

Part 1: General Information of the Respondents

Instructions: Please mark X in the box X next to the option that applies to you.

Gender ☐ Male ☐ Female
Position ☐ School Director ☐ Deputy School Director ☐ Teacher
Educational Attainment ☐ Bachelor's Degree ☐ Master's Degree ☐ Doctoral Degree
Years of Work Experience ☐ Less than 5 years ☐ 6 – 10 years ☐ 10 years or more

Part 2: Questionnaire: Management Strategies for Innovative Schools Under the Office of the Basic Education Commission

No.	Current State, Desired State, and Management Guidelines for Innovative Schools Under the Office of the Basic Education Commission	Current State Level					Desired State Leve				
		5	4	3	2	1	5	4	3	2	1
Component 1: Possession of a Challenging Vision											
1.	School administrators provide opportunities for teachers to participate in defining the vision and strategies.										
2.	The school establishes strategies that promote and support teachers' innovative and creative thinking, leading to the process of creating new things.										
3.	The school clarifies and ensures understanding among relevant stakeholders regarding the school's administrative policies, vision, and mission.										
4.	**The administrators analyze and evaluate various factors arising from the organization's internal and external environments.**										
5.	School administrators set the direction for governance that facilitates internal school management.										
6.	The educational institution establishes clear and specific objectives, policies, and strategies for innovation.										
7.	The educational institution sets specific goals for its administrators concerning the generation and assessment of innovation.										
8.	The educational institution implements processes and management strategies to create and launch new innovations every 1.5 to 2 years.										
9.	The educational institution can clearly assess and determine performance success directly from its vision and objectives.										
10.	The educational institution takes evaluated new ideas and transforms them into tangible administrative benefits, prioritizing the successful application of findings from R&D efforts.										
11.	Administrators and teachers systematically coordinate within teams through clear processes to ensure efficient personnel performance within the school.										

No.	Current State, Desired State, and Management Guidelines for Innovative Schools Under the Office of the Basic Education Commission	Current State Level					Desired State Leve				
		5	4	3	2	1	5	4	3	2	1
12.	Management employs a **Speed Strategy**, capitalizing on the staff's **strengths** and capabilities to drive innovation.										
Component 2 Management of Innovative Teams											
13.	Administrators provide teachers with opportunities for continuous performance improvement to enhance their potential for becoming effective innovators.										
14.	The administration fosters shared awareness and responsibility among all staff and teachers regarding the objectives for generating instructional and managerial innovations, with accountability reinforced through performance evaluations tied directly to these objectives.										
15.	Administrators encourage and support personnel to continuously develop their skills, capabilities, and innovative work processes.										
16.	The administration promotes professional development for teachers through training and observation at innovative benchmark schools, helping them explore and seek suitable working methodologies.										
17.	Administrators foster knowledge, skills, and processes for leveraging existing knowledge into innovation development among school personnel.										
18.	dministrators encourage and support teachers by providing continuous training and skills development to enhance their potential for creating effective innovations.										
19.	Administrators and teachers systematically coordinate within teams through clear processes to ensure efficient personnel performance within the school.										
20.	Teachers can apply the acquired knowledge and information to effectively and diversely develop innovative instructional management in the classroom.										
21.	The educational institution places importance on knowledge management, implementing administrative practices for handling all knowledge and information within the school.										
22.	The educational institution implements a system to ensure staff access diverse knowledge sources, fostering efficient learning.										
23.	ผู้บริหารส่งเสริมให้มีการจัดกิจกรรมการแลกเปลี่ยนและแบ่งปันความรู้ให้กับบุคลากรได้มีการพัฒนานวัตกรรมอย่างต่อเนื่อง										
24.	Administrators provide opportunities for teachers to give direct feedback to management regarding innovations, thereby enhancing operational efficiency and ensuring continuous professional development for school personnel.										
25.	Administrators provide opportunities for teachers for continuous performance improvement to enhance their potential for becoming effective innovators.										
Component 3 Guidelines for Innovation Creation											
26.	The educational institution utilizes data from internal and external environmental analysis, its direction, vision, and objectives to determine its school strategies.										
27.	The educational institution analyzes its strengths, weaknesses, opportunities, and threats.										
28.	The educational institution develops a strategic plan to facilitate the generation and advancement of organizational innovation.										

No.	Current State, Desired State, and Management Guidelines for Innovative Schools Under the Office of the Basic Education Commission	Current State Level					Desired State Leve				
		5	4	3	2	1	5	4	3	2	1
29.	The educational institution sets its course to be responsive to current social changes and consistent with educational policy.										
30.	The educational institution defines a school direction that is realistic and actionable in practice.										
31.	The educational institution defines a vision and objectives aimed at transforming teachers into innovators.										
32.	The educational institution must clarify its organizational innovation strategy through well-defined statements and work plans.										
33.	The educational institution engages its key stakeholders—including the Basic Education Committee, parents, teachers, and students—in setting the school's direction.										
34.	The educational institution sets administrative objectives for innovation generation and links performance appraisal directly to innovative outputs. This necessitates clearly defining the innovation vision, strategic intent, mission, goals, and objectives.										
35.	Administrators utilize new, evaluated ideas to generate administrative benefits. The organization must prioritize the successful implementation of results derived from research and development (R&D).										
36.	The educational institution defines its strategies to be responsive to social changes and consistent with educational policies.										
37.	The educational institution maintains a clear action plan and schedule for executing its strategic plan.										
38.	The educational institution promotes and supports teachers in leveraging their knowledge and capabilities to generate innovation, ensuring their work aligns with the school's strategic plan.										
Component 4 Flexible Organizational Structure											
39.	The school administrator determines the management direction that facilitates internal administration within the school.										
40.	The school administrator establishes an organizational structure conducive to internal management, which promotes the institution as an organization of innovation.										
41.	The educational institution employs cross-functional teams and opens participation to teachers, personnel, students, and the school board to join innovation discovery, process design, and innovation teams.										
42.	The structure is designed to be consistent with the school's aims, ensuring its appropriateness for the institution's specific context.										
43.	The educational institution's strategy is consistent with its structure and aims, with due consideration given to the school's specific contexts and suitability.										
44.	The educational institution creates a central hub dedicated to research and innovation discovery, encompassing process design, pedagogical innovation, and administrative practices. Establishing this unit is viewed as the foundational initiative for successful innovation generation.										
45.	The educational institution employs open communication among the central innovation, process, and management										

No.	Current State, Desired State, and Management Guidelines for Innovative Schools Under the Office of the Basic Education Commission	Current State Level					Desired State Leve				
		5	4	3	2	1	5	4	3	2	1
	teams throughout all organizational sectors. This factor is essential for collaboration in the innovation process.										
46.	The educational institution secures partners for innovation creation in teaching and learning, processes, and strategy. This collaboration, usually between two entities, often results in new or strategic alliances.										
47.	The educational institution maintains a highly effective and efficient structure to support the creation of new innovations and services, covering process design, pedagogical innovation, and management innovation.										
48.	The educational institution adjusts its management structure to be consistent with educational administration, ensuring it is flexible for change and includes the delegation of authority.										
49.	Management consistently and systematically implements administrative innovations and actively motivates the development of new innovations in the school.										
50.	The school administrator determines the management direction and organizational structure that facilitate internal administration within the school.										
51.	The educational institution's structure is flexible and dynamic, ensuring it can be adapted as needed, thereby facilitating staff innovation.										
Component 5 Innovative Organizational Culture											
52.	The educational institution defines common core values that serve as the collective operating principles for all staff in transforming the school into an innovative institution.										
53.	Administrators foster knowledge, skills, and processes for leveraging existing knowledge into innovation development among school personnel.										
54.	Administrators promote the organization of knowledge exchange and sharing activities to ensure personnel continuously develop innovations.										
55.	The educational institution strives to cultivate a culture of daring to think and daring to implement, which facilitates increased innovation capacity among its staff.										
56.	Teachers accept the shared procedures and workflows, fostering a unified culture within the school through mutual understanding among all personnel.										
57.	Administrators provide work reinforcement and offer rewards for personnel's success, thereby establishing a culture of innovation within the school.										
58.	Organizational administrators implement a knowledge and information management system that promotes innovation, and they maintain methods for developing this system by appointing capable personnel to oversee operations and supporting staff in mutual knowledge exchange.										
59.	The educational institution creates an environment that encourages all staff to think creatively, openly receive feedback, voice opinions, and embrace risk in piloting new ideas, while supporting continuous self-development and a lifelong learning mindset.										
60.	Teachers accept the shared procedures and workflows, fostering a unified culture within the school through mutual understanding among all personnel.										

No.	Current State, Desired State, and Management Guidelines for Innovative Schools Under the Office of the Basic Education Commission	Current State Level					Desired State Leve				
		5	4	3	2	1	5	4	3	2	1
61.	The educational institution stimulates teachers to understand the importance of external environmental shifts, cultivating responsive and adaptive behaviors to constantly stay current with change.										
62.	The educational institution strives to cultivate a culture of daring to think and daring to implement, which facilitates increased innovation capacity among its staff.										
63.	The administrators continuously develop the innovative school model to achieve the school's sustainability.										
64.	Administrators and teachers are motivated to change the educational management within the school.										
65.	School personnel maintain a work culture characterized by courageous thinking and bold action, pursuing new, goal-oriented initiatives that benefit the educational institution.										
Component 6 Digital Technology											
66.	Administrators encourage and support personnel knowledge sharing by using an efficient Information Technology (IT) system for managing knowledge and various information within the school.										
67.	The educational institution implements a system to ensure staff access diverse knowledge sources, fostering efficient learning.										
68.	Teachers can apply the acquired knowledge and data to develop innovative instructional management in the classroom, effectively and diversely.										
69.	Administrators promote the organization of knowledge exchange and sharing activities to ensure personnel continuously develop innovations.										
70.	Teachers are increasing their use of educational technology in the classroom.										
71.	Teachers are increasing their use of educational technology in the classroom.										
72.	The educational institution uses Information Technology (IT) systems to link innovations among its various networks.										
73.	The educational institution works to create and develop educational innovations, ensuring they are regularly updated to keep pace with contemporary changes.										
74.	The educational institution employs innovations in its administration to boost the overall effectiveness of its educational programs.										
75.	The educational institution fosters networking and knowledge sharing among various entities.										
76.	The educational institution serves the public with information and news using a wider range of communication platforms.										
77.	The educational institution implements innovative management methods to ensure parental communication is systematic and favorably received.										

Part 3: Open-Ended Questionnaire (Current State, Desired State, and Management Guidelines for Innovative Schools Under the Office of the Basic Education Commission)
1. Current State, Desired State, and Management Guidelines for an Innovative School Regarding the Component of Possession of a Challenging Vision
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2. Current State, Desired State, and Management Guidelines for an Innovative School Regarding the Component of Management of Innovative Teams

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3. Current State, Desired State, and Management Guidelines for an Innovative School Regarding the Component of Guidelines for Innovation Creation

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4. Current State, Desired State, and Management Guidelines for an Innovative School Regarding the Component of Flexible Organizational Structure

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5. Current State, Desired State, and Management Guidelines for an Innovative School Regarding the Component of Innovative Organizational Culture

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6. Current State, Desired State, and Management Guidelines for an Innovative School Regarding the Component of Digital Technology

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