

**OPEN ACCESS**

Manuscript ID:  
ASH-2024-12048617

Volume: 12

Issue: 4

Month: April

Year: 2025

P-ISSN: 2321-788X

E-ISSN: 2582-0397

Received: 20.02.2025

Accepted: 28.03.2025

Published Online: 01.04.2025

**Citation:**

Khanphou, Nutdaya, et al. "The Development of a Leadership Model for Teachers in Learning Management in the Digital Era at Primary Schools under the Office of the Basic Education Commission in Chaiyaphum Province." *Shanlax International Journal of Arts, Science and Humanities*, vol. 12, no. 4, 2025, pp. 36-42.

**DOI:**

<https://doi.org/10.34293/sijash.v12i4.8617>




This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License

# The Development of a Leadership Model for Teachers in Learning Management in the Digital Era at Primary Schools under the Office of the Basic Education Commission in Chaiyaphum Province

**Nutdaya Khanphou**

*Chaiyaphum Rajabhat University, Thailand*

 <https://orcid.org/0009-0000-6588-0684>

**Pennapa Sukserm**

*Chaiyaphum Rajabhat University, Thailand*

**Terdsak Supandee**

*Chaiyaphum Rajabhat University, Thailand*

**Abstract**

*This research aimed to develop a leadership model for teachers in digital-era learning management at primary schools in Chaiyaphum Province under the Office of the Basic Education Commission. The study followed a research and development (R&D) methodology, beginning with a comprehensive review of concepts, principles, theories, and related research to establish the model's foundation. This literature review helped define key components essential for teacher leadership in digital learning environments. A panel of nine experts assessed the model's validity and suitability before its implementation to ensure its relevance and effectiveness. The model was tested with 30 teachers selected through purposive sampling. Assessment tools included pretests and posttests to measure knowledge development, along with a satisfaction questionnaire to evaluate teachers' perceptions of the model. The collected data were analyzed using statistical methods such as mean, percentage, and standard deviation to ensure accurate interpretation of results. The study findings revealed that the developed model consisted of five key components: (1) principles, (2) objectives, (3) content, (4) process, and (5) evaluation and assessment methods. Additionally, clear guidelines were provided to support the model's implementation in schools, ensuring ease of application for teachers. The expert panel rated the model's validity and suitability highly, confirming its effectiveness in fostering teacher leadership in digital-era learning management. After implementing the model, teachers demonstrated high competency levels across five essential areas: (1) technology-enhanced learning management, (2) proactive leadership, (3) teamwork, (4) creative learning, and (5) classroom research. The assessment results indicated that all competencies reached the highest level, suggesting significant improvements in teachers' leadership skills, instructional capabilities, and ability to integrate technology effectively. Furthermore, teachers expressed a high level of satisfaction with the leadership model, particularly regarding its practicality and effectiveness in enhancing their ability to manage learning in the digital era. These findings underscore the model's potential for widespread application in primary schools, contributing to long-term teacher development and improved student learning outcomes in an increasingly technology-driven educational landscape.*

**Keywords:** Development Model, Digital Era Teacher Leadership, Learning Management

**Introduction**

Modern teaching and learning have been influenced by advancements in information technology, requiring teachers to adapt in order to improve education quality in a competitive era. By integrating technology with content and teaching methods, innovations like online learning platforms such as MOOCs

help make education borderless and foster skills essential for the 21st century, particularly social and emotional skills (OECD). Additionally, Thailand's national strategy and educational development focus on fostering learning capabilities, workforce development, and adaptation to a rapidly changing world, based on principles of equality and sustainability in education. This also includes enhancing the development of teachers and education personnel through the use of technology and innovation in teaching (Khammanee).

According to the National Education Council's report on the results of the education reform evaluation in 2022, the findings from the PISA assessments revealed that Thailand's education quality, as reflected by the opportunity and potential for international competitiveness, still faces challenges. The 2022 PISA test focused on students' mathematical abilities and introduced a framework to reflect broad societal changes, emphasizing more critical thinking in mathematics, reading, and science. Thailand's scores were below the OECD average, indicating that the country has yet to prepare its youth for global competition. The analysis of the 2022 PISA results identified that 'teacher competence' played a significant role in improving Thai students' reading scores, with teacher feedback being the most influential factor. Following that, teaching methods where teachers took on leadership roles to adapt their instruction to suit students' needs and stimulate interest in reading showed positive results. Furthermore, the National Education Council acknowledged the inefficiency of traditional teacher development models, which often failed to meet teachers' actual needs due to a lack of participant engagement. As a solution, the council has implemented research and development of a participatory model for teacher and school leader development, specifically in small schools, to enhance their capabilities and improve the overall quality of teaching and administration.

According to the National Education Testing Institute (Public Organization), an analysis comparing O-NET average scores from 2017 to 2020 with external quality assessment results from the same period revealed a very low correlation between the two, suggesting that the quality

of education in Thailand remains suboptimal, particularly in primary education, which has been trending downward. These findings highlight the urgent need to improve educational management, foster educator development, and ensure ongoing monitoring of teaching and learning processes. Educational reform, especially in enhancing teacher professionalism, is crucial for creating an effective, standardized educational system capable of producing quality human resources for a learning society (Somprach). Teachers, who directly impact student development, must constantly adapt to changes, and their development is key to fostering a learning environment that encourages innovation and critical thinking (Panich). In Chaiyaphum province, home to 691 primary schools across three districts, schools face significant challenges in teacher development, particularly in adopting student-centered teaching approaches, while many teachers struggle with administrative burdens that hinder their professional growth. A report on student test results from Chaiyaphum primary schools revealed that fewer than 60% of Grade 6 students passed all subjects, underscoring the need for enhanced teacher development (Phonongkoon). Given the critical role of teacher leadership and continuous self-improvement in driving educational quality, developing teachers' leadership skills is essential for transforming education (Namchu et al.). Effective leadership in the classroom is necessary to help students develop problem-solving skills and critical thinking, essential for their future success. Therefore, enhancing teacher competencies in digital learning management is crucial for Chaiyaphum's primary schools, as it will help improve education quality, align with rapid societal changes, and contribute to a sustainable, impactful educational system. The objectives of this research are to study the components of teacher leadership in digital learning management, examine the current and desired conditions for leadership development, create and develop a model for teacher leadership, and assess the outcomes of applying this model in Chaiyaphum's primary schools. The study will provide valuable insights into enhancing teacher leadership in digital learning management, addressing gaps in teacher competencies and fostering student-

centered learning. By developing a model for leadership development, it will offer a structured approach to improving teaching quality and adapting to technological advancements. The research will also guide targeted professional development efforts, with potential to serve as a blueprint for other regions, ultimately empowering educators to lead transformative changes in education and better equip students for future success.

### Methodology

The researcher has reviewed literature on teacher leadership in learning management, emphasizing teachers as knowledgeable and skilled professionals who serve both as educators and managers in the classroom. Teacher competencies include core competencies such as achieving work performance, providing excellent service, self-development, teamwork, and professional ethics. Additionally, job-specific competencies include curriculum management and effective classroom management, with a focus on developing students through analysis, synthesis, and research. Key competencies for enhancing education quality include the ability to integrate technology into learning, proactive learning management, classroom research, creative learning management, and teamwork. Proficiency in these areas ensures effective teaching, fosters critical thinking, and supports the development of 21st-century skills such as problem-solving, collaboration, and communication.

### Research and Development

Research and Development (R&D) is a theory that involves a systematic, credible process of investigation and invention, with a clear goal of development. It uses specific techniques and methods aimed at solving problems or improving quality, known as 'innovation'. The development process must be supported by principles, reasoning, or theories to address issues or improve work. If the initial results are not successful, continuous improvements are made until satisfactory outcomes are achieved, which can then be shared to further enhance work efficiency (Green et al.).

### Steps of Research and Development (R&D)

Research and Development (R&D) is a systematic process of studying and exploring

knowledge according to established guidelines and procedures. It involves investigating new knowledge that helps researchers uncover facts and then use those facts or research findings to develop something new for widespread use. R&D also aims at improving operational systems to enhance efficiency (Leksingto; In-arn). In this research, the researcher outlines the R&D process, which is divided into four stages:

Stage	Process
1	Studying the Components of Development: In this phase, the focus is on identifying and analyzing the key components necessary for the development process.
2	Developing Indicators: This stage involves creating and refining the indicators that will guide the development of teacher leadership in learning management.
3	Analyzing the Validity of the Indicators: At this stage, the validity of the developed indicators is assessed in relation to the actual conditions through feedback from a group of experts (Know Group).
4	Creating a Development Model for Teacher Leadership in Learning Management: This final phase involves designing and developing a model for enhancing teacher leadership in learning management, which can then be applied in educational settings.

### Digital Learning Management

The transition from the 20th to the 21st century represents a structural change, creating a new set of opportunities, threats, conditions, and limitations. It is therefore essential to develop a new set of capabilities that are entirely different from the past. This is akin to preparing new seeds by nurturing Thai people to become 'well-rounded individuals of the 21st century', alongside the development of 'Thai 4.0 for a globalized world'. A complete Thai individual of the 21st century is one who possesses sharp intellect (Head), effective skills (Hand), strong health (Health), and a noble heart (Heart). This process begins with fostering growth for people by creating a society of opportunities to unlock their potential. When these individuals reach their full potential, they become the driving force for growth and will lead the country towards true prosperity, stability,

and sustainability. It can suggest that in the digital age, the CCPR model should be used in teaching to develop four key student characteristics: 1) the ability to analyze society, understand its origins, and make reasoned connections; 2) creativity, enabling students to apply and innovate existing knowledge; 3) productivity, focusing on outcomes, methods, and quality; and 4) responsibility, nurturing social awareness, ethics, and morality, presents the E-Teacher model, which outlines 9 essential skills for 21st-century educators, including experience, knowledge acquisition, effective use of technology for teaching, content selection, evaluation, engagement, and efficient use of technology identifies seven components of teacher leadership in Thailand 4.0, such as curriculum development, innovative learning, thinking skills, ethics, self-development, teamwork, and digital technology use. Studies by (Wongkruasorn; Saothong and Chanetiyoung) explore the competencies required for effective teaching in the digital age, covering areas like ICT skills, teaching development, and ethical behavior. In summary, digital learning management involves adopting flexible, innovative teaching methods where educators leverage technology effectively to enhance students' ability to use digital tools for efficient learning (Phalee).

### **Research Process**

The research process for developing teacher leadership in digital learning management for primary schools in Chaiyaphum Province consists of four phases. Phase 1 involves studying the components of teacher leadership in digital learning through document analysis and synthesizing research findings in a table (Step 1), followed by in-depth interviews to explore these components (Step 2). Phase 2 focuses on assessing the current and desired states of teacher leadership in digital learning, using the Modified Priority Needs Index (PNI modified) to evaluate the necessary leadership competencies (Step 3). In Phase 3, a model for developing teacher leadership in digital learning is created and validated through drafting (Step 4) and confirmation (Step 5). Finally, Phase 4 tests and evaluates the effectiveness of the developed model through implementation (Step 6) and assessment (Step 7).

### **Results**

The study on the components of developing teacher leadership in digital learning management for primary schools under the Office of the Basic Education Commission in Chaiyaphum Province identified five key competencies: 1) technology competency in learning management, 2) proactive leadership in learning management, 3) teamwork competency, 4) creative learning management competency, and 5) research competency in the classroom. These align with the core competencies which include performance results, service quality, self-development, teamwork, and professional ethics, as well as functional competencies related to curriculum management, student development, classroom management, research, teacher leadership, and community collaboration. The study also reflects the principles regarding teacher leadership as a characteristic and behavior that fosters collaborative learning within and outside the classroom without relying on school administration, creating a learning power that enhances the quality of education. Additionally, the study supports the finding who identified four key components for teacher leadership development in northeastern Thailand: curriculum development, learning management processes, teacher leadership for change, and appropriate personal qualities for teaching.

### **Discussion**

The current situation shows a high average in teacher leadership competencies, with the highest being creative learning management. This may reflect the ability of teachers in the digital era to adapt effectively to technological and societal changes, designing creative learning processes aligned with students' needs. This is supported by policies from the Office of the Basic Education Commission (OBEC), including training and the promotion of technology usage. Teachers in Chaiyaphum Province are also motivated to enhance their skills to meet students' expectations for interactive and creativity-driven learning. However, for comprehensive teacher leadership development, additional skills such as advanced technology use, systems thinking, and integrated learning management need to be improved, aligning with the research (Thaweechot

and Chalakbang). The desired state shows the highest average in the competency of using technology for learning management. This may stem from the recognition of technology's central role in 21st-century education, enhancing learning effectiveness and meeting students' digital-era needs. Technology enables engaging, flexible learning experiences, such as using AI for student progress analysis or AR/VR for immersive learning. The current generation of students expects technology-integrated, creativity-stimulating teaching. Teachers who effectively incorporate technology can meet these needs, further supported by education policies promoting digital tools, teacher training, and technology-focused curricula. These policies position technological competency as a key component of teacher leadership in the digital era, ensuring quality learning and preparing the Thai education system for sustainable technological advancements (Ditsuwan). Moreover, the integration of advanced technologies such as Artificial Intelligence (AI) and Augmented/Virtual Reality (AR/VR) plays a crucial role in promoting diverse learning experiences. These technologies enable learners to construct knowledge through inquiry-based exploration and collaborative engagement, fostering meaningful and sustainable learning outcomes. The use of technology enhances accessibility to educational resources for both teachers and learners, ensuring flexibility in learning and effectively catering to individual needs. More importantly, technology contributes to the development of essential 21st-century skills, including critical thinking, problem-solving, and teamwork, which are vital for adapting to the rapidly evolving society. In the era of Digital Disruption, teachers should strengthen their technological competencies and effectively incorporate digital tools into their teaching practices to align with the shifting educational landscape. Therefore, promoting the integration of technology at all levels of the education system is imperative to drive sustainable development and adequately prepare teachers and learners for future digital challenges. Another key finding is that resource limitations and teachers' varying digital competencies present significant obstacles to the adoption of digital-era leadership in learning management. Some teachers may resist

technological integration due to familiarity with traditional teaching methods and concerns about increased workloads. Additionally, inadequate access to essential infrastructure and technological tools in some schools further hampers the process. The disparity in teachers' digital skills also results in uneven implementation of technology in education. To address these challenges, a systematic approach is required, emphasizing the cultivation of a learning culture, differentiated professional development, adequate resource allocation, and mentorship networks for technology support. By overcoming these barriers, teachers can confidently leverage technology as a powerful tool to enhance learning experiences, meet 21st-century students' needs, and drive educational progress in alignment with global digital transformations.

The analysis of the teachers' development needs using the Modified Priority Needs Index (PNI Modified) indicates that the highest priority is the competency of using technology for learning management. This reflects the urgency of developing teachers' ability to integrate technology effectively in response to rapid technological advancements, students' expectations for modern learning, and education policies promoting digital tools. The COVID-19 pandemic, emphasizing online and blended learning, has further exposed skill gaps, highlighting the critical need for teachers to develop technology-based competencies to meet digital-era demands. The high PNI Modified score reflects a strong recognition of the importance of developing teachers' technological competencies to align with students' needs, educational strategies, and the global digital transformation.

The developed model for enhancing teacher leadership in digital-era learning management for primary schools in Chaiyaphum Province includes six components: 1) principles, 2) objectives, 3) content, 4) processes, 5) evaluation, and 6) implementation guidelines. The overall appropriateness of the model was rated very high. This model, designed based on theories that focus on the development of teachers' knowledge, skills, and behaviors, involves workshops, hands-on practice, and the creation of professional learning communities (PLC) over 120 hours. It aims to enhance competencies in five

key areas: technology usage, proactive learning management, classroom research, creative learning management, and teamwork. Evaluation methods include tests, observations, and PLC exchanges. The model is found to be highly suitable, feasible, beneficial, and accurate, reflecting a well-rounded design that meets teachers' needs in the digital era. It emphasizes diverse development processes and is adaptable to different school contexts, with clear participation and evaluation criteria. This approach successfully aligns with educational policies and the needs of teachers, ensuring sustainable and effective teacher leadership development (Piriyawutigornudom; Ryan and Cox).

The study on the use of the teacher leadership development model for digital-era learning management in primary schools in Chaiyaphum Province, divided into three phases, revealed significant findings. In Phase 1, the training workshops, consisting of three steps - pre-test, development activities, and post-test - showed that teachers' competencies in using technology, proactive learning management, classroom research, creative learning management, and teamwork were highly rated. The post-test scores were higher than pre-test scores, indicating the effectiveness of the training in enhancing teacher performance. In Phase 2, practical implementation in schools demonstrated that teachers had the highest performance in creative learning management, with the lowest performance in classroom research, reflecting the complexity and time required to develop such skills. In Phase 3, the overall satisfaction of teachers was very high, particularly in the areas of training, trainers, and the knowledge gained. The high satisfaction was attributed to the practical and relevant nature of the training activities, the effective role of the trainers, and the clear and applicable content, which met teachers' needs and expectations (Jansrahang et al.).

## Conclusion

The study on developing teacher leadership in digital-era learning management for primary schools in Chaiyaphum Province revealed key competencies in five areas: technology use, proactive leadership, teamwork, creative learning management, and classroom research. These align with the Office of the

Basic Education Commission's core competencies and teacher leadership principles from both national policies and research. The findings show that teachers excel in creative learning management, reflecting their ability to adapt to digital education trends, but also highlight the need to further develop advanced technological competencies and systems thinking. The developed model for enhancing teacher leadership, consisting of six components, was highly rated for its suitability and effectiveness, particularly through hands-on workshops and professional learning communities. The evaluation of the model in three phases demonstrated positive results: improved post-test scores, high performance in practical implementation, and strong teacher satisfaction, underscoring the model's relevance and alignment with educational policies. These findings emphasize the critical role of technology in modern education and the ongoing need for teacher development to meet the evolving demands of the digital era.

## References

- Ditsuwan, S. "Strategy of Triam Udom Suksa Pattanakarn Suvarnabhumi to be Leading Educational Institution for Sustainable Development." *Journal of Roi Kaensarn Academi*, vol. 8, no. 2, 2023, pp. 19-42.
- Green, Soisuda, et al. "A Model for Developing Teacher Leadership on Instructional Management in Secondary Schools under the Regional Education Office No. 11." *Journal of Roi Et Rajabhat University*, vol. 15, no. 2, 2021.
- Guskey, T. R. "The Effects of Change in Instructional Effectiveness on the Relationship of Teacher Expectations and Student Achievement." *The Journal of Educational Research*, vol. 75, no. 6, 1982, pp. 345-49.
- In-arn, Sompang. *A Model for Developing Leadership of Deputy Directors of Secondary Schools in NorthEast*. Sakon Nakhon Rajabhat University, 2021.
- Jansrahang, Sudarat, et al. "The Development Learning Activities on Concentration by Using Polya's Problem-Solving Process with Multimedia for Mathayomsuksa 4 Students at

- Phadungnaree School." *Journal of Research and Development Institute, Rajabhat Maha Sarakham University*, vol. 10, no. 3, 2023.
- Juntrakote, Phornma, et al. "Digital Leadership Components of Large Secondary School Administrators under the Office of the Basic Education Commission." *The Journal of Research and Academics*, vol. 7, no. 2, 2024, pp. 163-80.
- Khammanee, Thitsana. *Teaching Science: Knowledge for Organizing Effective Learning Processes*. Chulalongkorn University Press, 2016.
- Leksingto, Nattayaporn. *A Model for Developing Digital Era Leadership of Primary School Teachers in the Northeast Region* Sakon Nakhon Rajabhat University, 2021.
- Namchu, Charoen, et al. "Learning Leadership of School Administrators under the Bueng Kan Primary Educational Service Area Office." *Journal of Research and Development Institute, Rajabhat Maha Sarakham University*, vol. 9, no. 1, 2022, pp. 429-42.
- OECD. *21st-Century Readers: Developing Literacy Skills in a Digital World*. OECD Publishing, 2021.
- Panich, W. *Learning Path for Students in the 21st Century*. Sodsri-Saridwong Foundation, 2013.
- Peanchana, Suwit, et al. "The Elements of Development of Effective Team Building for Educational Opportunity Expansion Schools under Primary Educational Service Area Offices in the Northeast." *Journal of Social Science and Cultural*, vol. 7, no. 10, 2023, pp. 265-77.
- Phalee, Mattika. *A Model for Developing Digital-Era Leadership of Teachers in Learning Management in Primary Schools under the Regional Education Office No. 11*. Sakon Nakhon Rajabhat University, 2023.
- Phonongkoon, Yuttakan. *Developing Guidelines for Building a Team of Teachers for Educational Institutions under the Office of Chaiphaphum Primary Educational Service Area 3*. Mahasarakham University, 2022.
- Piriyawutigorn-udom, Kanokporn. *Compliance Enhancement in Educational Organization*. Silpakorn University, 2015.
- Promsin, Rattiya. *A Model for Developing Teacher Leadership in Primary Schools under the Office of Education Region 11*. Sakon Nakhon Rajabhat University, 2016.
- Ryan, Sarah, and Joshua D. Cox. *Guide to the Competency-based Learning Survey for Students*. Institute of Education Sciences, U.S. Department of Education, 2016.
- Saonthong, Saisawart, and Den Chanetiyoung. "The Strategy on Teacher Competency Development in Basic Education Schools According to Education 4.0." *Journal of MCU Nakhondhat*, vol. 6, no. 9, 2019.
- Satitpong, Phuchit. "MOOC MODEL: Innovative Approach of Teaching in Thailand 4.0." *Academic Journal of Thailand National Sport University*, vol. 13, no. 1, 2021, pp. 234-35.
- Somprach, Kanokorn. "Learning Leadership of School Principals: A Grounded Theory Study." *Social Sciences Research and Academic Journal*, vol. 12, no. 34, 2016, pp. 51-66.
- Thaweechot, J., and W. Chalakbang. "Instructional Leadership of Teachers." *Journal of Roi Et Rajabhat University*, vol. 12, no. 1, 2018, pp. 243-50.
- Wongkruasorn, Piyanat. *Development Model of Teacher Leadership on Instructional Management in Thailand 4.0 Era in Primary Schools under the Regional Education Office No.11*. Sakon Nakhon Rajabhat University, 2019.

#### Author Details

**Nutdaya Khanphou**, Chaiphaphum Rajabhat University, Thailand, **Email ID:** nutdaya2525@gmail.com

**Pennapa Sukserm**, Chaiphaphum Rajabhat University, Thailand

**Terdsak Supandee**, Chaiphaphum Rajabhat University, Thailand