

Supervision Model Through Coaching and Mentoring for Enhancing Active Learning Instruction Competency of Elementary Teachers Under Office of the Basic Education Commission

Rattiya Phumsaidorn¹ & Suwat Julsuwan¹

¹ Faculty of Education, Mahasarakham University, Mahasarakham, Thailand

Correspondence: Suwat Julsuwan, Faculty of Education, Mahasarakham University, Mahasarakham, Thailand.

Received: January 28, 2024

Accepted: March 16, 2024

Online Published: June 23, 2024

doi:10.5539/jel.v13n5p34

URL: <https://doi.org/10.5539/jel.v13n5p34>

Abstract

The study aimed to 1. investigate the components and indicators of active learning instruction competency among elementary school teachers, 2. examine the current state, desired state, and necessary requirements of active learning instruction competency among elementary school teachers, and 3. develop an educational supervision model based on instructional coaching and mentoring principles, aimed at enhancing active learning instruction competency among elementary school teachers under the jurisdiction of the Office of the Basic Education Commission. The study was divided into three phases: Phase 1 examine the components and indicators of active learning instruction competency. The target group comprised 7 qualified individuals selected through purposive sampling, with suitability assessed using an appropriateness assessment questionnaire. Phase 2 the current state, desired state, and necessary requirements of active learning instruction competency among elementary school teachers are investigated. The sample group consisted of 384 elementary school teachers selected through multi-stage random sampling, employing a proportional stratified sampling technique. A questionnaire with a 5-point Likert scale was utilized for data collection. Phase 3 the development of the supervision model involved input from a group of 9 qualified individuals selected through purposive sampling. These individuals were chosen based on their expertise and relevance to the research objectives. Research tools included interviews and assessments. The research findings revealed that: 1. there were 4 components and 24 indicators of active learning instruction competency among elementary school teachers. These components are categorized as follows: 1) Designing of active learning management: comprising 6 indicators, 2) Organization of learning activities focusing on higher-order thinking skills and practical application: consisting of 4 indicators, 3) Utilization of educational media, innovations, educational technology, and learning resources: encompassing 6 indicators, and 4) Measurement and evaluation based on actual conditions: including 8 indicators. Overall, the competency level is rated as the highest. 2. The current state was rated as moderate, while the desired state was rated as the highest. Upon disaggregating the components of the supervision model, it was found that the component with the highest level of necessity was Component 2, which pertains to organizing learning activities emphasizing higher-order thinking skills and practical application. 3. The results of developing the educational supervision model based on instructional coaching and mentoring principles to enhance active learning management competency among elementary school teachers, under the jurisdiction of the Office of the Basic Education Commission, revealed that the supervision model consisted of the following steps: 1) Planning, 2) Observation, 3) Reflection, and 4) Evaluation. These steps were deemed highly appropriate and feasible at the highest level.

Keywords: supervision model, coaching and mentoring, active learning instruction competency, competency of elementary teachers

1. Introduction

Elementary education is a fundamental level within the education system, occurring during the early stages of compulsory education. Its aim is to develop a well-rounded quality of life encompassing physical, intellectual, emotional, social, and cultural aspects (Ministry of Education, 2009). Elementary education emphasizes holistic learning management, connecting subject matter in the curriculum to accommodate the diverse interests and needs of learners. Furthermore, the 12th edition of the Ministry of Education's educational development plan (2017–2021) aims to ensure that learners at each educational level receive development according to their individual potential, desirable characteristics, significant knowledge, and learning skills in the 21st century, including life

skills, knowledge, abilities, and competencies that meet the demands of the labor market and national development. Schools are expected to have efficient management systems with international quality and standards, capable of providing services that meet the needs of local, national, and regional contexts (Ministry of Education, 2016).

The educational reform process, responding to changes in the 21st century, mandates a shift in the role of “teachers” to become educators of the new era. This involves developing lifelong learning systems and fostering inquiry-based learning that emphasizes hands-on practice, critical reflection, and application, focusing on teaching methods that enhance life skills. Teachers must adapt to this new role and manage teaching to promote learners’ future skills in the 21st century. They must continuously improve themselves and promote learners’ learning and innovation skills, life and work skills, and information, media, and technology literacy. An essential aspect of the new teacher’s learning management is the adoption of Active Learning, which engages learners in the learning process, stimulates higher-order thinking, and involves analysis, evaluation, and creativity rather than passive listening. Learners must read, write, question, discuss collectively, and engage in practical activities.

The quality of learners is considered the keystone of educational administration, with all stakeholders in the education sector aiming to prioritize it as the ultimate goal of their work. However, according to the assessment report conducted by the OECD, which evaluates learners internationally every three years, Thailand’s educational quality compared to 70 participating countries in the PISA 2015 program revealed that the country’s performance in science ranked 54th, mathematics ranked 54th, and reading skills ranked 57th. These scores fall below the average standard. Additionally, from the monitoring report of educational activities conducted by the Office of the Basic Education Commission in Kalasin Primary Educational Service Area Office 1 during the years 2018–2020, it is evident that the desired success has not been achieved. Specifically, students’ academic performance falls short of the predetermined targets. Several factors contribute to this issue, including: 1) Teacher-related factors: Teachers predominantly utilize traditional teaching methods such as lectures, which do not prioritize student-centered learning. Students lack hands-on practice and struggle to apply their knowledge in real-life situations. Furthermore, learning activities are not tailored to students’ abilities and interests. 2) Educational supervision: Challenges include inadequate preparation for educational supervision, insufficient personnel responsible for supervision, and a lack of knowledge, understanding, and skills among the supervisory committee members. This leads to ineffective educational planning as it fails to align with the needs of the supervised teachers, resulting in ineffective supervision. 3) Implementation of educational supervision: Supervision plans are not executed as planned, further exacerbating the issue (Office of the Basic Education Commission, Kalasin Primary Educational Service Area Office 1, 2021).

The aforementioned issues highlight the primary mission of teachers to organize high-quality learning activities that align with educational goals to promote student excellence. Successful development of student quality hinges on the effective implementation of processes such as teaching management, administration, and supervision. Collaboration and support are essential components for achieving this goal. Educational supervision, in particular, is a crucial process that fosters the development and improvement of teaching practices. Its aim is to create efficient learning management that positively impacts student quality (Glickman et al., 2009). Furthermore, findings from research conducted by Siridhrungsri (2016) align with the findings of McKinsey (2007) “What Works in Education” report presented to the Organization for Economic Co-operation and Development (OECD). Successful educational management in countries that excel in nurturing talented students is attributed to various teacher-related factors, including high teacher quality, continuous teacher development, and equitable improvement of teaching practices for all students. Teachers play a pivotal role in influencing the quality of education and learners amid the changing global societal landscape. Therefore, educational supervision is crucial as it involves providing guidance and developing teachers’ effectiveness in their roles. Teaching supervision is a collaborative process between supervisors and teachers, with the outcomes directly impacting the quality of education and learners. Consequently, the development of students’ learning capabilities at the primary education level should focus on changing teachers’ roles to that of mentors and fostering active learning activities. Supervision of teaching should adopt appropriate formats to support teachers in systematic and continuous development, incorporating coaching and mentoring methods into the educational supervision process in schools (Laoriandee, 2013).

The coaching approach to professional development involves collaborative work between two or more individuals, with one party being the coach and the other the coachee. Together, they engage in reflective dialogue on education-related topics, self-improvement, teaching practices, and student learning to enhance work efficiency and effectiveness. For example, peer coaching entails two teacher peers pairing up or forming groups to enhance or develop teaching practices. This approach involves observing teaching, providing feedback to one another, and implementing suitable teaching methods or formats to improve student learning outcomes. Peer coaching is facilitated by the shared interest and willingness of teacher peers to collaborate on enhancing teaching practices

Laoriandee (2013), Okey, James and Wrigley (2007), McManus (2009), Tomson and Smith (2009). Additionally, mentoring is another form of professional development that involves providing guidance and advice to improve teaching practices, resulting in increased work efficiency for teachers Okey, James & Wrigley (2007). This approach aligns with the research conducted by Kruekam-ai and Kodsiri (2018), Upphinjai and others (2019), and Puntalee (2019) who studied the development of mentoring systems and processes using coaching and mentoring methods to enhance the teaching management abilities of teachers and educational personnel.

Kalasin Primary Educational Service Area Office 1 plays a crucial role in promoting and supporting schools in developing educational management to ensure that students meet both national and international standards. As a supervisory body, it provides guidance, consultation, promotion, and coordination to enable teachers in its jurisdiction to efficiently perform their duties. Additionally, it supervises and monitors school operations to facilitate positive outcomes in student learning quality and educational activity management aligned with school needs and standards. Therefore, the researchers are interested in studying the model of educational supervision based on coaching and mentoring concepts to enhance the proactive learning management competence of elementary school teachers under the supervision of the Basic Education Commission, aiming to meet the standards. Due to the District Education Office's supervision report regarding school supervision lacking connection with student quality improvement and lacking consistency and sustainability, the researchers aim to develop a supervision model that is clear, trustworthy, and supportive to teachers in line with the objectives and goals of the basic education core curriculum, BE 2551, to continually enhance student learning quality.

2. Research Objectives

- 1) to investigate the components and indicators of active learning instruction competency among elementary school teachers under the Office of the Basic Education Commission of Thailand
- 2) to examine the current state, desired state, and necessary requirements of active learning instruction competency among elementary school teachers under the Office of the Basic Education Commission of Thailand
- 3) to develop an educational supervision model based on instructional coaching and mentoring principles, aimed at enhancing active learning instruction competency among elementary school teachers under the Office of the Basic Education Commission of Thailand

3. Scope of the Research

This research aimed to study and develop a model of educational supervision based on coaching and mentoring concepts to enhance the active learning management competence of elementary school teachers under the supervision of the Basic Education Commission. The research scope includes the following aspects:

3.1 The Content Scope of the Research

- 1) Components and Indicators of Elementary School Teachers' Active Learning Management Competence consist of 4 components and 24 indicators categorized as follows:

Designing active learning management, there are 6 indicators: Studying the core curriculum of basic education, BE 2551, school curriculum, and curriculum structure. Analyzing and defining learning objectives or goals. Designing teaching and active learning management plans with student involvement in the design of learning. Designing and developing various assessment tools. Selecting diverse learning media and sources. Providing feedback.

Organizing learning activities that emphasize high-level thinking skills and practical application, there are 4 indicators: Organizing learning activities that emphasize critical thinking. Organizing learning activities that emphasize problem-solving skills. Organizing learning activities that emphasize analytical thinking. Organizing learning activities that emphasize synthesis thinking.

Utilizing innovative educational media, technology, and learning resources, there are 6 indicators: Using media, innovation, educational technology, and learning sources directly according to the learning objectives, content, and learning activities. Selecting contemporary media, innovative technology, and learning sources for diverse learning management. Developing, designing, and creating innovative technology media to promote student learning and engage students in producing and using teaching media. Using computers to develop technology and information to facilitate student learning. Seeking diverse learning sources according to the context to promote student learning. Providing consultation, knowledge, advice, and support in using innovative media, educational technology, and student learning sources.

Assessing and evaluating learning outcomes based on real-life conditions, there are 8 indicators: Designing various assessments to reflect teaching and learning behaviors. Assessing high-level thinking skills in students' work.

Assessing realistically in tandem with teaching and learning. Comprehensive assessment aligned with real-life situations. Assessing students' development. Evaluating from students presented works. Criteria for assessing students' works involving teachers, students, and relevant parties. Assessing students' performance in practical tasks and creative work.

2) The format of educational counseling according to the principles of coaching and mentoring to enhance the active learning management competence of elementary school teachers under the Basic Education Commission Office found that the educational counseling format consists of the following steps: Planning, Observation, Reflection, and Evaluation.

3.2 The Research Conceptual Framework

The components of the active learning management competence of elementary teachers under the Basic Education Commission Office were synthesized by the researcher from relevant documents and research works related to the concept by (Meyers & Jones, 1993; Malisorn, 2020; Office of the Basic Education Commission, 2010; Office of the Civil Service Commission, 2009; Chaimongkol, 2013; Phusittarattanawalee & Jinnge, 2017; Chalerm Sri, 2020).

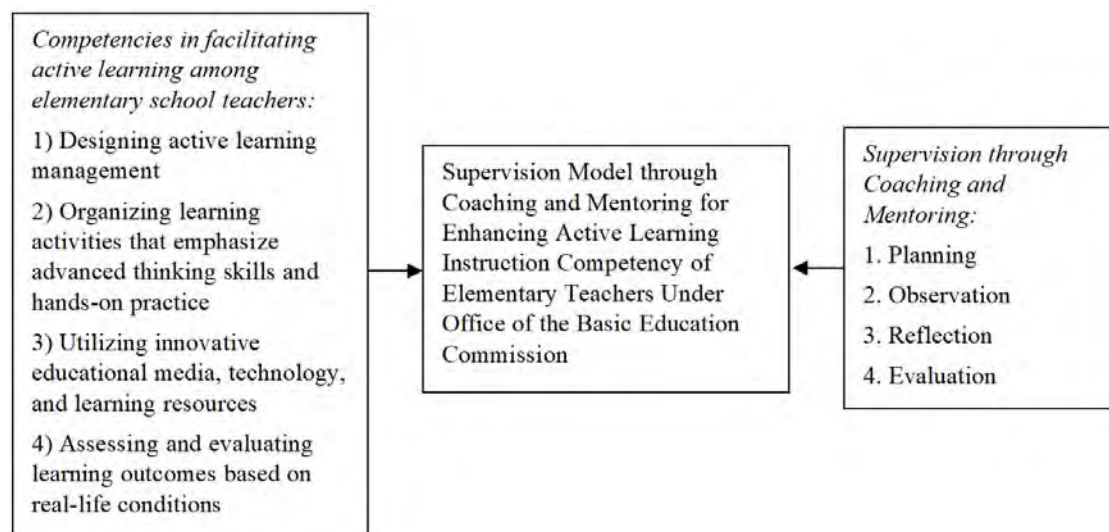


Figure 1. The research conceptual framework

4. Research Methodology

The study is conducted through the use of research and development methods (R & D). The study is divided into three phases as follows:

4.1 Phase 1: Examine the Components and Indicators of Active Learning Instruction Competency Among Elementary School Teachers under the Office of the Basic Education Commission of Thailand

1) The group of informants consisted of 7 qualified individuals who are experts in the field related to the competencies of promoting active learning management among elementary school teachers under the jurisdiction of the Office of the Basic Education Commission. They were selected through purposive sampling.

2) The research instrument used was an assessment questionnaire for the suitability of components and indicators of the competencies of promoting active learning management among elementary school teachers under the jurisdiction of the Office of the Basic Education Commission.

3) Data collection was conducted by sending the assessment questionnaire regarding the suitability of components and indicators of the competencies of promoting active learning management among elementary school teachers under the jurisdiction of the Office of the Basic Education Commission, along with a letter seeking cooperation in responding to the questionnaire from the Faculty of Education, Mahasarakham University, to the qualified individuals. This aimed to explain the objectives and relevant details.

4) Data analysis included content analysis, mean values, and standard deviations.

4.2 Phase 2: Examine the Current State, Desired State, and Necessary Requirements of Active Learning Instruction Competency Among Elementary School Teachers Under the Office of the Basic Education Commission of Thailand

1) The sample group consisted of 384 elementary school teachers from 61 educational service area offices under the authority of the Office of the Basic Education Commission, in the northeastern region of Thailand. The sample size was determined using the Krejcie and Morgan table and then subjected to multi-stage sampling, divided geographically into 12 provinces in the Upper Northeast and 8 provinces in the Lower Northeast. A random simple sampling method was used to select 6 provinces in the Upper Northeast (Khon Kaen, Roi Et, Mahasarakham, Mukdahan, Loei, and Nakhon Phanom) and 4 provinces in the Lower Northeast (Nakhon Ratchasima, Chaiyaphum, Surin, and Ubon Ratchathani), followed by random selection of schools according to the proportions.

2) The research instrument used was a questionnaire assessing the current status and desired state of competencies for promoting active learning management among elementary school teachers under the authority of the Office of the Basic Education Commission. It employed a Likert scale with 5 rating levels and consisted of two parts:

Part 1: A checklist format collecting demographic data of the respondents.

Part 2: A questionnaire assessing the current status and desired state of competencies for promoting active learning management among elementary school teachers under the jurisdiction of the Office of the Basic Education Commission.

The questionnaire underwent modification and revision by 5 experts to ensure alignment between the questions and the research objectives. The resulting 72-item questionnaire achieved an Item-Objective Congruence (IOC) value ranging from 0.80 to 1.00.

3) Data collection involved the researcher distributing questionnaires on the current state and desired state regarding the competencies for promoting active learning management among elementary school teachers under the authority of the Office of the Basic Education Commission. Permission was sought from the Faculty of Education at Mahasarakham University to use the questionnaire, and schools were approached to facilitate questionnaire distribution and data collection. The collected data from the questionnaire responses of the sample group were analyzed using mean and standard deviation. The researcher established criteria for interpreting the results as follows (adapted from Srisa-ard, 2010):

4.51–5.00: Indicates the highest level of current status/desired conditions.

3.51–4.50: Indicates a high level of current status/desired conditions.

2.51–3.50: Indicates a moderate level of current status/desired conditions.

1.51–2.50: Indicates a low level of current status/desired conditions.

1.00–1.50: Indicates the lowest level of current status/desired conditions.

4) Data analysis included calculating the mean and standard deviation and determining the priority needs based on the Modified Priority Needs Index ($PNI_{Modified}$). The $PNI_{Modified}$ was calculated using the formula: $PNI_{Modified} = (I - D) / D$, where:

$PNI_{Modified}$: Represents the index for ranking the priority needs.

I: Refers to the mean of the current status.

D: Refers to the mean of the desired conditions.

The Modified Priority Needs Index ($PNI_{Modified}$) determined the ranking of priority needs based on the current status, desired conditions, and necessary requirements, utilizing a ranking methodology developed by Wongwanit (2015).

4.3 Phase 3: Develop the Supervision Model Through Coaching and Mentoring to Enhance Active Learning Instruction Competency of Elementary Teachers Under the Office of the Basic Education Commission of Thailand

This phase involved synthesizing data from Phase 1 and 2 to develop and refine the educational supervision model based on instructional coaching and mentoring principles aimed at enhancing the active learning management competencies of elementary school teachers under the Office of the Basic Education Commission in Thailand. Additionally, it examined the evaluation results to assess the alignment, suitability, and feasibility of the supervision model draft revealed the following:

1) Draft the educational supervision model based on instructional coaching and mentoring principles to enhance the active learning management competencies of elementary school teachers under the Office of the Basic Education Commission in Thailand. This process comprises the following steps:

Target Group: This included 9 experts involved in assessing the alignment, suitability, and feasibility of the model through expert seminars (connoisseurship).

Research Tools: These consisted of: 1) Seminar record forms and 2) Validation and verification forms for the drafted supervision model, focusing on suitability and feasibility. This document is developed in two dimensions: suitability and feasibility, with one copy produced. The quality assurance process involved the following steps:

Reviewing theoretical concepts and related research works to guide the assessment tool development.

Formulating questions aligned with the assessment objectives and ensuring completeness of content and language use.

Submitting the validation and verification forms for the supervision model to the thesis advisor for review and feedback. The advisor's recommendations are then incorporated into the model.

Revising the model based on assessment results and feedback to enhance its suitability.

Developing a comprehensive user manual for the finalized model.

Data Analysis: Content analysis is utilized for qualitative data, while quantitative data are analyzed using mean values and standard deviations.

2) Evaluate the suitability and feasibility of the developed supervision model based on instructional coaching and mentoring principles, expert seminars (Connoisseurship) were conducted. The aim was to have experts assess the adequacy and viability of the model in terms of its structure, components, process steps, activities, and application. The process involved the following steps:

Target Group: The target group consisted of 9 experts who participated in the seminars to assess the alignment, suitability, and feasibility of the supervision model.

Research Tools: The research tools comprised: Seminar recording forms and Validation and verification forms for the developed educational supervision model based on instructional coaching and mentoring principles. This document covered two dimensions: suitability and feasibility, with one copy produced. The quality assurance process involved the following steps:

Reviewing theoretical concepts and related research works to guide the development of assessment tools.

Formulating questions aligned with the assessment objectives and ensuring completeness of content and language use.

Submitting the validation and verification forms for the supervision model to the thesis advisor for review and feedback. The advisor's recommendations were then incorporated into the model.

Revising the model based on assessment results and feedback to enhance its suitability.

Developing a comprehensive user manual for the finalized model.

Data Analysis: Content analysis was utilized for qualitative data, while quantitative data were analyzed using mean values and standard deviations.

3) Develop the Complete Supervision Model involved the following steps:

Verification of the Accuracy and Completeness of the Educational Supervision Model based on Instructional Coaching and Mentoring Principles: Conduct a thorough review of the accuracy and completeness of the developed educational supervision model based on instructional coaching and mentoring principles under the Office of the Basic Education Commission of Thailand. This includes presenting the findings from the expert seminars (Connoisseurship), highlighting areas for improvement, observations made by experts, and any significant feedback received. Subsequently, refine and revise the model before presenting it to the thesis advisor for evaluation and recommendations.

Revision and Preparation of the Complete Documentation for the Educational Supervision Model based on Instructional Coaching and Mentoring Principles: Modify and develop the documentation for the educational supervision model based on instructional coaching and mentoring principles under the Office of the Basic Education Commission of Thailand, as per the recommendations received from the thesis advisor. Ensure that the finalized model is prepared before conducting pilot tests to study its effectiveness.

5. Research Results

Phase 1: Examine the components and indicators of active learning instruction competency among elementary school teachers under the Office of the Basic Education Commission of Thailand

Through a thorough literature review, the researcher examined pertinent documents, concepts, and theories, particularly focusing on the educational supervision model rooted in instructional coaching and mentoring principles. This synthesis resulted in the identification of 4 components and 24 indicators pertaining to elementary school teachers' competency in fostering active learning, under the purview of the Office of the Basic Education Commission.

Table 1. The components and indicators of active learning instruction competency among elementary school teachers

Components (4 components)	Indicators (24 Indicators)
1) Designing active learning management	<ol style="list-style-type: none"> 1. Studying the core curriculum of basic education, BE 2551, school curriculum, and curriculum structure 2. Analyzing and defining learning objectives or goals 3. Designing teaching and active learning management plans with student involvement in the design of learning 4. Designing and developing various assessment tools 5. Selecting diverse learning media and sources 6. Providing feedback
2) Organizing learning activities that emphasize advanced thinking skills and hands-on practice	<ol style="list-style-type: none"> 1. Organizing learning activities that emphasize critical thinking 2. Organizing learning activities that emphasize problem-solving skills 3. Organizing learning activities that emphasize analytical thinking 4. Organizing learning activities that emphasize synthesis thinking
3) Utilizing innovative educational media, technology, and learning resources	<ol style="list-style-type: none"> 1. Using media, innovation, educational technology, and learning sources directly according to the learning objectives, content, and learning activities 2. Selecting contemporary media, innovative technology, and learning sources for diverse learning management 3. Developing, designing, and creating innovative technology media to promote student learning and engage students in producing and using teaching media 4. Using computers to develop technology and information to facilitate student learning 5. Seeking diverse learning sources according to the context to promote student learning 6. Providing consultation, knowledge, advice, and support in using innovative media, educational technology, and student learning sources
4) Assessing and evaluating learning outcomes based on real-life conditions	<ol style="list-style-type: none"> 1. Designing various assessments to reflect teaching and learning behaviors. 2. Assessing high-level thinking skills in students' work 3. Assessing realistically in tandem with teaching and learning 4. Comprehensive assessment aligned with real-life situations 5. Assessing students' development 6. Evaluating from students presented works 7. Criteria for assessing students' works involving teachers, students, and relevant parties 8. Assessing students' performance in practical tasks and creative work

According to Table 1, there are 4 components and 24 indicators of active learning instruction competency of elementary teachers under the Office of the Basic Education Commission of Thailand.

Table 2. The components and indicators of active learning instruction competency of elementary teachers under the Office of the Basic Education Commission of Thailand

Indicators	\bar{X}	S.D.	Level of appropriateness
1) Designing active learning management	4.80	0.37	Highest
1.1 Studying the core curriculum of basic education, BE 2551, school curriculum, and curriculum structure	4.81	0.42	Highest
1.2 Analyzing and defining learning objectives or goals	4.86	0.38	Highest
1.3 Designing teaching and active learning management plans with student involvement in the design of learning	5.00	0.00	Highest
1.4 Designing and developing various assessment tools	4.81	0.42	Highest
1.5 Selecting diverse learning media and sources	4.71	0.49	Highest
1.6 Providing feedback	4.57	0.53	Highest
2) Organizing learning activities that emphasize advanced thinking skills and hands-on practice	4.57	0.53	Highest
2.1 Organizing learning activities that emphasize critical thinking	4.57	0.53	Highest
2.2 Organizing learning activities that emphasize problem-solving skills.	4.57	0.53	Highest
2.3 Organizing learning activities that emphasize analytical thinking.	4.57	0.53	Highest
2.4 Organizing learning activities that emphasize synthesis thinking	4.57	0.53	Highest
3) Utilizing innovative educational media, technology, and learning resources	4.64	0.55	Highest
3.1 Using media, innovation, educational technology, and learning sources directly according to the learning objectives, content, and learning activities	4.86	0.38	Highest
3.2 Selecting contemporary media, innovative technology, and learning sources for diverse learning management	4.57	0.79	Highest
3.3 Developing, designing, and creating innovative technology media to promote student learning and engage students in producing and using teaching media	4.57	0.54	Highest
3.4 Using computers to develop technology and information to facilitate student learning	4.71	0.49	Highest
3.5 Seeking diverse learning sources according to the context to promote student learning	4.57	0.53	Highest
3.6 Providing consultation, knowledge, advice, and support in using innovative media, educational technology, and student learning sources	4.57	0.38	Highest
4) Assessing and evaluating learning outcomes based on real-life conditions	4.52	0.53	Highest
4.1 Designing various assessments to reflect teaching and learning behaviors.	4.86	0.53	Highest
4.2 Assessing high-level thinking skills in students' work.	4.43	0.53	High
4.3 Assessing realistically in tandem with teaching and learning.	4.57	0.53	Highest
4.4 Comprehensive assessment aligned with real-life situations.	4.43	0.53	High
4.5 Assessing students' development.	4.14	0.69	High
4.6 Evaluating from students presented works.	4.57	0.53	Highest
4.7 Criteria for assessing students' works involving teachers, students, and relevant parties	4.57	0.53	Highest
4.8 Assessing students' performance in practical tasks and creative work	4.57	0.53	Highest
Overall	4.63	0.50	Highest

According to Table 2, the overall level of active learning instruction competency of elementary teachers under the Office of the Basic Education Commission of Thailand was observed to be at the highest level ($\bar{X} = 4.63$). Upon consideration of each component, the top three factors with the highest average scores are: Designing active learning management ($\bar{X} = 4.80$), Utilizing innovative educational media, technology, and learning resources ($\bar{X} = 4.64$), and Organizing learning activities that emphasize advanced thinking skills and hands-on practice ($\bar{X} = 4.57$), respectively. Conversely, the factor with the lowest average performance was Assessing and evaluating learning outcomes based on real-life conditions ($\bar{X} = 4.42$).

Phase 2: Examine the current state, desired state, and necessary requirements of active learning instruction competency among elementary school teachers under the Office of the Basic Education Commission of Thailand

Overall, the current state is at a moderate level. The highest average is in the aspect of active learning management design, followed by the use of media, educational innovations, educational technology, and learning resources. The lowest average is in the aspect of measurement and evaluation according to actual conditions. Upon considering the desired state, it is found that the overall desirable condition is at a high level. The aspect with the highest average score is in the area of organizing learning activities that focus on higher-order thinking skills and practical application. Following this is the aspect of using media, educational innovations, educational technology, and learning resources. The lowest average score is in the aspect of measurement and evaluation according to real-life conditions.

The essential need for the competency in facilitating active learning among elementary school teachers under the Office of the Basic Education Commission is deemed to be at a necessary level of development ($PNI_{\text{modified}} = 0.42$). Upon ranking the development priorities based on the PNI_{modified} values, it is evident that the aspect requiring the highest priority for development is organizing learning activities that emphasize higher-order thinking skills and practical application ($PNI_{\text{modified}} = 0.44$). Following this is the aspect of measurement and evaluation according to actual conditions ($PNI_{\text{modified}} = 0.43$), with the utilization of media, educational innovations, educational technology, and learning resources ($PNI_{\text{modified}} = 0.42$) being next in priority. The lowest priority for development is in the area of designing active learning management ($PNI_{\text{modified}} = 0.40$), in descending order.

Table 3. The analysis results of the current state, the desired state, and the needs of active learning instruction competency of elementary teachers under the Office of the Basic Education Commission of Thailand

Components	The current state (D)			The desired state (I)			PNI_{modified} (I - D)/D	Ranking of the needs
	\bar{x}	S.D.	Level	\bar{x}	S.D.	Level		
1. Designing active learning management	3.22	0.56	Moderate	4.53	0.73	Highest	0.40	4
1.1 Studying the core curriculum of basic education, BE 2551, school curriculum, and curriculum structure	3.49	0.79	Moderate	4.53	0.56	Highest	0.30	6
1.2 Analyzing and defining learning objectives or goals	3.13	0.41	Moderate	4.53	0.57	Highest	0.45	2
1.3 Designing teaching and active learning management plans with student involvement in the design of learning	3.11	0.38	Moderate	4.55	0.55	Highest	0.46	1
1.4 Designing and developing various assessment tools	3.18	0.46	Moderate	4.51	0.55	Highest	0.42	4
1.5 Selecting diverse learning media and sources	3.25	0.54	Moderate	4.55	0.52	Highest	0.40	5
1.6 Providing feedback	3.19	0.99	Moderate	4.54	1.28	Highest	0.43	3
2. Organizing learning activities that emphasize advanced thinking skills and hands-on practice	3.16	0.44	Moderate	4.55	0.55	Highest	0.44	1
2.1 Organizing learning activities that emphasize critical thinking	3.14	0.43	Moderate	4.50	0.57	High	0.43	2
2.2 Organizing learning activities that emphasize problem-solving skills.	3.14	0.39	Moderate	4.60	0.53	Highest	0.47	1
2.3 Organizing learning activities that emphasize analytical thinking.	3.16	0.41	Moderate	4.52	0.57	Highest	0.41	4
2.4 Organizing learning activities that emphasize synthesis thinking	3.21	0.52	Moderate	4.59	0.52	Highest	0.43	3
3. Utilizing innovative educational media, technology, and learning resources	3.21	0.49	Moderate	4.54	0.54	Highest	0.42	3
3.1 Using media, innovation, educational technology, and learning sources directly according to the learning objectives, content, and learning activities	3.21	0.53	Moderate	4.55	0.52	Highest	0.44	1
3.2 Selecting contemporary media, innovative technology, and learning sources for diverse learning management	3.18	0.48	Moderate	4.56	0.52	Highest	0.41	3
3.3 Developing, designing, and creating innovative technology media to promote student learning and engage students in producing and using teaching media	3.24	0.52	Moderate	4.53	0.57	Highest	0.41	3
3.4 Using computers to develop technology and information to facilitate student learning	3.23	0.47	Moderate	4.53	0.57	Highest	0.40	4
3.5 Seeking diverse learning sources according to the context to promote student learning	3.18	0.42	Moderate	4.54	0.53	High	0.43	2
3.6 Providing consultation, knowledge, advice, and support in using innovative media, educational technology, and student	3.19	0.48	Moderate	4.55	0.52	Highest	0.43	2

Components	The current state (D)			The desired state (I)			PNI _{modified} (I - D)/D	Ranking of the needs
	□	S.D.	Level	□	S.D.	Level		
learning sources								
4. Assessing and evaluating learning outcomes based on real-life conditions	3.13	0.50	Moderate	4.49	0.58	High	0.43	2
4.1 Designing various assessments to reflect teaching and learning behaviors	3.15	0.37	Moderate	4.54	0.54	Highest	0.44	2
4.2 Assessing high-level thinking skills in students' work	3.06	0.29	Moderate	4.42	0.63	High	0.45	1
4.3 Assessing realistically in tandem with teaching and learning	3.12	0.40	Moderate	4.47	0.58	High	0.43	3
4.4 Comprehensive assessment aligned with real-life situations	3.08	0.33	Moderate	4.40	0.65	High	0.42	4
4.5 Assessing students' development	3.13	0.96	Moderate	4.51	0.61	Highest	0.44	2
4.6 Evaluating from students presented works	3.16	0.43	Moderate	4.52	0.57	Highest	0.43	3
4.7 Criteria for assessing students' works involving teachers, students, and relevant parties	3.19	0.43	Moderate	4.54	0.54	Highest	0.42	4
4.8 Assessing students' performance in practical tasks and creative work	3.17	0.49	Moderate	4.56	0.53	Highest	0.44	2
Overall	3.18	0.52	Moderate	4.53	0.60	Highest	0.42	

Phase 3: Develop the supervision model through Coaching and Mentoring to enhance active learning instruction competency of elementary teachers under the Office of the Basic Education Commission of Thailand

The results of developing the instructional coaching and mentoring-based educational supervision model to enhance the competency in facilitating active learning among elementary school teachers, under the jurisdiction of the Office of the Basic Education Commission, through a seminar involving 9 experts, have been refined and adjusted according to their recommendations. The researcher has incorporated the suggestions and presented them to the thesis advisor for evaluation, ensuring accuracy and appropriateness. The educational supervision model, aligned with instructional coaching and mentoring principles to enhance the competency in facilitating active learning among elementary school teachers, under the Office of the Basic Education Commission, is now ready for implementation with the target group in the subsequent phase, as illustrated in the accompanying image.



Figure 2 The educational supervision model, based on instructional coaching and mentoring principles, to enhance the competency in facilitating active learning among elementary school teachers, under the jurisdiction of the Office of the Basic Education Commission

Table 4 The validation results of the educational supervision model based on instructional coaching and mentoring principles to enhance the competency in facilitating active learning among elementary school teachers, under the authority of the Office of the Basic Education Commission

Model	Appropriateness		Meaning	Possibility		Meaning
	\bar{x}	S.D.		\bar{x}	S.D.	
1. Principles	4.44	0.73	High	4.56	0.53	Highest
2. Objectives	4.22	0.67	High	4.33	0.71	Highest
3. Processes	4.11	0.78	High	4.33	0.50	High
4. Measurement and Evaluation	4.67	0.50	Highest	4.78	0.44	Highest
5. Conditions for Implementation	4.56	0.53	Highest	4.67	0.50	Highest
Overall	4.40	0.64	High	4.53	0.54	Highest

According to Table 4, it is evident that the validation results of the educational supervision model based on instructional coaching and mentoring principles to enhance the competency in facilitating active learning among elementary school teachers, under the jurisdiction of the Office of the Basic Education Commission, through expert seminars with a total of 9 experts, yielded a high average score of 4.53 (S.D. = 0.54).

6. Discussion

The components of the competency in facilitating active learning among elementary school teachers, under the jurisdiction of the Office of the Basic Education Commission, consist of four elements, as follows: 1) Component related to designing learner-centered management: This involves the design of curriculum frameworks, curriculum activities emphasizing higher-order thinking skills and practical application. 2) Component focusing on activity-based learning emphasizing higher-order thinking skills and practical application. 3) Component related to the utilization of media, innovation, educational technology, and learning resources. 4) Component related to measurement and evaluation based on actual conditions. These components align with the principles of McClelland (2001), which state that knowledge, skills, and abilities are behavioral characteristics. Teachers are expected to demonstrate proficiency in course and learning management, as indicated by: 1) Curriculum development and enhancement, 2) Knowledge and ability in designing active learning activities, 3) Utilization and development of media, innovative technologies for learning management, and 4) Measurement and evaluation of active learning. These align with the concepts discussed by Chalerm Sri (2020), who studied the components of the ability to manage active learning among elementary school teachers.

The current state of the competency in promoting active learning among elementary school teachers, supervised by the Office of the Basic Education Commission, shows that the highest priority component is Component 1: Designing learner-centered management. This aligns with the concept of Bonwell and Eison (1991), emphasizing student engagement in activities beyond passive listening, such as reading, writing, discussing, or problem-solving. Teachers' activities aim to foster students' development of higher-order thinking skills like analysis, synthesis, and evaluation. This is supported by the research of Phutawang (2022), indicating that the competency level of promoting active learning among elementary school teachers is currently rated at the highest level.

The desired state of the competency in promoting active learning among elementary school teachers, supervised by the Office of the Basic Education Commission, shows that the highest priority component is Component 2: Organizing learning activities that emphasize advanced thinking skills and hands-on practice. This aligns with the concept of Smith and Allen (1992), which describes higher-order thinking as a complex blend of characteristics or components involving analysis and critique. According to Panich (2012), the concept of practical application supports individuals in practicing various activities based on their interests, abilities, and potentials, through self-study, practice, and skill development until achieving self-directed learning. This is consistent with the research by Sanguankhruea (2019), which studied the competency of teachers in promoting active learning and found it at the highest level.

The highest priority needs for enhancing the competency in promoting active learning among elementary school teachers, supervised by the Office of the Basic Education Commission, lies in Component 2: Organizing learning activities that emphasize advanced thinking skills and hands-on practice. This aligns with the concept of Fink (2003), which emphasizes maximizing student involvement in learning activities. It involves creating opportunities for students to explore, exchange ideas, engage in hands-on activities, and construct knowledge from diverse activities, driven by the learners themselves. Active learning aims to increase student participation in their own learning process rather than merely receiving knowledge from the teacher, fostering higher-order thinking through hands-on practice. This is consistent with the research by Phosri (2023), which investigated the competency of

teachers in promoting active learning, highlighting that the highest priority need lies in this component

The educational supervision model based on instructional coaching and mentoring principles to enhance the competency in facilitating active learning among elementary school teachers, supervised by the Office of the Basic Education Commission, is in line with the concept of Glickman and others (2013). They describe educational supervision as a collaborative process between supervisors or administrators and those being supervised, aimed at promoting, supporting, and improving the effectiveness of teaching and learning management. This is consistent with the research by Boonmak (2023), which emphasizes the continuous relationship between each step of the process, aligned with the principles and objectives, ensuring that the processes can be implemented effectively to develop teachers' competency in facilitating active learning.

7. Suggestion

7.1 General Suggestions

Regarding the findings of the study, the components and indicators of the educational supervision model based on instructional coaching and mentoring principles to enhance the competency in facilitating active learning among elementary school teachers, supervised by the Office of the Basic Education Commission, it is divided into three phases: Phase 1: Examine the components and indicators of active learning instruction competency among elementary school teachers under the Office of the Basic Education Commission of Thailand, Phase 2: Examine the current state, desired state, and necessary requirements of active learning instruction competency among elementary school teachers under the Office of the Basic Education Commission of Thailand, and Phase 3: Develop the supervision model through Coaching and Mentoring to enhance active learning instruction competency of elementary teachers under the Office of the Basic Education Commission of Thailand.

7.2 Suggestions for Further Study

- 1) There should have a study and research on the competency of promoting active learning among elementary school teachers, focusing on activities that emphasize higher-order thinking skills and practical application.
- 2) Research should investigate the factors influencing the successful implementation of the educational supervision model based on instructional coaching and mentoring principles to enhance the competency in promoting active learning among elementary school teachers, considering different school sizes such as small, medium, and large schools.

Acknowledgments

This research has received generous supports and guidance from the faculty advisors and all experts who provided advice, suggestions, and corrections until its completion. I would like to express my sincere gratitude for the invaluable assistance provided by my esteemed colleagues, as well as all the experts, knowledgeable teachers, and participants whose collaborative efforts significantly contributed to the progress of this study.

Authors' contributions

Not applicable

Funding

Not applicable

Competing interests

Not applicable

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Canadian Center of Science and Education.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

References

- Bonwell, C. C., & Eison, J. A. (1991). *Active Learning: Creating Excitement in the Classroom*. ASHE-ERIC Higher Education Report, Washington DC: School of Education and Human Development, George Washington University.
- Boonmak, W. (2019). *Development Program for Enhancing Competency of Learning Management Active Learning of Primary School Teacher under the Office of the Basic Education*. Doctor of Education Dissertation in Curriculum and Instruction, Naresuan University.
- Chaimongkol, S. (2013). STRATEGIES FOR DEVELOP COMPETENCY ACTIVE LEARNING OF ELEMENTARY TEACHERS ON HIGHLAND. *SWU Educational Administration Journal*, 10(18). Retrieved from <https://ejournals.swu.ac.th/index.php/EAJ/article/view/4133>
- Chalerm Sri, A. (2020). *Development of the Active Learning Management Abilities of Elementary Teachers through the professional Learning Community Process*. Doctoral dissertation in Educational Science and Learning Management, Srinakharinwirot University, Thailand.
- Fink, L. D. (2003). *Creating significant learning experiences: an integrated approach to designing college courses*. John Wiley and Sons.
- Glickman, C. D., et al. (2013). *Supervision and Instruction Leadership: A Developmental Approach* (9th ed.). Boston: Allyn and Bacon.
- Glickman, C. D., Stephen, P. G., & Jovita, M. R.-G. (2009). *Supervision and Instructional Leadership: A Developmental Approach* (8th ed.). Boston: Allyn and Bacon.
- Kalasin Primary Educational Service Area Office 1. (2021). *Report of Educational Supervision of 2020*. Kalasin: Kalasin Primary Educational Service Area Office 1.
- Kruekam-ai, W., & Kodsiri, C. (2018). *The Development of Coaching and Mentoring Supervision to Enhance Learning Management in 21st Century in the Service Area of the Office of the Basic Education Commission in Chiang Mai Province*. Research Report of Chiang Mai Rajabhat University and National Research Council of Thailand. Chiang Mai.
- Laoriandee, W. (2013). *Supervision and Coaching Strategy Professional Development: Theory, Strategy and Practice*. Nakhon Pathom: Silpakorn University Sanam Chan Palace Campus Press.
- Malisorn, Y. (2020). *The Development of Teacher Competency about Active Learning Management in School under Mahasarakham Primary Educational Service Area Office 2*. Master's thesis, Mahasarakham University, Thailand. Retrieved from <http://202.28.34.124/dspace/handle/123456789/1108>
- McClelland, D. C. (2001). Test for Competence rather than for Intelligence. *American Psychologist*, 28, 1–14. <https://doi.org/10.1037/h0034092>
- McKinsey. (2007). *McKinsey Report on Education*. 2014, March 1. Retrieved October 19, 2021, from <http://www.mckinsey.com>
- McManus, P. (2009). *Coaching People*. Harvard: Harvard Business Press.
- Meyers, C., & Jones, T. B. (1993). *Promoting Active Learning: Strategies for the College Classroom*. San Francisco, CA: Jossey-Bass Inc.
- Ministry of Education. (2009). *Basic Education Core Curriculum B.E. 2551* (A.D. 2008). Bangkok: The Agricultural Cooperative Federation of Thailand, LTD.
- Ministry of Education. (2016). *Educational Development Plan of Ministry of Education* (Issues 12) (B.E. 2560–2564). Retrieved October 20, 2019, from <http://www.reo2.moe.go.th/home/images/pdf/EducationPlanBook12MOE-2560-2564.pdf>
- Oakley, L., James, R., & Wrigley, R. (2007). *Coaching and mentoring for Leadership development in civil society*. Retrieved October 22, 2021, from https://peaceinfrastructures.org/Home%20Documents/Coaching%20and%20Mentoring%20for%20Leadership%20Development%20in%20Civil%20Society/Intrac_CoachingMentoringCS_2006.pdf
- Office of the Basic Education Commission. (2010). *Counseling Handbook for Developing the Quality of Education*

- Management*. Bangkok.
- Office of the Basic Education Commission. (2019). *Guidelines of the Internal Supervision for Improving Learners' Quality*. Supervision Affairs.
- Office of the Civil Service Commission. (2009). *Annual report 2009 Office of the Civil Service Commission*. Bangkok.
- Panich, W. (2012). *Ways of Learning Management for students in the 21st Century*. Bangkok: Sodsri-Sariswong Foundation.
- Phosri, W. (2023). *Development of Teacher Competency Strengthening Program of Active Learning Management under Mahasarakham Primary Educational Service Area Office*. Doctor of Education Dissertation in Educational Administration and Development, Mahasarakham University.
- Phutawang, P. (2022). *Development Program for Enhancing Capacity of Learning Management Active Learning of Primary School Teacher under the Office of the Basic Education*. Doctor of Education Dissertation in Educational Supervision, Mahasarakham University.
- Puntalee, S. (2019). *The Developing of Learning Management Supervision System Through Teacher Coaching-Mentoring with Supervisor*. Doctor of Education Dissertation in Educational Administration and Development, Mahasarakham University.
- Pusitrattanavalee, S., & Jinngae, P. (2017). Active Learning Instructional Model of Teachers in Southern College Technology. *JOURNAL OF SOUTHERN TECHNOLOGY*, 10(1), 151–158. Retrieved from https://so04.tci-thaijo.org/index.php/journal_sct/article/view/87276
- Sanguankhrua, K. (2019). *The Program for Teacher Competency for Learning Management by STEM Education Approach Under Office of the Basic Education Commission*. Doctor of Education Dissertation in Educational Supervision, Mahasarakham University.
- Siridhrungsri, P. (2016). *Knowledge, Thought, Skills and Ethic of Teachers*. Bangkok: DPU Coolprint Dhurakij Pundit University.
- Smith, M., & Allen, M. (1992). A postmodern inquiry into the language of art criticism. *Inquiry: Critical Thinking Across the Disciplines*, 9(3), 3–6.
- Upphinjai, S., et al. (2019). Model of Coaching and Mentoring for preparation of teachers in schools under Chiang Rai Primary Educational Service Area Office. *Buabundit Journal of Educational Administration*, 19(4).
- Wongwanit, S. (2015). *Needs Assessment Research* (3rd ed.). Bangkok: Publisher of Chulalongkorn University.

Copyrights

Copyright for this article is retained by the author, with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).