


Learning leadership development model of opportunity expansion school administration in the Northeast of Thailand

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Abstract: This study aimed to (1) identify the components and indicators of learning leadership among school administrators in opportunity expansion schools in northeastern Thailand, (2) validate the consistency of these indicators with empirical data, (3) develop a corresponding learning leadership model, and (4) assess the model's suitability, feasibility, and utility. In Phase 1, a comprehensive literature review and expert interviews established the key components and indicators. Phase 2 employed confirmatory factor analysis on data from 460 administrators and teachers—yielding $\chi^2 = 115.819$, $df = 97$ ($\chi^2/df = 1.194$), $p = 0.0935$, $RMSEA = 0.020$, $SRMR = 0.016$, $CFI = 0.997$, and $TLI = 0.996$ —to confirm model consistency. Phase 3 involved developing and evaluating a learning leadership model, which comprises a model name, principles and concepts, objectives, 28 practical guidelines, 13 success goals, and 23 mechanisms for driving success. Expert evaluations indicated that the model is highly suitable, feasible, and useful.

Keywords: *Administrators, CFA, Learning leadership, Opportunity expansion schools.*

1. Introduction

Thailand has a variety of school formats such as primary school, secondary school, opportunity expansion schools, etc. The Opportunity Expansion Schools in Thailand are institutions that provide education from kindergarten through lower secondary levels, with some extending instruction to upper secondary education. Nationwide, there are 6,882 such schools, including 3,212 in northeastern Thailand under the jurisdiction of the Office of Primary Educational Service Area across 20 provinces [1].

Educational administrators in these schools face multifaceted challenges. They must manage educational programs spanning multiple levels—each governed by distinct standards and performance indicators—while contending with limited budgets and human resources that hinder effective integration. Moreover, these schools often experience reduced community collaboration, as local communities tend to undervalue the role of teachers. In addition, teachers are frequently required to instruct in multiple subjects without specialized expertise, which compromises the quality of instructional management.

Students in these institutions, particularly those from remote areas, exhibit considerable disparities in their foundational learning experiences. Socioeconomic inequities further obstruct the provision of equitable learning opportunities. Most students come from middle to low socioeconomic backgrounds, and those in northeastern Thailand often struggle to access essential educational resources, adversely affecting both their academic achievement and overall development. Rural Opportunity Expansion Schools also face challenges in fostering community partnerships, as some parents perceive education as solely the responsibility of teachers, thereby limiting external support.

Consequently, effective leadership is imperative for the successful management and development of these schools. Research by Lieberman and Miller [2] highlights the critical role of leadership in driving

school transformation. Nonetheless, some administrators still lack the skills needed to build robust collaborative networks both within and outside their institutions. As noted by James and Barry [3] in the introduction to *Learning Leadership* by Kouzes and Posner [4] “learning leadership is a call to unlock the inherent leadership potential already present in society.” Leadership is an ongoing learning process; to succeed, leaders must master and implement the five fundamental principles of leadership—key tools for exemplary leadership. These essential attributes include self-efficacy, a commitment to continuous improvement, the willingness to challenge personal competencies, dedication to collaborative leadership, and persistent diligence in professional practice.

The most prevalent issues observed in Opportunity Expansion Schools in northeastern Thailand include the assignment of teaching responsibilities to educators and personnel who do not hold the appropriate academic qualifications, compounded by widespread economic hardships and challenging social environments among the student population. These schools play a crucial role in enhancing access to education for rural students; however, several factors negatively impact teaching effectiveness and the overall quality of education: 1) Shortage of Qualified Teachers: Most rural Opportunity Expansion Schools face a significant shortage of qualified teachers, particularly in essential subjects such as Mathematics, Science, and English. Teachers in these areas are often overburdened, which adversely affects their teaching efficacy and the academic development of students. 2) Limited Resources and Budget: The financial allocation for Opportunity Expansion Schools in northeastern Thailand is insufficient to adequately support instructional materials, infrastructure maintenance, and the development of learning-enhancing activities, all of which are critical for improving educational quality. 3) Socioeconomic and Community Challenges: A majority of students in these schools come from low-income families. Additionally, a lack of parental awareness and understanding regarding the importance of educational support contributes to issues such as high absenteeism and elevated dropout rates.

Institutional leadership is pivotal to the comprehensive development of schools. Enhancing administrators’ knowledge and skills in creative leadership is essential for modern education, and further research should be supported to establish context-specific frameworks for leadership development across diverse school settings. In the realm of education, leadership focuses on human resource development, cultivating an organizational culture, and setting strategic directions for change. Effective school leaders must possess key attributes, including the ability to communicate clearly to foster mutual understanding and collaboration, a strategic vision capable of developing plans that promote school achievement, and the capacity to motivate teachers and students to reach their highest potential. This perspective is supported by Leithwood, et al. [5] in their study “How Leadership Influences Student Learning,” which found that administrators who successfully facilitate collaboration between teachers and the community have a direct impact on school and student success. Similarly, Hallinger and Heck [6] demonstrated in “Collaborative Leadership and School Improvement” that collaborative leadership fosters a learning-centered culture, especially in schools that must adapt to contemporary changes. Fullan [7] in *The Principal: Three Keys to Maximizing Impact*, further argued that transformational leadership can drive long-term school development by creating a compelling vision and motivating staff.

Learning leadership is defined as the process of reinforcing, assisting, and supporting learning practices to achieve outcomes, as well as creating an empowering environment that expands learning potential and fosters innovation. This process is characterized by the dissemination, sharing, and connection of activities and interactions among formal and informal stakeholders both within and outside the educational system or learning community [8]. Consequently, learning leadership is crucial for the development of both teachers and administrators, equipping them with the characteristics and behaviors necessary to establish a learning organization. Such an organization serves as a model for individual self-improvement and continuous lifelong learning. Administrators should pursue ongoing self-development through diverse learning models and strategies, co-create a shared vision with their staff, prioritize learning, foster teamwork, and build close relationships with their personnel. These learning leadership qualities and behaviors are indispensable for effective school management in today’s

environment, where schools and communities are reservoirs of cultural capital and human resources essential for adapting to future changes.

Given these challenges and opportunities, the researcher is motivated to study and develop a model for enhancing the learning leadership of administrators in Opportunity Expansion Schools in northeastern Thailand. The objective is to provide a valuable framework for school leaders to advance their personal and organizational development, inform policy planning, and serve as a guideline for effectively improving the learning leadership of administrators in Opportunity Expansion Schools under the Office of Primary Educational Service Area in northeastern Thailand.

2. Literature Review

James and Barry [3] in the preface of *Learning Leadership* by James and Barry [3] stated that “learning leadership is a call to unleash the inherent leadership potential already present in society.” They argue that leadership is a continuous learning process and, to succeed, leaders must understand, master, and apply the five fundamental principles of leadership, essential tools for exceptional leadership.

Sirimas [9] in a report on educational administration research at Naresuan University, emphasized that learning leaders in schools play a pivotal role in fostering creativity among teachers and staff, enhancing instructional practices through teamwork, and creating environments conducive to learning.

In summary, leadership is not only vital for effective organizational management but also serves as the core element that develops and elevates the potential of personnel, promotes continuous learning, and drives sustainable organizational growth. The leadership of school administrators is therefore a key factor in school development, particularly in educational systems that demand efficient management to achieve positive outcomes at both individual and societal levels. Effective leadership not only facilitates efficient management but also bolsters motivation and cultivates a positive mindset among team members. In educational institutions, administrators are crucial in setting clear directions and visions, as well as in creating environments that support learning and development. Both students and teachers must receive guidance from leaders who demonstrate a clear vision and employ fair, effective decision-making processes. Ultimately, strong leadership is the cornerstone for fostering high-quality, innovative change within the education system.

Modern leadership has undergone significant transformation and expansion, evolving from traditional leadership theories into various contemporary models that align with the current global context. Kantapat and Sirimas [10] assert that leadership is a critical role for guiding management and initiating change within organizations—it serves as the starting point for transformation before others in the organization. Consequently, leaders and administrators must act as change agents by employing a management paradigm based on the “Four I’s.” This approach leverages knowledge to unlock the potential of followers, generate motivation for their development, foster mutually beneficial relationships, instill ethical values, and engage in the psychological art of winning people’s hearts. These factors are vital for propelling an organization toward becoming a modern, resilient, and learning-oriented entity—one in which personnel continually enhance their knowledge and capabilities, produce desired outcomes, and contribute to intellectual innovation.

Moreover, the establishment of a learning organization requires cultivating individuals who are well-informed, capable of systematic thinking, team-oriented, and committed to co-creating a shared vision and common goals. It is imperative to recognize that leadership is not confined to those in formal managerial positions but is a quality that every member of the organization should embody.

Modern leadership is thus regarded as the key to excellence. Somchai [11] describes modern leadership as an evolution from traditional leadership models, reimagined and developed to suit the current conditions and challenges of the global society.

Focusing on the enhancement of instructional quality is at the core of effective school leadership. Robinson, et al. [12] found that leadership which promotes learning and provides continuous support to teachers significantly contributes to student success. In their study “Assessing the Instructional

Management Behavior of Principals," Hallinger and Heck [6] developed an instrument to measure the instructional leadership of school administrators and demonstrated that leaders who emphasize teaching play a critical role in setting clear goals, supporting teachers, and monitoring student progress. Further research indicates that school administrators who adopt a learning leadership approach enhance educational quality and produce sustainable outcomes within their organizations. Additionally, Blase and Blase [13] in their study "Principals' Instructional Leadership and Teacher Development: Teachers' Perspectives," revealed that administrators who foster learning through mentoring, academic support, and the creation of an open culture for knowledge exchange positively influence the quality of instruction and student achievement.

Based on the study of modern leadership concepts, the researcher found that modern leadership is not confined to a single model but rather represents a synthesis of attributes, behaviors, and methodologies tailored to the contemporary context and the needs of organizations. Kantapat and Sirimas [10] conducted a study on adaptive leadership development, which aimed to examine the characteristics and components of adaptive leadership and to propose a framework that integrates leader attributes and behaviors with the current organizational context. The components of adaptive leadership include: (1) adaptability, (2) lifelong learning, (3) goal-oriented focus, (4) effective communication, (5) trust-building, and (6) motivation.

Thongjurai and Jesadalak [14] explored the influence of transformational leadership, strategic flexibility, knowledge management process capabilities, and change management abilities on organizational effectiveness. Their findings indicate that transformational leadership and strategic flexibility positively affect organizational performance, suggesting that aligning leader attributes and behaviors with evolving contexts can enhance organizational efficiency. Consequently, effective leaders must be adaptable, continuously learn new approaches, and be capable of building trust and motivation among their personnel to achieve sustainable collective success.

The connection between learning leadership and modern leadership lies in continuous adaptation and lifelong learning. Learning leadership emphasizes ongoing development and adaptation, aligning with modern leadership concepts that call for flexibility and the incorporation of new experiences to meet contemporary challenges. Furthermore, it promotes a collaborative learning culture within organizations—especially in educational institutions—where leaders encourage teachers, students, and staff to exchange knowledge, experiences, and perspectives on shared learning. This approach is consistent with the principles underlying modern leadership models.

Learning leadership specifically focuses on developing the potential of personnel, enabling them to continually enhance their competencies. Administrators who practice learning leadership create work environments conducive to learning and development, emphasizing support and empowerment for their subordinates to perform effectively. Modern learning leaders frequently leverage data and emerging technologies to improve management efficiency and drive innovation within their organizations.

In the context of modern education, the role of learning leadership is pivotal. Not only does it help to establish a culture of learning within schools, but it also equips teachers and students with the skills needed for ongoing development and adaptation. This, in turn, promotes overall educational quality. Therefore, learning leadership is regarded as an essential element of modern leadership, with its focus on human resource development, the promotion of collaborative learning, and the readiness to embrace change in alignment with current societal needs.

3. Methodology

This research is a mixed methods study based on the framework of Creswell and Plano Clark [15] employing a multi-phase design that integrates both quantitative and qualitative approaches for development, refinement, and evaluation. The objectives of the study are to:

1. Examine the components and indicators of learning leadership among school administrators in Opportunity Expansion Schools under the Office of Primary Educational Service Area in Northeastern Thailand.

2. Assess the consistency of the learning leadership indicators model for these administrators with empirical data.

3. Develop a model to enhance the learning leadership of school administrators in Opportunity Expansion Schools under the Office of Primary Educational Service Area in Northeastern Thailand.

4. Evaluate the developed model in terms of its propriety, feasibility, and utility.

The research is conducted in three phases with the following procedures:

3.1. Phase 1

Investigate the components and indicators of learning leadership among administrators of Opportunity Expansion Schools in Northeastern Thailand. This phase involves an in-depth study of relevant concepts, theories, literature, documents, and previous research, followed by expert validation of the identified components and indicators.

3.2. Phase 2

Examine the congruence of the learning leadership indicators model for administrators in Opportunity Expansion Schools in Northeastern Thailand with empirical data through Confirmatory Factor Analysis (CFA).

3.3. Phase 3

Conduct case studies in Opportunity Expansion Schools where administrators demonstrate effective learning leadership and exhibit outstanding academic management performance. In these cases, administrators apply learning leadership practices in managing the institution with clear, measurable outcomes. A model for developing learning leadership among administrators is drafted and then evaluated using a Multi-Attribute Consensus Reaching (MACR) process with 10 experts from academic and practitioner backgrounds. Finally, the proposed model is assessed by 7 experts in terms of its propriety, feasibility, and utility.

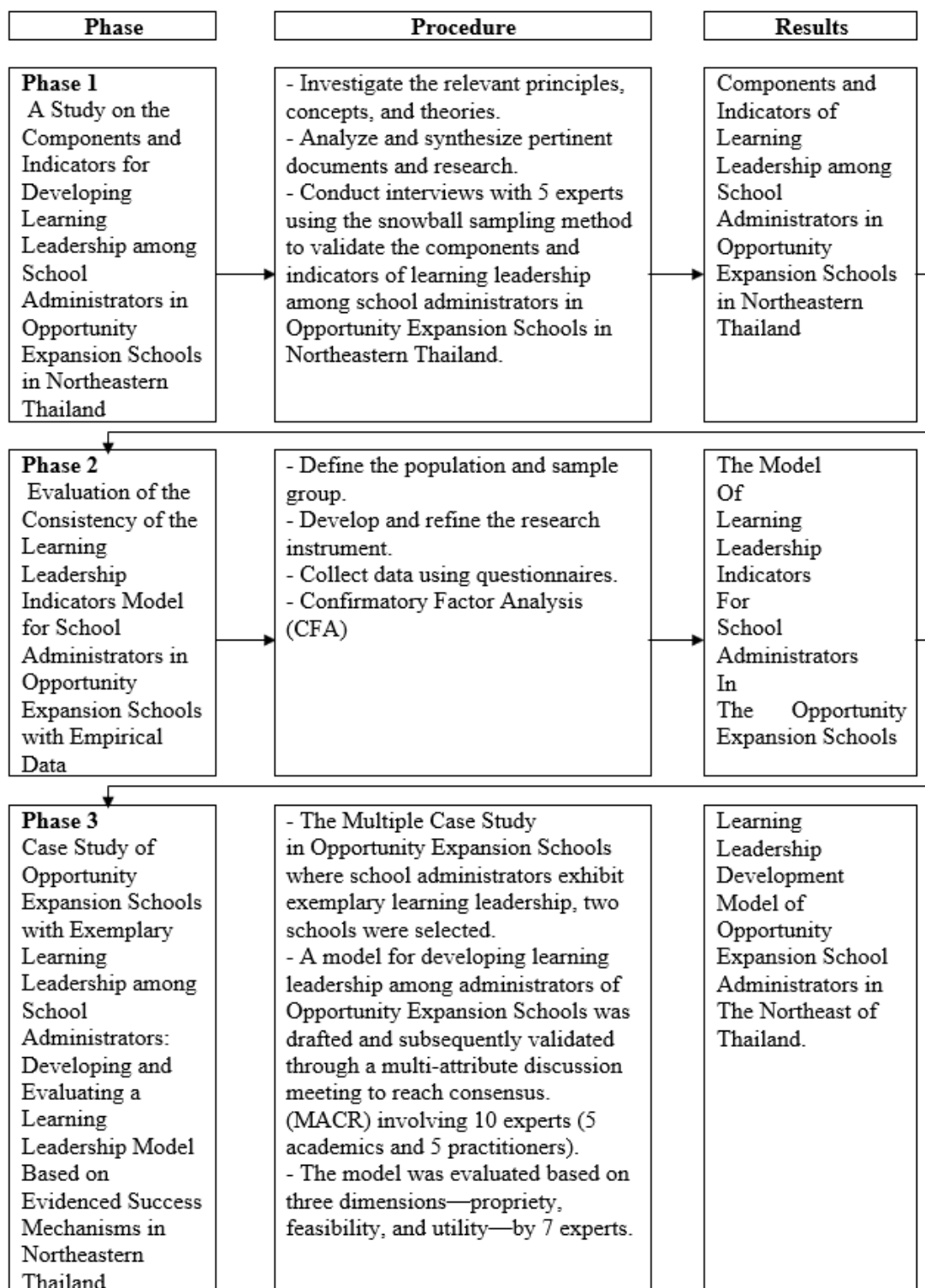


Figure 1.
Steps of the Research Procedure.

4. Results

4.1. Identifying the components and indicators of learning leadership among school administrators in opportunity expansion schools in northeastern Thailand

Based on the theoretical frameworks and concepts proposed by Runcharoen [16]; Jirawat [17]; Kanokorn [18]; Thammathatnanon [19]; Jaruwan and Sittichai [20]; Patamawan, et al. [21]; Kaisit Plerin, et al. [22] and Wanprakob, et al. [23] as well as the perspectives of Antonacopoulou and Bento [24]; Christansen and Tronsmo [25]; Greiter [26]; Jolonch, et al. [27]; Kohlreiser [28]; Owen [29]; Salavert [30]; Tubin [31]; Farham [32]; Prarasri, et al. [33] and Cockpim and Somprach [34] this research adopted a comprehensive framework for learning leadership. The researcher analyzed and synthesized these sources to derive five key components of learning leadership among school administrators in Opportunity Expansion Schools in Northeastern Thailand, as follows:

- 1) Learning Person
 - (1.1) Demonstrating a commitment to learning
 - (1.2) Exhibiting academic leadership
 - (1.3) Promoting learning through personal example
- 2) Pursuing Learning Innovation
 - (2.1) Developing new learning skills
 - (2.2) Seeking new methods of learning
 - (2.3) Utilizing technology to advance learning innovations
 - (2.4) Supporting resources for creating learning innovations
- 3) Team Learning
 - (3.1) Engaging in reflective thinking
 - (3.2) Establishing shared learning goals
 - (3.3) Communicating creatively for collaborative learning
- 4) Creative Thinking
 - (4.1) Demonstrating initiative
 - (4.2) Exhibiting flexible thinking
 - (4.3) Displaying adaptive thinking
 - (4.4) Practicing thorough and meticulous thought
- 5) Creating a Conducive Learning Environment
 - (5.1) Developing and enhancing learning resources
 - (5.2) Fostering motivation for learning
 - (5.3) Establishing an atmosphere conducive to learning
 - (5.4) Facilitating knowledge exchange through social environments

The evaluation of the measurement model for the learning leadership components of school administrators in Opportunity Expansion Schools in Northeastern Thailand revealed that the model comprises 5 components with a total of 18 indicators. Specifically, Component 1 includes 3 indicators, Component 2 includes 4 indicators, Component 3 includes 3 indicators, Component 4 includes 4 indicators, and Component 5 includes 4 indicators. A total of 25 observed variables were analyzed using Pearson's Product Moment Correlation Coefficient. The analysis demonstrated that all variable pairs exhibited positive correlations that were statistically significant at the .01 level, indicating that the inter-variable relationships are sufficiently strong (measure of sampling adequacy) to proceed with further analysis.

4.2. Validation the consistency of these indicators with empirical data

The learning leadership components of school administrators in Opportunity Expansion Schools in Northeastern Thailand comprise 5 dimensions. Every pair of variables exhibited statistically significant positive correlations at the 0.01 level, with correlation coefficients ranging from 0.380 to 0.842. The highest correlation was observed between "seeking new learning methods" (LI2) and "developing new

learning skills" (LI1) ($r = 0.842$), followed by the correlation between "motivating learning" (EL2) and "developing and enhancing learning resources" (EL1) ($r = 0.784$). In contrast, the lowest correlation was found between "using technology to develop learning innovations" (EL3) and "exemplifying academic leadership" (LP2) ($r = 0.380$).

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.962, which is well above the 0.5 threshold, indicating that the variables are suitably correlated for Confirmatory Factor Analysis. Furthermore, Bartlett's Test of Sphericity yielded a value of 7539.623 ($p < 0.05$), demonstrating that the correlation matrix significantly differs from the identity matrix. This confirms that the data are appropriate for CFA.

The fit indices of the measurement model for the learning leadership components of school administrators in Opportunity Expansion Schools in Northeastern Thailand meet the specified criteria. Specifically, the chi-square (χ^2) value is 115.819 with 97 degrees of freedom ($p = 0.0935$), indicating that the chi-square is not statistically significant. Additionally, the Root Mean Square Error of Approximation (RMSEA) is 0.020, the Standardized Root Mean Square Residual (SRMR) is 0.016, the Comparative Fit Index (CFI) is 0.997, and the Tucker-Lewis Index (TLI) is 0.996. These values collectively suggest that the measurement model fits the empirical data well.

The confirmatory factor analysis of the key components of learning leadership among school administrators in Opportunity Expansion Schools revealed the following standardized factor loadings and predictive coefficients (R^2):

- The highest loading was observed for the "Creating a Conducive Learning Environment" component (EL) with $\beta = 0.988$ and $R^2 = 0.977$.
- This was followed by the "Creative Thinking" component (CT) with $\beta = 0.987$ and $R^2 = 0.973$.
- The lowest loading was for the "Pursuing Learning Innovation" component (LI) with $\beta = 0.859$ and $R^2 = 0.738$.

These findings indicate strong relationships among the indicators, supporting the validity of the measurement model for learning leadership.

4.3. Developing a corresponding learning leadership model

The development of a model for enhancing the learning leadership of school administrators in Opportunity Expansion Schools in Northeastern Thailand is divided into two stages. In the first stage, field visits are conducted to draft the model through multiple case studies. These case studies examine the characteristics, phenomena, strategies, conditions, and outcomes associated with the emergence of learning leadership among administrators. The target sites are Opportunity Expansion Schools where administrators demonstrate learning leadership in managing their institutions, leading to notable academic management performance. In fact, two schools have achieved distinguished recognition, having received Gold-level OBEC Awards for Excellent School Directors.

The model for developing learning leadership among school administrators in Opportunity Expansion Schools in Northeastern Thailand was constructed based on findings from Phase 1 and Phase 2. It integrates the components and indicators of learning leadership—comprising 5 components, 18 indicators, and 25 behavioral variables that demonstrated consistency with the empirical data—with insights derived from a review of relevant theories and conceptual frameworks. This integrated approach provided the foundation for a high-quality, practically applicable model. The model consists of six sections:

1. Model Name
2. Principles and Concepts
3. Model Objectives
4. Implementation Procedures
5. Success Targets
6. Mechanisms for Driving Success

In evaluating the model for developing learning leadership among school administrators in Opportunity Expansion Schools in Northeastern Thailand, the researcher employed foundational theoretical concepts (2560) alongside the model framework proposed by Keeves [35] and the Objectives and Key Results approach (Office of the Secretary of the Education Council, 2560). The resulting model comprises six components: 1. Model Name, 2. Principles and Concepts, 3. Model Objectives, 4. Implementation Procedures, 5. Success Targets, and 6. Mechanisms for Driving Success.

4.4. Assessing the model's suitability, feasibility, and utility

The researcher then assessed the quality of the model in terms of its propriety, feasibility, and utility. For this evaluation, a panel of 7 experts—meeting the predetermined criteria—was assembled. This panel included 3 policy- and planning-level administrators (education administrators and supervisors), 3 school-level administrators, and 1 academic expert in educational administration holding a doctoral degree. These experts evaluated the model, confirming its potential for practical application in the context of Opportunity Expansion Schools in Northeastern Thailand.

Evaluation Results

The model was assessed in two main parts:

4.4.1. Evaluation of Model Name, Objectives, and Underlying Principles (Feasibility and Utility)

1. Model Name: Rated as highly appropriate, feasible, and useful with an average score of 4.95 (S.D. = 0.20).
2. Objectives: Rated very highly with an average score of 4.73 (S.D. = 0.58).
3. Principles and Concepts: Achieved the maximum rating with an average score of 5.00 (S.D. = 0.00).

4.4.2. Evaluation of the Overall Model Quality

The model comprises five components. The evaluations for each component are as follows:

Table 1.
Evaluation of the Overall Model Quality.

Component of Learning Leadership	Propriety		Feasibility		Utility	
	\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.
Being a Learning Person	4.92	0.28	4.86	0.40	4.95	0.18
Pursuing Learning Innovation	4.93	0.27	4.90	0.28	5.00	0.00
Team Learning	4.93	0.20	4.87	0.42	5.00	0.00
Creative Thinking	4.92	0.28	4.94	0.25	5.00	0.00
Creating a Conducive Learning Environment	4.91	0.27	4.84	0.48	5.00	0.00

The overall propriety ratings are consistently high, with the highest scores observed for the "Pursuing Learning Innovation" and "Team Learning" components, followed by "Being a Learning Person," "Creative Thinking," and "Creating a Conducive Learning Environment."

Feasibility ratings are uniformly high, with the "Creative Thinking" component receiving the highest score, and "Creating a Conducive Learning Environment" the lowest among the five.

All components were rated at the highest level of Utility, with "Pursuing Learning Innovation," "Team Learning," "Creative Thinking," and "Creating a Conducive Learning Environment" each achieving perfect scores, and "Being a Learning Person" rated slightly lower at 4.95.

Overall, the model for developing learning leadership among school administrators in Opportunity Expansion Schools in Northeastern Thailand is considered highly appropriate, feasible, and useful across all evaluated dimensions.

5. Discussion

Educational opportunity schools aim to provide quality education despite resource limitations. The effectiveness of these institutions is closely linked to the learning leadership of administrators, which fosters innovation, collaboration, and sustainable educational improvement. This study examines the key components of learning leadership among administrators and their direct impact on school culture and educational quality.

According to the research conducted by Apisit, et al. [36] five essential components define learning leadership in school administrators:

1. Creating a Learning-Conducive Environment – Establishing a school culture that promotes continuous learning and encourages students and staff to seek knowledge.
2. Creative Thinking – Developing innovative solutions to challenges in educational management while fostering cognitive flexibility.
3. Being a Knowledgeable Leader – Committing to lifelong learning and promoting academic leadership among educators.
4. Team-Based Learning – Encouraging collaborative learning strategies, communication, and shared educational objectives.
5. Seeking Educational Innovation – Integrating technology and new pedagogical strategies to enhance the learning process.

6. Empirical Findings

Research findings indicate that learning leadership has a statistically significant direct impact on school quality culture. The study by Apisit, et al. [36] analyzed a structural equation model and found a positive influence on educational quality (0.807, $p < .01$). Administrators' leadership was rated as highly suitable ($M = 4.75$, $SD = 0.32$), highly feasible ($M = 4.65$, $SD = 0.42$), and highly beneficial ($M = 4.79$, $SD = 0.28$). Additionally, the evaluation aligns with the framework from Stufflebeam (2001, cited in Sirichai [37] which emphasizes learning leadership's role in fostering an adaptable, high-quality educational environment.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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References

- [1] Basic Education Policy and Planning Office, *Thailand under the jurisdiction of the office of primary educational service area across 20 provinces*. Thailand: Ministry of Education, 2023.
- [2] A. Lieberman and L. Miller, *Teacher leadership*. Francisco: Jossey-Bass, 2004.
- [3] M. K. James and Z. P. Barry, *Learning leadership: The five fundamentals of becoming an exemplary leader*. USA: Wiley, 2016.

- [4] J. M. Kouzes and B. Z. Posner, *The leadership challenge: How to make extraordinary things happen in organizations*, 6th ed. USA: Wiley, 2017.
- [5] K. Leithwood, A. Harris, and D. Hopkins, "Seven strong claims about successful school leadership," *School Leadership and Management*, vol. 28, no. 1, pp. 27-42, 2008.
- [6] P. Hallinger and R. H. Heck, "Leadership for learning: Does collaborative leadership make a difference in school improvement?," *Educational Management Administration & Leadership*, vol. 38, no. 6, pp. 654-678, 2010.
- [7] M. Fullan, *Leading in a culture of change*. San Francisco: Jossey-Bass, 2001.
- [8] K. Somprat, *Leadership and learning leadership for school principals*. Khon Kaen: Klangnanawitaya Publishing, 2016.
- [9] C. Sirimas, "Guidelines for developing learning leadership of school administrators under the phichit primary educational service area office 1," Master's Thesis in Educational Administration, Graduate School, Naresuan University, 2023.
- [10] S. Kantapat and M. Sirimas, "Leadership and modern organizational development," *Journal of Modern Learning Development*, vol. 7, no. 2, pp. 498-509, 2022.
- [11] T. Somchai, "Learning leadership: Models of modern leadership," *Journal of Educational Administration, Srinakharinwirot University*, vol. 10, no. 9, pp. 1-6, 2013.
- [12] V. M. Robinson, C. A. Lloyd, and K. J. Rowe, "The impact of leadership on student outcomes: An analysis of the differential effects of leadership types," *Educational Administration Quarterly*, vol. 44, no. 5, pp. 635-674, 2008.
- [13] J. Blase and J. Blase, "Principals' instructional leadership and teacher development: Teachers' perspectives," *Educational Administration Quarterly*, vol. 35, no. 3, pp. 349-378, 1999.
- [14] W. Thongjurai and W. Jesadalak, "Influence of transformational leadership, strategic flexibility, knowledge management process capability, and change management capability on organizational effectiveness," *Veridian E-Journal, Silpakorn University*, vol. 8, no. 3, pp. 793-810, 2015.
- [15] J. W. Creswell and V. L. Plano Clark, *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage, 2011.
- [16] T. Runcharoen, *Professionalism in educational management and administration in the era of educational reform*. Bangkok, Thailand: Khaofang Publishing, 2007.
- [17] W. Jirawat, "Indicators of learning leadership of administrators under secondary educational service area office 25," *Journal of Education, Khon Kaen University*, vol. 13, no. 2, pp. 48-58, 2017.
- [18] S. Kanokorn, "Learning leadership of basic education administrators: A grounded theory study," *Journal of Social Science and Educational Research, Faculty of Education, Khon Kaen University*, vol. 12, no. 34, pp. 51-66, 2017.
- [19] S. Thammathatnanon, "Development of a program to enhance learning leadership of basic education school administrators," *Journal of Educational Research, Faculty of Education, Srinakharinwirot University*, vol. 13, no. 2, pp. 169-182, 2018.
- [20] N. Jaruwan and S. Sitthichai, "Components of transformational leadership of school administrators under the Nong Khai Primary Educational Service Area Office 2," in *Proceedings of the 22nd National Graduate Research Conference, Khon Kaen, Khon Kaen University*, 2021.
- [21] Y.-A. Patamawan, P. Suwimon, and S. Pongthorn, "A model for developing learning leadership of school administrators under the secondary educational service area office," *Santiprachasan Journal of MCU*, vol. 9, no. 7, pp. 3008-3021, 2021.
- [22] S. Kaisit Plerin, S. Sakdamduang, P. Pra-rasri, and S. Wasan, "Strategies for developing learning leadership of secondary school administrators," *Journal of Education and Intelligence*, vol. 4, no. 2, pp. 1-13, 2022.
- [23] S. Wanprakob, A. Prasertsin, and B. Khajornsind, "Development of learning leadership components and indicators for heads of learning groups in secondary schools under the Bangkok Secondary Educational Service Area Office," *Ratchaphrak Journal*, vol. 16, no. 46, pp. 217-233, 2022.
- [24] E. Antonacopoulou and R. Bento, *Methods of learning leadership taught and experiential*. Manchester: University of Manchester, 2003.
- [25] L. L. Christansen and P. Tronsmo, *Leadership for 21st century learning*. New York: OCED, 2013.
- [26] T. W. Greiter, *Leadership for 21st century learning*. New York: OCED, 2013.
- [27] A. Jolouch, M. Martinez, and J. Badia, *Leadership for 21st century learning*. New York: OCED Publishing, 2013.
- [28] G. Kohlreiser, *Learning leadership*. New York: IMD Real World Real Learning, 2013.
- [29] S. Owen, *Leadership for 21st century learning*. New York: OCED, 2013.
- [30] R. Salavert, *Approaches to learning leadership development in different School system: In Leadership for 21st Century Learning*. New York: OCED, 2013.
- [31] D. Tubin, *Approaches to learning leadership development in different school system: Leadership for 21st Century Learning*. New York: OCED, 2013.
- [32] B. Farham, "Strengthening our health system," *South African Medical Journal*, vol. 108, no. 12, pp. 1003-1015, 2018.
- [33] A. Prarasri, A. Chanawongse, and K. Tesaputa, "Developing a program to strengthen learning leadership of school principals under the secondary educational service areas," *International Education Studies*, vol. 11, no. 12, pp. 86-93, 2018.

- [34] J. Cockpim and K. Somprach, "Learning leadership of school administrators and teaching behavior affecting the effectiveness of teacher professional development: Hierarchical Linear Model," *Turkish Online Journal of Educational Technology*, vol. 18, no. 2, pp. 52-57, 2019.
- [35] P. J. Keeves, *Education research and methodology and measurement : An International Handbook*. Oxford: Pergamon Press, 1998.
- [36] K. Apisit, T. Daoruwan, and A. Wanlapa, "Structural equation model of learning leadership of administrators affecting quality culture in schools under khon kaen primary educational service area office 3," *Journal of Education, Chulalongkorn University*, vol. 50, no. 3, pp. 1-13, 2022.
- [37] K. Sirichai, *Evaluation theory*, 9th ed. Bangkok: Chulalongkorn University Press, 2019.