The Training Curriculum Development for Supervising Teachers to Enhance Competency in Thai Language Communicative Management Using a Coaching Model Integrated with Artificial Intelligence

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Abstract

Background and Aim: In the context of 21st-century education, communicative competence in the Thai language is a critical skill for supervisory teachers, who play a central role in mentoring and instructional leadership. Despite the growing complexity of communication in digital learning environments, existing professional development programs for supervisory teachers remain fragmented and lack integration with modern pedagogical frameworks and technological innovations. This research addresses this gap by developing a training curriculum that synthesizes Artificial Intelligence (AI) with a coaching model to enhance communication management in Thai language instruction systematically. The study aimed to: (1) examine the current context, needs, and barriers to effective communication management among supervisory teachers; (2) design and validate an AI-integrated coaching curriculum; (3) implement the curriculum in a real-world educational setting; and (4) evaluate its effectiveness and identify areas for improvement.

Materials and Methods: Adopting a mixed-methods exploratory sequential design, the study proceeded in two phases: qualitative inquiry followed by quantitative validation. The research process comprised four stages: (1) a needs assessment involving document analysis and semi-structured interviews with 120 stakeholders (supervisors, Thai language teachers, and educational experts); (2) curriculum design and expert validation by a panel of five specialists; (3) implementation with 30 purposively sampled supervisory teachers, evaluated through pre-post assessments of knowledge, competence, instructional planning, and learner outcomes; and (4) curriculum refinement based on empirical feedback.

Results: Findings revealed a critical and clearly articulated need for a structured training model focused on communication management. The developed curriculum—comprising pedagogical objectives, modular content, AI-assisted learning activities, and formative evaluation—was rated as highly appropriate by experts. Post-implementation assessments indicated statistically significant improvements in supervisors' pedagogical knowledge and communicative competence ($p < .05$). Student teachers under their supervision also exhibited strong performance in lesson planning ($M = 4.55$, $SD = 0.66$), instructional delivery ($M = 4.57$, $SD = 0.53$), and learner engagement ($M = 4.59$, $SD = 0.71$). Recommendations for refinement included expanding content depth, adjusting training duration, and introducing post-training support mechanisms.

Conclusion: This study contributes to the field of teacher professional development by offering an empirically grounded, AI-supported coaching curriculum tailored to the communicative demands of Thai language supervision. The integration of AI within an instructional coaching framework not only enhanced supervisory competencies but also addressed a notable gap in existing training literature. The findings support the curriculum's applicability and adaptability for sustained use in broader educational contexts.

Keywords: Training Course for Supervisors; Thai Language Communication Management Competence; Coaching Models; Artificial Intelligence (AI)

Introduction

In today's educational landscape, the rapid evolution of digital technologies has transformed how teachers teach, learners learn, and institutions operate. However, while digital transformation continues to expand across sectors, teacher preparation—particularly in communication and supervision—lags. The Thai education system still faces persistent challenges in producing graduates with strong academic performance, critical thinking, and workplace-relevant competencies (Office of the Education Council, 2017). These gaps highlight a growing urgency for innovative professional development models that support supervisory teachers in guiding student teachers, especially in Thai language instruction. Recognizing these concerns, national policies such as the National Education Plan (2017–2036) and the National Education Act B.E. 2542 (1999) advocate for learner-centered approaches and emphasize 21st-

century skills, including the 3Rs (Reading, Writing, Arithmetic) and 8Cs (Critical Thinking, Creativity, Cross-cultural Understanding, Collaboration, Communication, Computing, Career Skills, and Compassion). These frameworks set clear expectations for educational reform; however, they fall short of detailing how supervisory teachers can effectively implement these principles through contemporary practices, particularly in communication management and coaching.

To strengthen professional capacity, the Professional Standards Commission's Regulation on Professional Standards (4th edition) B.E. 2565 (2022) outlines three essential domains: professional responsibilities, learning management, and community engagement. It further defines eight core competencies for student teachers, ranging from curriculum development to the use of digital tools and the promotion of engaging learning environments (Royal Gazette, 2020). Similarly, the NSW Institute of Teachers (2012) identifies three core areas of teacher professionalism—knowledge, practice, and engagement—which together inform high-quality instruction and supervision. Within this broader policy environment, teacher education programs like the Bachelor of Education in Thai Language (Revised Curriculum 2019) aim to produce graduates skilled in instructional design, research, innovation, and ethical practice, with an emphasis on learner diversity, inquiry-based learning, and Buddhist-informed professional identity.

Despite these developments, a notable disconnect remains between policy aspirations and on-the-ground supervisory practice. At the Faculty of Education, Mahamakut Buddhist University, challenges persist in the third-year practicum experience for Thai language education students. Many supervisory instructors still lack a structured, evidence-based coaching approach. Supervisory tools remain outdated or ineffective, and student teachers often struggle with basic instructional competencies, including lesson planning, contemporary teaching strategies, and Thai language communication, particularly in listening, speaking, reading, and writing. These limitations compromise the overall quality and impact of teaching practice.

Coaching, as a collaborative and reflective form of instructional supervision, offers a viable solution. It enables mentors and mentees—often peers—to co-construct knowledge, develop self-directed learning, and enhance classroom practices (Kise, 2006; Siriwan, 2015; Homchaiwong, 2014; Chuenglin, 2010). Effective coaching also incorporates techniques responsive to learner diversity, mindfulness, and metacognition, promoting long-term knowledge retention and professional growth (Wongyai & Patthaphon, 2015). While coaching models are well-established in educational literature, they remain underutilized in Thai supervisory contexts and are rarely integrated with emerging technologies.

To address this gap, the present study introduces Artificial Intelligence (AI) as a transformative element in the coaching process. AI tools such as Claude AI (offering natural, ethical dialogue), Perplexity (providing concise, reliable, and source-cited responses), and Mind AI (focusing on cognitive and emotional support) represent new opportunities for enhancing supervisory capacity and teacher development. These technologies can support Thai language supervisory teachers in real-time feedback, adaptive communication strategies, and personalized professional learning. Despite growing global interest in AI for education, few studies have explored how AI can be systematically integrated into coaching curricula for supervisory teachers, particularly within Thai language education. This research, therefore, aims to fill this gap by developing, implementing, and evaluating an AI-integrated coaching curriculum to improve communication management competencies among supervisory teachers. In doing so, it contributes to both pedagogical innovation and the broader discourse on sustainable teacher professional development in the digital age.

Previous research has addressed both supervisor competency training and coaching models. Notable works include training curricula research by Kinreewong et al. (2024), Khaisaeng (2022), Chamnanakit (2017), and Benyamat (2016). Studies on coaching models include those by Kanchanataweewat (2022), Klongchuea (2021), Chaiyadee (2021), Thusriwan (2019), Srirattanawong (2019), Watcharakarn (2019), Srichan (2017), and Supakit et al. (2016). Research related to artificial intelligence in education includes that by Thepparod et al. (2022), Chaisuwan et al. (2022), Khetbanjong (2022), Srisuwan (2021), and

Wichupakornkul (2020). In light of the background, significance, and relevant research outlined above, the present study aims to develop a training curriculum for supervisory instructors to enhance their Thai language communication management competency through a coaching model integrated with Artificial Intelligence (AI). The goal is to enable supervisors to apply the knowledge gained from the training to effectively support and improve the teaching competencies of student teachers during their school practicum.

Objectives

1. To analyze the current context, conditions, and specific needs related to the development of a training curriculum aimed at enhancing supervisory teachers' competencies in Thai language communication management through a coaching model integrated with Artificial Intelligence (AI).

2. To design and construct an evidence-based training curriculum that integrates a coaching framework with AI technologies, specifically tailored to improve Thai language communicative management among supervising teachers.

3. To implement and facilitate the developed curriculum in a real-world educational setting, monitoring its practical application and effectiveness in enhancing supervisory communication competencies.

4. To evaluate the effectiveness of the implemented curriculum in terms of learning outcomes, teacher performance, communication competencies, and user satisfaction, and to refine the curriculum based on evaluative findings.

Literature review

1. Theoretical Models of Educational Coaching

The coaching model adopted in this study draws on both Thai and international perspectives, conceptualizing coaching as a dynamic, reflective, and developmental process that supports professional growth among educators. In the Thai context, Laolueandee (2013) highlights coaching as a mechanism that fosters constructive dialogue and reflection between mentors and mentees, thereby enhancing pedagogical practices. Wongyai and Patthaphon (2014) further advocate for cognitive coaching, emphasizing its capacity to cultivate educators' metacognitive awareness and autonomy.

Internationally, Joyce and Showers (1988) assert that coaching bridges the gap between theory and practice by providing sustained support through modeling, practice, and feedback—core components of effective teacher development. Kise (2009) advances this by introducing differentiated coaching, which aligns coaching strategies with individual teacher profiles, a key element in personalizing professional learning. Hackman (2002) shifts focus to team-based coaching and leadership within professional learning communities, emphasizing structured collaboration with room for flexibility. While these models have significantly shaped contemporary coaching practices, they tend to emphasize traditional face-to-face interactions and often overlook the evolving role of digital tools in educational contexts. Moreover, although reflective practice is widely acknowledged as essential (Maeda, 1999; Donald & Schön, 1987), its practical integration into scalable training programs remains inconsistently implemented. Recent contributions by MacLennan (2021) and Hinen (2020) begin to address this gap by incorporating goal-setting, accountability, and digital feedback systems, highlighting the potential of Artificial Intelligence (AI) in personalizing and scaling coaching processes.

However, the incorporation of AI raises questions about the balance between automation and human-centered coaching. While AI tools can enhance efficiency and provide real-time analytics, they may also lack the nuance and empathy necessary for truly transformative coaching relationships. This emerging tension underscores the need for hybrid models that integrate AI with human-facilitated reflection and mentoring.

2. Learning Theories Underpinning Curriculum Development

The curriculum design in this research is informed by well-established learning theories that advocate for learner-centered approaches, holistic development, and intrinsic motivation. Khammani (2019) emphasizes the alignment of instructional strategies with learners' cognitive readiness and developmental stages, promoting active and contextual learning. Similarly, Jitchayawanit recognizes the pivotal role of social and emotional learning in enhancing communication and engagement, an increasingly crucial element in language instruction. Foundational theories also inform the pedagogical structure of the training curriculum. Bruner (1963) introduces discovery learning, where knowledge construction occurs through exploration and problem-solving. Maslow's (1962) hierarchy of needs frames self-actualization as the pinnacle of educational achievement, a goal attainable only after fundamental psychological needs are met. Thorndike's (1914) law of effect, though rooted in behaviorism, offers insight into reinforcement strategies for shaping communication behaviors in classroom settings.

Rogers (1951), representing humanistic education, proposes that empathy and authenticity are essential for learner development, principles aligned with the coaching model's relational nature. Gagné (1974) outlines a systematic instructional design through nine learning events, providing a cognitive roadmap for sequencing learning activities. While these theories collectively enrich curriculum development, they are not without limitations. For instance, behaviorist models like Thorndike's may oversimplify complex human interactions, while Rogers' humanism, though idealistic, may lack structure for standardized training. Synthesizing these diverse theoretical insights requires a critical balancing of structured frameworks with the flexibility needed for adaptive instruction.

3. Instructional Design Models

Effective instructional design in this study draws on a blend of theoretical and practice-based models that emphasize curriculum alignment, learner engagement, and contextual relevance. Khammani (2019) offers instructional principles centered on outcome-driven planning, assessment alignment, and learning progression. Buasri (1999) adds a culturally grounded dimension by advocating for the integration of moral and cultural values, an especially important consideration in Thai teacher education.

Kolb's (1984) experiential learning model underpins the curriculum's emphasis on iterative practice, linking concrete experience with reflection and experimentation. This is particularly relevant in developing communication competencies where hands-on application is vital. Erickson and Anderson (1997) propose interdisciplinary and thematic approaches that foster critical thinking, essential for navigating complex communication scenarios. Likewise, student-centered curriculum frameworks (Westerhold, 1998; Gordon, 1998) support differentiated instruction and responsiveness to diverse learner needs.

Despite their strengths, these models can present implementation challenges. Experiential learning, for example, requires substantial time and resource investment, while interdisciplinary design may face institutional resistance due to rigid subject boundaries. These challenges underscore the importance of adaptable frameworks that support both innovation and practical feasibility.

While the reviewed literature offers rich theoretical and practical insights into coaching, learning, and instructional design, a gap remains in the synthesis of these domains within the context of digital transformation, especially concerning the role of AI in educational supervision and communication management. Existing models tend to address coaching and instructional design separately, and there is limited research exploring their integration with emerging technologies to enhance supervisor training in Thai language instruction. This study seeks to bridge this gap by designing a curriculum that combines AI tools, coaching principles, and instructional design grounded in robust educational theories. The resulting model aims to equip supervisory teachers with the communication competencies required in an increasingly digital educational landscape.

Conceptual Framework

This study's conceptual framework integrates key theories from coaching pedagogy, learning psychology, instructional design, and AI-enhanced education. It draws upon both Thai and international research to guide the development of a professional training curriculum that enhances supervisory teachers'

competencies in Thai language communication management. The framework is underpinned by two theoretical models: Cognitive Apprenticeship (Collins, Brown, & Newman, 1989), which emphasizes learning through guided experience, and the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006), which informs the integration of digital tools with pedagogical and content knowledge.

The framework is operationalized through a Research and Development (R&D) process consisting of four iterative stages that reflect both human-centered coaching practices and AI-based instructional innovations:

Stage 1: Needs Assessment and Contextual Analysis (R1)

This foundational stage involves data collection to analyze the existing context, conditions, and specific needs of supervisory teachers. The aim is to inform the development of a curriculum that leverages coaching strategies in tandem with AI technologies. Findings from this stage serve as empirical grounding for the design phase.

Stage 2: Curriculum Design and Development (D1)

Based on the insights gathered in Stage 1, a training curriculum is constructed that integrates AI tools and coaching methodologies. This stage involves expert validation to ensure content accuracy, relevance, and coherence. A small-scale pilot implementation is also conducted to assess the feasibility and practicality of the draft curriculum in authentic educational contexts.

Stage 3: Implementation and Formative Evaluation (R2)

Utilizing a One-Group Pretest–Posttest Design, the curriculum is deployed among supervisory teachers in two sub-phases. Phase 1: Training supervisory teachers through structured modules combining coaching and AI-based instruction.Phase 2: Supervisory teachers apply their training in real classroom settings, specifically in the supervision of Thai language instruction.

Stage 4: Summative Evaluation and Refinement (D2)

In this stage, data from participant feedback and pre-test and post-test analyses are used to evaluate the curriculum's effectiveness in improving communication management competency. The curriculum is then revised and enhanced for broader application and scalability.

This framework explicitly addresses both human and technological dimensions of instructional coaching. By embedding Cognitive Apprenticeship principles, it supports the gradual development of supervisory expertise through modeling, scaffolding, and reflection. Simultaneously, the TPACK model ensures that AI integration complements, not replaces, human interaction, aligning digital tools with pedagogical goals and disciplinary content. The combination of these frameworks ensures that the curriculum is both theoretically grounded and practically responsive to the demands of the digital age. The conceptual framework of this study is illustrated in the diagram below.
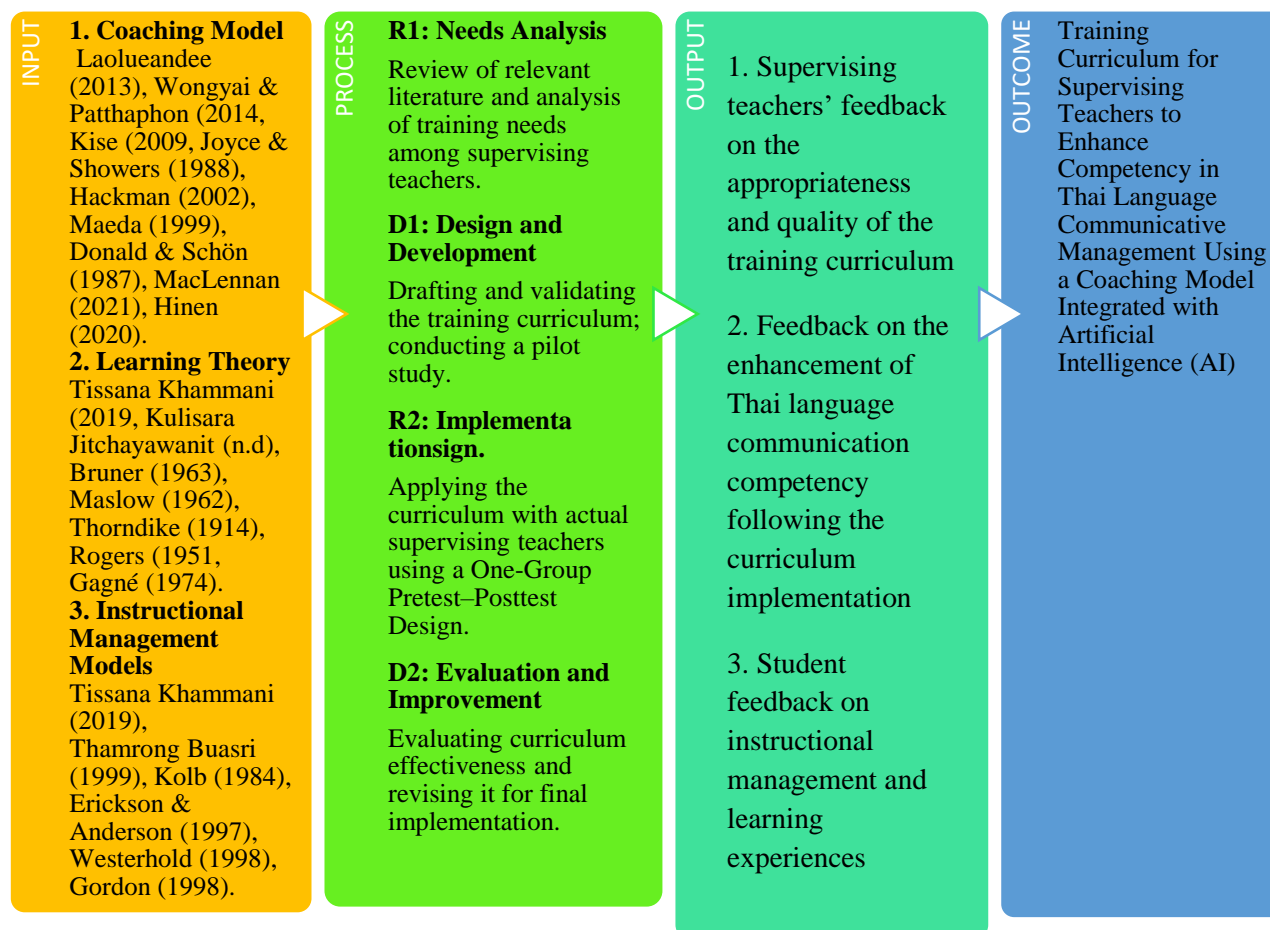
INPUT

1. Coaching Model
Laolueandee (2013), Wongyai & Patthaphon (2014, Kise (2009, Joyce & Showers (1988), Hackman (2002), Maeda (1999), Donald & Schön (1987), MacLennan (2021), Hinen (2020).

2. Learning Theory
Tissana Khammani (2019, Kulisara Jitchayawanit (n.d), Bruner (1963), Maslow (1962), Thorndike (1914), Rogers (1951, Gagné (1974).

3. Instructional Management Models
Tissana Khammani (2019), Thamrong Buasri (1999), Kolb (1984), Erickson & Anderson (1997), Westerhold (1998), Gordon (1998).

PROCESS

R1: Needs Analysis
Review of relevant literature and analysis of training needs among supervising teachers.

D1: Design and Development
Drafting and validating the training curriculum; conducting a pilot study.

R2: Implementationsign.
Applying the curriculum with actual supervising teachers using a One-Group Pretest–Posttest Design.

D2: Evaluation and Improvement
Evaluating curriculum effectiveness and revising it for final implementation.

OUTPUT

1. Supervising teachers' feedback on the appropriateness and quality of the training curriculum

2. Feedback on the enhancement of Thai language communication competency following the curriculum implementation

3. Student feedback on instructional management and learning experiences

OUTCOME

Training Curriculum for Supervising Teachers to Enhance Competency in Thai Language Communicative Management Using a Coaching Model Integrated with Artificial Intelligence (AI)

Figure 1 The conceptual framework

Methodology

This study employed a Research and Development (R&D) methodology and adopted a Mixed Methods strategy using an Exploratory Sequential Design, comprising two continuous phases: an initial qualitative phase followed by a quantitative phase. The process consisted of four major stages: Needs Analysis (R1), Design and Development (D1), Curriculum Implementation (R2), and Curriculum Evaluation and Improvement (D2).

1. Population and Target Group

The population included 15 supervising teachers from the Faculty of Education, Mahamakut Buddhist University, Isan Campus. The target group consisted of 5 supervising teachers from the same faculty who were actively supervising student teachers during the second semester of the 2024 academic year. These participants were selected through purposive sampling, based on their professional role and availability during the curriculum trial period. While purposive sampling limits broad generalizability, it allows for the selection of information-rich cases most relevant to the research objectives.

2. Research Instruments

Two categories of research instruments were used.

Instruments for Research Implementation: A training curriculum was designed to enhance supervising teachers' competency in Thai language communication management, integrating a coaching

model and Artificial Intelligence (AI). Its content validity and appropriateness were reviewed by experts (n = 5), resulting in a mean rating of 4.59 and a standard deviation (SD) of 0.65.

Instruments for Data Collection: Curriculum Evaluation Form (experts): Mean = 4.84, SD = 0.59. Thai Language Communication Competency Assessment (for supervising teachers): Mean = 4.67, SD = 0.75. Lesson Plan Writing Competency Assessment (for student teachers): Mean = 4.65, SD = 0.78. Teaching Ability Assessment (for student teachers): Mean = 4.55, SD = 0.74. Student Satisfaction Questionnaire: Mean = 4.59, SD = 0.81. All instruments underwent expert validation. Although pilot testing and inter-rater reliability were not conducted, the instrument ratings suggest strong face and content validity, which supports their appropriateness for this research context.

3. Data Collection Procedures

Data were collected through the following steps:

Step 1: Needs Analysis

A review of relevant documents, policies, and prior studies was conducted. Surveys and qualitative inquiries were employed to identify training needs. Tools were developed and validated by experts. Quantitative data were analyzed using descriptive statistics.

Step 2: Curriculum Design and Development

The training curriculum was designed based on the results from Step 1. Tools for evaluation and measurement were finalized in this stage, and content validity was confirmed by expert judgment.

Step 3: Curriculum Implementation

The intervention followed a One-Group Pretest–Posttest Design, which, while practical for initial trials, carries a risk of internal threats to validity such as history, maturation, and testing effects. The implementation was conducted in two phases: Phase 1: Training of supervising teachers using the developed curriculum. Phase 2: Application of the curriculum in real teaching contexts with student teachers.

Step 4: Curriculum Evaluation and Improvement

Evaluation involved collecting qualitative and quantitative feedback from both supervising and student teachers. Focus groups and surveys were conducted to evaluate: Supervising teachers' perceptions of the training, the observed promotion of Thai language communication competencies, and student satisfaction with teaching practices. Based on these findings, the curriculum was revised and improved for broader application in future academic terms.

4. Data Analysis

Quantitative Data were analyzed using descriptive statistics (means and standard deviations) and paired sample t-tests to assess pre- and post-intervention differences in teacher and student competencies. Qualitative Data were collected through focus group discussions and analyzed using content analysis, ensuring credibility through investigator triangulation and member checking, thereby increasing trustworthiness.

5. Ethical Considerations

This research was conducted according to ethical standards. Participants were provided with detailed information about the study objectives and procedures. Informed consent was obtained before participation. All data were anonymized, and confidentiality was strictly maintained. Ethical approval for the study was granted by the Research Ethics Committee of Mahamakut Buddhist University, Isan Campus.

6. Limitations

The study's limitations include: The small sample size (n = 5) limits external validity, though the study's developmental nature justifies the focused sample. The use of a one-group pretest-posttest design without a control group may limit causal inference, as observed improvements may be influenced by extraneous variables. These limitations are acknowledged and will inform future iterations of the study using more robust experimental designs.

Results

The research focused on developing a training curriculum for supervising teachers aimed at enhancing their competency in Thai language communicative management using a coaching model integrated with Artificial Intelligence (AI). The findings are organized into four key areas: (1) Needs Analysis, (2) Curriculum Development, (3) Curriculum Implementation, and (4) Curriculum Evaluation and Improvement. The findings are summarized as follows:

1. Results of Needs Analysis for Curriculum Development

A comprehensive needs assessment was conducted through document analysis, interviews with supervising teachers and Thai language instructors, and expert focus group discussions. The data revealed a strong demand for a training curriculum specifically designed for supervising teachers. Core themes that emerged included:

1) The necessity for hands-on practice, peer learning, and inquiry-based participation.

2) The importance of structured guidance in Thai language communication, especially when integrated with AI-supported coaching.

3) The demand for practical tools that supervising teachers can transfer to real classroom situations.

"We need more than just theory. Real classroom examples and AI
tools would help us connect better with students" (Supervising Teacher 03).

These findings confirmed the need for a well-structured, practical curriculum that bridges theory and classroom application. Triangulation of interviews, focus groups, and document reviews showed convergence on the need for competency-based, participatory training.

2. Results of Curriculum Development

The developed training curriculum for enhancing supervising teachers' Thai language communication management competency using a coaching model integrated with AI comprised the following components:

1) Background and significance
2) Curriculum principles
3) Curriculum objectives
4) Core content
5) Training process
6) Learning activities
7) Media and learning resources
8) Assessment and evaluation

The curriculum was evaluated by five experts in education and Thai language communication. Results are shown in Table 1

Table 1 Evaluation of the developed curriculum

Evaluation Aspect	Mean	SD	Interpretation
Curriculum Coherence	4.73	0.35	High
Curriculum Appropriateness	4.56	0.62	Very High
Competency Assessment Tool Alignment	4.58	0.38	Very High

The structure demonstrated high internal coherence and strong alignment with intended outcomes. The evaluation of curriculum structure by five experts showed a high level of consistency, with a mean

score of 4.73 and a standard deviation of 0.35, indicating the curriculum was highly coherent. Similarly, the overall appropriateness of the curriculum received a mean score of 4.56 with a standard deviation of 0.62, indicating the highest level of appropriateness. Additionally, the competency assessment tool for Thai language communication management was evaluated by five experts, receiving a mean score of 4.58 and a standard deviation of 0.38, signifying its strong alignment with the intended competencies.

3. Results of Curriculum Implementation

3.1 Knowledge and Understanding Test

A paired sample t-test revealed a statistically significant increase in supervising teachers' knowledge post-training ($p < 0.05$), with a large effect size (Cohen's d = 1.08), indicating a practically significant gain in understanding.

Table 2 The Pre-training and post-training scores of supervising teachers on Thai language communication management

Test Stage	Mean	SD
Pre-training	18.73	1.66
Post-training	26.33	1.23

The post-training scores of supervising teachers on Thai language communication management using the AI coaching model were significantly higher than the pre-training scores at the 0.05 level of significance. Pre-training mean = 18.73, SD = 1.66; post-training mean = 26.33, SD = 1.23.

3.2 Competency Assessment

Supervising teachers showed high levels of competency across three assessment rounds.

Table 3 The competency assessment

Round	Mean	SD	Interpretation
1	4.50	0.79	High
2	4.56	0.75	High
3	4.58	0.71	High

Across three assessment rounds, the supervising teachers' Thai language communication management competency demonstrated the highest level, with a mean score of 4.56 and a standard deviation of 0.75.

3.3 Student Teacher Development

Lesson Plan Writing Competency: Student teachers demonstrated high competency in writing learning management plans, with a mean score of 4.55 and a standard deviation of 0.66. Teaching Ability of Student Teachers: Student teachers exhibited high levels of teaching ability, with a mean score of 4.57 and a standard deviation of 0.53 on Table 4.

Table 4 Student teacher development

Category	Mean	SD	Interpretation
Lesson Plan Writing	4.55	0.66	High
Teaching Ability	4.57	0.53	High

These findings confirm that the curriculum positively impacted both supervising teachers and their student trainees.

4. Results of Curriculum Evaluation and Improvement

4.1 Supervising Teachers' Feedback

Supervising Teachers' Feedback on the training curriculum revealed the following: Feedback revealed high satisfaction with the curriculum's design, structure, and delivery. Teachers appreciated the balance of AI integration, coaching techniques, and practical application.

> "AI gave us a systematic approach to monitor and give feedback effectively" (Supervising Teacher 07).
> "The coaching method helped us build real mentoring relationships" (Supervising Teacher 02).

However, minor issues related to internet connectivity during sessions were noted. The training process was deemed well-aligned with the objectives. Duration and venue were appropriate, though some internet connectivity issues were noted during training. Supervising teachers reported improved understanding of Thai language communication management using the AI-integrated coaching model. Teachers effectively applied knowledge from the training to improve students' communication competencies. The training was perceived as highly beneficial for future instructional planning, especially in designing effective learning activities. Post-training, supervising teachers showed increased knowledge of the AI-integrated coaching process, including systematic planning, supervision, and follow-up. Coaching was seen as beneficial, fostering a mentoring relationship between coach and trainee, which led to improved learning outcomes among student teachers.

4.2 Student Competency Development

Supervising teachers reported that student teachers demonstrated appropriate Thai communication skills, suitable for classroom integration. The curriculum promoted an environment that enhanced dialogue between teachers and learners, narrowing communication gaps. Feedback on Student Competency Development indicated that student teachers developed strong and appropriate Thai language communication skills. These could be effectively integrated into real classroom and school contexts, creating a supportive learning environment and narrowing communication gaps between teachers, students, and student teachers.

4.3 Student Satisfaction Evaluation

The AI-coaching model was seen as effective for solving real-time instructional issues and enabling systematic supervision. Students expressed high satisfaction with the learning experience, as seen in Table 5

Table 5 Student Satisfaction

Aspect	Mean	SD	Interpretation
Learning Management Process	4.59	0.71	Very High
Usefulness of the AI-Coaching Model	4.61	0.68	Very High

Students expressed the highest level of satisfaction with the learning management process, with a mean score of 4.59 and a standard deviation of 0.71. Moreover, the AI-integrated coaching model was considered effective in solving school-based problems promptly and provided a systematic, trackable approach to instruction.

The triangulated analysis of quantitative and qualitative data underscores the effectiveness and practical relevance of the developed training curriculum for supervising teachers in Thai language communication management using an AI-integrated coaching model. The convergence of these findings from diverse data sources provides strong evidence supporting the validity, coherence, and applicability of the training curriculum. The alignment of quantitative outcomes (e.g., competency gains and satisfaction

scores) with qualitative feedback (e.g., perceived usefulness, applicability, and expert consensus) confirms the program's impact on professional growth and instructional quality.

Table 6 Summary of triangulated findings

Source	Key Insights
Quantitative Data	Significant improvement in knowledge and competencies post-training
Qualitative Interviews	Teachers valued AI tools and coaching for student-centered development.
Expert Review	Curriculum content and assessment aligned well with educational objectives.
Student Feedback	High satisfaction with the instructional process and applicability

Discussion

This research aimed to develop a training curriculum for supervising teachers to enhance their competency in managing Thai language communication through a coaching model integrated with Artificial Intelligence (AI). The discussion of research findings is presented as follows:

1) Needs Assessment and Foundational Information

The study revealed a compelling demand for professional development among supervising teachers, confirmed through document analysis, interviews, and expert group discussions. The curriculum design emphasized hands-on practice, active discussion, and collaborative learning—elements shown to be crucial for effective teacher training (Kinreewong et al., 2024). This aligns with findings from Benyamat (2016) and Khaisaeng (2022), who underscored the importance of instructional management, ethics, and culturally responsive pedagogy. Importantly, this study contributes to the growing global emphasis on personalized teacher development through blended learning strategies. As AI technologies are increasingly adopted in teacher education, this model represents a timely response to the need for data-informed, adaptive training solutions. While expected needs were largely confirmed, it is notable that some participants also expressed hesitancy about integrating technology, indicating a potential digital readiness gap that warrants further attention.

2) Curriculum Development

The developed curriculum comprised eight key components: (1) background and significance, (2) guiding principles, (3) learning objectives, (4) content divided into four learning units, (5) the SBADF training process, (6) learning activities, (7) instructional media and learning resources, and (8) assessment and evaluation methods. Expert evaluations confirmed that the curriculum was both highly relevant ($\bar{x} = 4.73$, SD = 0.35) and appropriate ($\bar{x} = 4.56$, SD = 0.62). These results are consistent with the findings of Khaisaeng (2022), who reported a high level of curriculum appropriateness ($\bar{x} = 4.46$, SD = 0.55) for enhancing Thai language instruction based on transfer theory for ethnic teachers. Likewise, Benyamat (2016) found that expert assessments confirmed the quality of his curriculum for supervising physical education student teachers ($\bar{x} = 3.84$, SD = 0.36). However, while expert consensus was strong, future development should consider broader implementation constraints such as scalability across diverse school contexts and adaptability to regional needs. Additionally, integrating digital literacy training for supervising teachers may strengthen future iterations, given the increasing technological demands in education.

3) Curriculum Implementation

The implementation phase revealed statistically significant gains in supervising teachers' understanding of communicative Thai language instruction using AI-enhanced coaching (from $\bar{x} = 18.73$ to 26.33, $p < .05$), with high competency retention across three rounds ($\bar{x} = 4.56$, SD = 0.75). Student teachers also showed marked improvement in planning and classroom delivery. Additionally, student teachers under supervision exhibited strong abilities in lesson planning ($\bar{x} = 4.55$, SD = 0.66) and classroom

performance ($\bar{x}$ = 4.57, SD = 0.53). These findings align with those of Khaisaeng (2022) and Chamnankit (2017), confirming that practice-oriented training enhances communication skills and instructional performance. Nonetheless, a critical consideration is the potential variation in effectiveness across different school environments, especially where digital infrastructure is limited or teacher resistance to AI remains high. These challenges could affect the model's replicability and call for additional support, such as localized mentoring and technical assistance.

4) Curriculum Evaluation and Improvement

Participant feedback was overwhelmingly positive. Supervising teachers noted that the training process was timely, relevant, and effective in promoting both theoretical and practical learning. Importantly, they valued the collaborative coaching structure that fostered mentor-mentee partnerships—an aspect that aligns with global trends promoting peer-led, reflective teaching models. Participants indicated enhanced understanding of communicative management with AI and the effective transfer of knowledge to their students. The training was viewed as highly beneficial for future teaching and coaching activities. Participants also emphasized the value of the coaching relationship, where mentors and mentees collaborated as learning partners, contributing to students' achievement of learning outcomes.

Regarding the enhancement of student teachers' communication competencies, supervising teachers observed effective integration into classroom settings, fostering a collegial environment, and reducing communication barriers. Student satisfaction ($\bar{x}$ = 4.59, SD = 0.71) further supports the training's impact. The AI-integrated coaching model was praised for providing real-time solutions to classroom problems and facilitating systematic lesson delivery. These perceptions are consistent with earlier studies (Kinreewong et al., 2024; Chamnankit, 2017; Khaisaeng, 2022), reinforcing the model's relevance. The study found high levels of satisfaction and positive attitudes toward competency-based training curricula focused on Thai language communication. Nevertheless, limitations must be acknowledged. Some participants reported minor internet disruptions and differing levels of confidence in AI usage, pointing to the need for contingency planning and ongoing support. Moreover, the study's scope—limited to a specific sample—raises questions about sustainability and scalability. Future research should assess how this model performs in different provinces or with larger teacher cohorts, particularly in under-resourced areas.

New Knowledge

This research on The Training Curriculum Development for Supervising Teachers to Enhance Competency in Thai Language Communicative Management Using a Coaching Model Integrated with Artificial Intelligence generated new knowledge that can be effectively applied to the communicative management practices of supervising teachers. The research findings demonstrated that the curriculum significantly enhances student learning outcomes. Moreover, this body of knowledge can be further developed and integrated into other subject areas. The newly acquired insights are summarized and presented in the following model.

Implications and Future Directions

This research contributes to the evolving intersection of coaching pedagogy and AI in teacher training. It highlights the potential for technology-enhanced supervision to improve communication instruction in Thai language education. However, successful scaling will depend on policy support, digital infrastructure investment, and teacher buy-in. Future studies should consider quasi-experimental or longitudinal designs to examine long-term competency development and student impact. Additionally, research could explore variations in model effectiveness across different subjects or cultural settings. A comparative analysis with AI-based models in international contexts would also deepen understanding of global applicability.

Conclusion

This study, titled "The Training Curriculum Development for Supervising Teachers to Enhance Competency in Thai Language Communicative Management Using a Coaching Model Integrated with Artificial Intelligence," successfully achieved its objectives through a rigorously designed Research and

Development (R&D) process, utilizing an exploratory mixed-methods approach. It responded to an urgent, evidence-based need for targeted professional development among supervising teachers, particularly in the area of Thai language communicative management. The needs assessment revealed that many supervising teachers lacked sufficient knowledge, pedagogical strategies, and confidence to support student teachers in this domain. To address these challenges, the study developed a training curriculum that integrated a coaching model with Artificial Intelligence (AI), structured around eight essential components: background and significance, guiding principles, learning objectives, content modules, the SBADF-based training process, learning activities, instructional media, and comprehensive evaluation methods. Expert evaluations affirmed the curriculum's relevance, clarity, and practical applicability, while implementation data showed statistically significant improvements in supervising teachers' understanding and competency, as well as effective knowledge transfer to student teachers. Student teachers demonstrated high levels of instructional planning, classroom management, and applied communication skills. Importantly, the AI-integrated coaching model was praised for its capacity to support real-time mentoring, enhance communication confidence, and offer scalable support for classroom problem-solving. Both supervising teachers and student teachers reported high satisfaction with the training process, emphasizing its practicality, responsiveness, and collaborative structure. Beyond its immediate outcomes, this research contributes to broader educational reform by aligning with national goals of enhancing teacher quality and fostering reflective, competency-based professional development. The curriculum model developed in this study has strong potential for integration into teacher certification programs, ongoing professional development initiatives, and national teacher quality assurance frameworks. It offers a replicable strategy for modernizing teacher training through the thoughtful incorporation of digital tools, particularly AI, in ways that support mentoring and practical pedagogy. From a policy perspective, this model could inform the design of large-scale capacity-building efforts for supervising teachers, especially in Thai language education. For practice, it suggests an actionable framework for teacher training institutions to implement responsive, data-informed curricula that are both contextually relevant and technologically enriched. Future research should explore the longitudinal effects of the curriculum, including sustained impacts on teaching performance and student outcomes. Additionally, quasi-experimental designs across multiple educational contexts would strengthen causal claims and allow for refinement of the model in diverse settings. Comparative studies could also investigate the integration of AI in coaching models across different subject areas or within international teacher education frameworks.

In sum, this study not only provides a validated and innovative curriculum but also contributes to the theoretical and practical advancement of teacher education in Thailand and beyond.

Recommendation

Based on the development of the training curriculum for supervising teachers to enhance their competency in Thai language communicative management using a coaching model integrated with Artificial Intelligence (AI), the researcher offers the following recommendations:

1. Recommendations for the Practical Application of Research Findings

1.1 The research revealed that the training curriculum effectively meets the needs of the participants. Feedback from the participants confirmed that the curriculum is highly practical and applicable. Therefore, any future development of training curricula should begin with a comprehensive needs assessment of the target group. This assessment should include surveys, interviews, focus group discussions, and relevant document analysis to ensure that the curriculum aligns with the learners' needs. Such alignment will facilitate the transfer of knowledge and understanding to actual practice.

1.2 The research also found that the developed training curriculum aligns with its stated objectives and includes all essential components. It follows a systematic process that contributes to improving the instructional capabilities of supervising teachers. Hence, before implementation, careful study and preparation of all curriculum components and instructional processes are essential. This includes preparing

teaching materials, equipment, and documents in advance. Omitting any part of the process may hinder the effectiveness and success of the training.

   2. Recommendations for Future Research

   2.1 Since the training curriculum successfully enhances the learning management competencies of supervising teachers, further research should explore its implementation across various academic disciplines and educational institutions. This expansion would increase the impact and applicability of the curriculum in diverse educational contexts.

   2.2 Future studies should include activities that reflect on student teachers' teaching practice experiences in schools. These reflections should focus on how supervisory and coaching skills are applied in real teaching contexts. Insights gathered from such reflections can then inform further refinement and development of learning activities in the curriculum.

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