Participatory Management Model That Enhances Teachers' Competence in Classroom Research to Develop Student Quality at Ban Pa School (Billasapachasan) Under the Jurisdiction of The Phitsanulok Primary Education Service Area Office 1

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Abstract

This research entitled "A Participatory Management Model for Enhancing Teachers' Competency in Classroom Research to Improve Student Quality at Ban Pa (Billasapachasan) School under the Phitsanulok Primary Educational Service Area Office 1" aimed to develop and evaluate a participatory management model that enhances teachers' competency in conducting classroom research to improve student quality. The objectives of the study were: (1) to examine the current conditions and desirable conditions of a participatory management model that enhances teachers' competency in classroom research to improve student quality; (2) to develop a participatory management model that enhances teachers' competency in classroom research to improve student quality; (3) to implement the participatory management model that enhances teachers' competency in

classroom research to improve student quality; and (4) to evaluate the participatory management model that enhances teachers' competency in classroom research to improve student quality. The target groups consisted of 15 teachers in the academic year 2023 and 7 members of the school committee. The research instruments used for evaluation throughout the implementation process included tests, questionnaires, assessment forms, and interviews.

The research findings revealed that the overall evaluation of the appropriateness and usefulness of the participatory management model for enhancing teachers' competency in classroom research to improve student quality at Ban Pa (Billasapachasan) School was at the highest level. The overall evaluation of the appropriateness of the model implementation manual was also at the highest level, as was the overall evaluation of its usefulness. In addition, the overall evaluation of teachers' satisfaction toward classroom research indicated a high level of satisfaction.

Keywords: Participatory Management Model, Teacher Competency Enhancement, Classroom Research, Student Quality

Introduction

The development of competency in classroom research is a crucial process for teachers in improving teaching and learning practices and in generating reliable knowledge. Classroom research primarily aims to enhance instructional management and to elevate the quality of students' learning. In this regard, teachers assume the role of classroom researchers. The research process begins with formulating research questions, followed by planning, data collection, data analysis, and drawing conclusions, which are then

applied to the continuous improvement of teaching practices. Classroom research enables teachers to work systematically and to make rational and creative decisions in instructional development.

Conducting classroom research is an important and necessary tool that encourages teachers to further their professional knowledge and to apply research findings in planning, decision-making, and problem-solving processes in alignment with the school context. This process is carried out alongside teaching and learning activities through simple and reliable procedures. The application of research findings to instructional improvement enhances teaching effectiveness and maximizes benefits for learners. Moreover, teachers who engage in classroom research develop greater knowledge and skills and are able to produce academic work that contributes to their professional growth (Phirormrak, 2001).

Teacher-researchers continuously seek knowledge and develop a deeper understanding of teaching practices. They possess the ability to support students' progress in various aspects. Classroom research is a systematic process for solving problems or improving instructional practices in teachers' own classrooms. It focuses on identifying the causes of problems, determining solutions, and improving teaching and learning processes to achieve targeted learning outcomes and ensure high-quality student learning. Koettham (2002) stated that classroom research addresses instructional problems arising in the classroom with the aim of improving student learning, and it is conducted concurrently with teaching and learning activities. Sitthisombun (2003) emphasized that developing teachers' knowledge in classroom research requires the study of appropriate models and the provision of manuals or guidelines to support teachers in acquiring knowledge, understanding

procedures, and implementing research systematically. Effective instructional problem-solving requires an understanding of existing conditions, research-based approaches to problem-solving, and the application of research findings in educational management. Developing learners' knowledge, abilities, and desirable characteristics in accordance with individual differences is a pathway toward realizing learners' future potential.

Participatory management is highly important and essential for organizational operations, as effective coordination and collaboration contribute significantly to successful outcomes (Wannsuk, 2020). Participatory management serves as a core element of development by encouraging creative expression and promoting smooth collaboration within organizations (Jaemmee, 2021). This approach emphasizes the involvement of organizational members in management and decision-making processes, fostering unity, democratic practices, and shared responsibility. Through participation, members can exchange experiences and perspectives, enhance teamwork motivation, and develop positive attitudes toward work. Consequently, organizations can improve operational capacity, increase effectiveness, and achieve organizational goals in a meaningful and sustainable manner.

Based on national educational policies, as well as the current conditions and existing problems at Ban Pa (Billasapachasan) School, the researcher—serving as the school administrator and holding a critical role in educational management—recognized the need to identify effective tools to drive school administration toward improved teacher quality and student outcomes. As a result, the researcher conducted a study on a participatory management model that enhances teachers' competency in classroom research to improve student quality at Ban Pa (Billasapachasan) School

under the Phitsanulok Primary Educational Service Area Office 1.The purpose of this study was to strengthen the effectiveness and efficiency of school administration, enhance teachers' professional capacity with positive impacts on learners, and improve the overall quality of education in alignment with national curriculum goals and educational policies.

Research Objectives

1. To study the current conditions and desirable conditions of a participatory management model that enhances teachers' competency in classroom research to improve student quality at Ban Pa (Billasapachasan) School.

2. To develop a participatory management model that enhances teachers' competency in classroom research to improve student quality at Ban Pa (Billasapachasan) School.

3. To investigate the results of implementing the participatory management model that enhances teachers' competency in classroom research to improve student quality at Ban Pa (Billasapachasan) School

4. To evaluate the participatory management model that enhances teachers' competency in classroom research to improve student quality at Ban Pa (Billasapachasan) School.
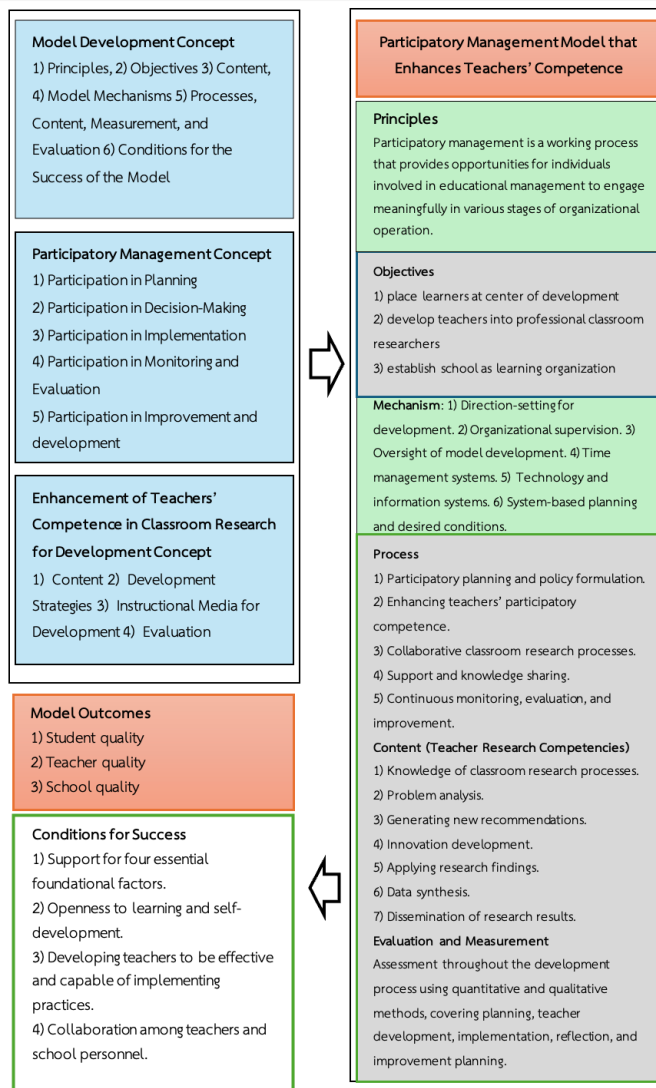
Research Conceptual Framework

Figure 1

Research Conceptual framework. Created by the author, 2025.

Research Methodology

Phase 1 (R_1): A Study of the Current and Desirable Conditions of a Participatory Management Model for Enhancing Teachers' Competency in Classroom Research to Improve Student Quality at Ban Pa (Billasapachasan) School.

1.1 A Study of a Participatory Management Model for Enhancing Teachers' Competency in Classroom Research to Improve Student Quality through Document and Research Synthesis

1.1.1 Data Sources The data sources consisted of relevant documents and research studies used to establish a preliminary conceptual framework. The review focused on principles, concepts, and key content related to management models, participatory management, teacher competency enhancement, classroom research, and related studies.

1.1.2 Research Instruments The research instrument was a data recording form used for reviewing and synthesizing relevant documents and research studies.

1.1.3 Data Collection After identifying the research problem and determining the scope of studies to be synthesized, the researcher conducted a search for research related to participatory management models that enhance teachers' competency in classroom research to improve student quality. Both primary and secondary data sources were utilized.

1.1.4 Data Analysis The researcher collected and reviewed relevant studies and analyzed statistical findings reported in those studies. Content

analysis was employed to identify major components, sub-components, indicators, and operational definitions.

1.2 A Study of the Current Conditions, Desirable Conditions, and Priority Needs of a Participatory Management Model for Enhancing Teachers' Competency in Classroom Research to Improve Student Quality

1.2.1 Informants The informants consisted of 15 teachers from Ban Pa (Billasapachasan) School and 90 parents from the parent network, totaling 114 participants. The participants were selected using purposive sampling.

1.2.2 Research Instruments The research instrument was a questionnaire designed to assess the current conditions and desirable conditions.

1.2.3 Data Collection The researcher collected data on the current and desirable conditions of the participatory management model for enhancing teachers' competency in classroom research to improve student quality.

1.2.4 Data Analysis A five-level rating scale was used to analyze data obtained from the questionnaires on current and desirable conditions. The data were analyzed using mean and standard deviation, and the interpretation of mean scores was based on the following criteria (Srisawat, 2017):

The criteria for interpreting mean scores were as follows (Srisawat, 2017):

1.2.5 Statistical Analysis Priority needs were analyzed using the Modified Priority Needs Index (PNI_modified) according to Wongwanich (2019), calculated as follows:

$$PNI_{modified} \quad = \quad \frac{I - D}{D}$$

Where PNI_modified = Priority Needs Index

I = Mean score of the desirable condition

D = Mean score of the current condition

1.3 A Study of Participatory Management Guidelines for Enhancing Teachers' Competency in Classroom Research to Improve Student Quality Using Focus Group Discussion

1.3.1 Informants The informants consisted of seven experts selected through purposive sampling: Two experts with at least 10 years of experience in educational administration or as senior educational supervisors under the Office of the Basic Education Commission; Two experts holding doctoral degrees in educational administration with at least 10 years of teaching experience in higher education institutions; Two expert school administrators with at least 10 years of experience in school administration; and One teacher with at least 10 years of teaching experience in an educational institution.

1.3.2 Research Instruments The research instruments included a focus group discussion recording form and guidelines for participatory management aimed at enhancing teachers' competency in classroom research to improve student quality.

1.3.3 Data Collection The researcher personally conducted data collection through document review and data recording from the seven experts participating in the focus group discussion.

1.3.4 Data Analysis Data obtained from the focus group discussions were transcribed, analyzed using content analysis, and presented descriptively.

Phase 2 (D1): Development of a Participatory Management Model to Enhance Teachers' Classroom Research Competency for Improving Learner Quality at Ban Pa (Billasapachasan) School

2.1 Drafting the Participatory Management Model to Enhance Teachers' Classroom Research Competency for Improving Learner Quality

2.1.1 Informants The informants consisted of nine experts selected through purposive sampling. They included three experts in educational management from Ban Pa (Billasapachasan) School, three experts in classroom research for improving learner quality from a mentoring university, and three experts in teacher competency development.

2.1.2 Research Instruments The research instruments were: A data recording form for drafting the participatory management model to enhance teachers' classroom research competency for improving learner quality; and A data recording form for drafting the user manual for the participatory management model to enhance teachers' classroom research competency for improving learner quality.

2.1.3 Data Collection The researcher identified relevant stakeholders, organized a brainstorming session, and officially invited participants through a formal letter from the school. The brainstorming participants consisted of nine purposively selected experts with knowledge, expertise, and experience in educational management at Ban Pa (Billasapachasan) School (three persons), classroom research for improving learner quality from a mentoring university (three persons), and teacher competency development (three persons). The brainstorming session was conducted online via the Zoom Meeting platform. The instruments used were a brainstorming meeting record form and discussion agenda.

2.1.4 Data Analysis The researcher integrated the findings from the study of the current conditions, desired conditions, and priority needs of the participatory management model obtained in Phase 1 with the data derived from the brainstorming session. These data were synthesized to draft the participatory management model and its user manual for enhancing teachers' classroom research competency to improve learner quality. The synthesized results were then summarized to develop the draft model and manual based on data collected from the sample group.

2.2 Validation of the Participatory Management Model to Enhance Teachers' Classroom Research Competency for Improving Learner Quality Using Connoisseurship

2.2.1 Informants The informants consisted of nine experts selected through purposive sampling, including three experts in educational administration, three experts in curriculum and instruction, and three experts in measurement and evaluation.

2.2.2 Research Instruments The research instruments were: A questionnaire for validating the participatory management model to enhance teachers' classroom research competency for improving learner quality; and A questionnaire for validating the user manual for the participatory management model to enhance teachers' classroom research competency for improving learner quality.

2.2.3 Data Collection The researcher collected data by presenting the draft model along with its user manual to the experts for evaluation of the appropriateness and feasibility of both the model and the manual.

2.2.4 Data Analysis

1) The completeness and accuracy of the data obtained from the evaluation forms for the draft model and user manual were examined.

2) The evaluation scores for the appropriateness and feasibility of the draft model and user manual were reviewed.

3) The appropriateness and feasibility of the draft model and user manual were assessed by calculating the mean and standard deviation, and the mean scores were interpreted.

4) Data analysis was conducted to evaluate the appropriateness and feasibility of the draft participatory management model and its user manual. The responses from the experts were used to calculate the mean and standard deviation. A mean score of 3.51 or higher indicated that the experts agreed that the developed participatory management model to enhance teachers' classroom research competency for improving learner quality was appropriate and practically applicable.

5) The summary results from Phase 2 were used as input for Phase3.

6) The researcher personally conducted the data collection from the sample group.

Phase 3 (R2): Implementation of the Participatory Management Model to Enhance Teachers' Classroom Research Competency for Improving Learner Quality at Ban Pa (Billasapachasan) School.

3.1 Research Procedure This phase aimed to examine the results of implementing the participatory management model designed to enhance teachers' classroom research competency for improving learner quality. This stage represents the R2 phase of the research and development process. The findings from the expert validation of the draft participatory management

model and the draft user manual were revised and finalized based on experts' recommendations. The finalized model and its user manual were developed as practical guidelines for school administrators and teachers to apply in practice. The researcher implemented the model and its user manual at Ban Pa (Billasapachasan) School during the first semester of the 2023 academic year. The informants consisted of 15 teachers and 337 students, selected through purposive sampling.

3.2 Research Instruments The instruments used in this phase were as follows:

3.2.1 A pre-test and post-test measuring teachers' knowledge and understanding before and after the implementation of the participatory management model to enhance classroom research competency for improving learner quality.

3.2.2 An evaluation form assessing teachers' ability to design and write classroom research proposals.

3.2.3 An evaluation form assessing teachers' classroom research competency through supervision and follow-up monitoring.
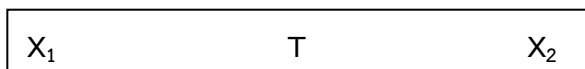
3.2.4 An evaluation form assessing the quality of teachers' classroom research outputs and learner quality outcomes after the enhancement of teachers' classroom research competency for improving learner quality.

3.3 Data Collection (Model Implementation)

3.3.1 The target group for the implementation consisted of 15 teachers from Ban Pa (Billasapachasan) School.

3.3.2 The model was implemented during the first semester of the 2023 academic year.

3.4 Research Design for Model Implementation The implementation of the participatory management model to enhance teachers' classroom research competency for improving learner quality employed principles of action research to examine the effectiveness of the model, test research hypotheses, and identify weaknesses for final improvement. This study adopted a research and development design using a One-Group Pre-test–Post-test design (Erawan, 2002), which can be represented symbolically as follows:

X_1	T	X_2

T refers to the development of the model (treatment)

X_1 refers to pre-test measurement

X_2 refers to post-test measurement

3.5 Data Processing and Analysis

3.5.1 Data obtained from the evaluation of the quality of teachers' classroom research outputs and learner quality outcomes were analyzed according to the framework of the participatory management model development. Mean scores and standard deviations were calculated, and the interpretation of mean scores followed the criteria proposed by Srisawat (2017) as follows:

3.5.2 The evaluation of the quality of teachers' classroom research outputs and learner quality outcomes employed a five-point rating scale. The interpretation criteria were as follows (Srisawat, 2017): to Wongwanich (2019), calculated as follows:

3.5.3 Data from the evaluation of teachers' classroom research quality and learner quality outcomes were further interpreted using the following criteria:

1) If the number of students achieving good and excellent post-learning outcomes combined accounted for 80% or more of the total number of students, the outcome was considered at a very good level.

2) If the combined percentage was 70–79%, the outcome was considered at a good level.

3) If the combined percentage was 60–69%, the outcome was considered at a fair level.

4) If the combined percentage was below 60%, the outcome was considered at a level requiring improvement.

5) If the combined percentage was below 60%, the outcome was considered at an improvement level.

3.5.4 The results were interpreted and synthesized to further refine the participatory management model in Phase 3, which would then be utilized in Phase 4.

3.6 Statistical Analysis The statistical measures used in this phase were the mean and standard deviation.

Phase 4（D2）: Evaluation of the Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality Ban Pa (Billasapachasan) School.

4.1 Evaluation of the Appropriateness and Usefulness of the Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality

4.1.1 Informants The informants consisted of 15 teachers from Ban Pa (Billasapachasan) School, selected through purposive sampling.

4.1.2 Research Instruments The research instrument was an evaluation form assessing the appropriateness and usefulness of the participatory

management model enhancing teachers' classroom research competency to improve learners' quality.

4.1.3 Data Collection The researcher collected data directly from 15 teachers of Ban Pa (Billasapachasan) School.

4.1.4 Data Analysis The collected evaluation forms were analyzed as follows:

1) The completeness of the responses was examined, and all questionnaires were found to be fully completed.

2) The responses were scored according to the specified criteria.

3) The data regarding the usefulness of the model were analyzed by calculating the mean and standard deviation, and the mean scores were interpreted based on the following criteria (Wongrattana, 2017) The interpretation criteria were as follows (Wongrattana, 2017)

4) The statistical methods used were mean and standard deviation.

4.2 Satisfaction Evaluation of the Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality

4.2.1 Data Collection

1) After the completion of the implementation and final revision of the participatory management model enhancing teachers' classroom research competency to improve learners' quality, the researcher administered a satisfaction questionnaire regarding classroom research to the teachers.

2) The satisfaction questionnaire responses were analyzed using the mean and standard deviation.

4.2.2 Data Analysis

1) Data were analyzed by calculating the mean and standard deviation. The interpretation criteria for the mean scores were as follows (Srisawat, 2017): The statistical methods used were mean and standard deviation.

4.2.3 Duration The research was conducted in April 2024.

Research Results

1. Results of the Study on the Current and Desired Conditions of the Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality

1.1 The results of the study on the participatory management model indicated that a model emphasizing the development of teachers' classroom research competency can concretely enhance learners' quality.

1.2 The results regarding the current conditions, desired conditions, and priority needs revealed an urgent necessity to develop a participatory management model in order to enhance teachers' research competency.

2. Results of the Development of the Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality

2.1 The developed model consisted of four phases: Preparation phase (3–6 months) Initial phase (6–12 months) Development phase (1–2 years) Sustainability phase (more than 2 years)

2.2 The evaluation results of the appropriateness and feasibility of the model showed that, overall, the draft participatory management

model was rated at the highest level of appropriateness and at a high level of feasibility.

2.3 The evaluation results of the appropriateness and feasibility of the model implementation manual indicated that the manual was complete, comprehensive, and easy to understand. It clearly emphasized operational procedures and classroom innovation, which are the core elements in improving learners' quality.

3. Results of the Implementation of the Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality

3.1 The results of the pretest and posttest comparison of teachers' knowledge showed that post-development knowledge scoreswere significantly higher than pre-development scores at the .05 level of statistical significance.

Table 1

Comparison of teachers' knowledge scores before and after development

Number (25)	Score before development	percentage	Score after development	percentage
$\overline{x}$	11.76	58.8	18.24	91.2
S.D.	1.27	-	0.98	-
T	22.15			
P	.000*			

3.2 The evaluation of teachers' ability in designing and conducting classroom research revealed that teachers demonstrated the highest level of competency, particularly in developing active learning units to support

the improvement of academic administration through the use of Professional Learning Communities (PLC).

3.3 The results of supervision and learning observation indicated that teachers were able to conduct classroom research effectively and demonstrated strong abilities in communication, knowledge transfer, and dissemination of research findings.

3.4 The evaluation results of learners' quality, teachers' quality, school quality, and community quality resulting from the implementation of the participatory management model showed positive outcomes across all dimensions.

4. Results of the Evaluation of the Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality

The evaluation results indicated that the overall appropriateness and usefulness of the model were at the highest level. The appropriateness of the implementation guideline manual was also rated at the highest level, and the usefulness of the model was evaluated at the highest level. In addition, teachers' overall satisfaction with classroom research was found to be at a high level.

Discussion the results

Phase 1 Research: A Study of the Current and Desired Conditions of a Participatory Management Model Enhancing Teachers' Classroom Research Competency to Improve Learners' Quality at Ban Pa (Billasapachasan) School.

(A study of components, current conditions, desired conditions, and priority needs)

The results of the study revealed that, under the current conditions at Ban Pa (Billasapachasan) School, teachers still faced limitations in planning active learning activities, lacked proficiency in conducting classroom research, and had insufficient integration of educational technology in teaching and learning. In contrast, the desired conditions indicated that teachers should possess higher research competency, be able to systematically design and conduct classroom research, and effectively apply research findings to improve learners' development. The results of the Modified Priority Needs Index (PNI_modified) calculation clearly showed that all components demonstrated a high level of priority needs, particularly in enhancing teachers' research knowledge and skills, as well as in developing learning management that integrates a variety of instructional approaches.

These findings reflect existing challenges among teachers at Ban Pa (Billasapachasan) School, including limited preparation of lesson plans and classroom research, discontinuous knowledge sharing and teamwork, and restricted integration of active learning techniques. These results are consistent with the concept proposed by Wongwanich (2014), which emphasizes that classroom research is a crucial tool for developing professional teachers; however, teachers often lack systematic research skills, indicating the necessity of establishing supportive mechanisms.

Phase 2 Research: Development of a Participatory Management Model to Enhance Teachers' Classroom Research Competency for Improving Learners' Quality at Ban Pa (Billasapachasan) School.

The synthesis of findings from Phase 1 led to the development of a participatory management model consisting of four key components. The model was reviewed and validated by nine experts. The evaluation results indicated that both the system and the operational manual were appropriate and feasible at high to the highest levels. The development of this system is consistent with Systems Theory, which emphasizes the interrelationships among various components in order to achieve high-quality outcomes. It also aligns with participatory management theory, which encourages the involvement of all stakeholders in the management process, thereby strengthening organizational implementation. Furthermore, expert validation confirmed the practical feasibility of the model. This finding is consistent with Fullan (2007), who emphasized that educational change in schools requires a clear structure, strong administrative support, and active teacher participation.

Phase 3 Research: Implementation of the Participatory Management Model to Enhance Teachers' Classroom Research Competency

1. Results of the Pretest and Posttest of Knowledge: Statistically Significant Improvement

The results of the knowledge tests clearly demonstrated the effectiveness of the participatory management model. The mean score increased from 11.76 points (58.8%) to 18.24 points (91.2%), representing an improvement of 32.4%, which was statistically significant (t = 22.15, p < .05).

This change is practically significant and consistent with the study by Guskey (2002), who emphasized that effective teacher development must be systematically designed and continuously evaluated. The findings

reflect the comprehensiveness and appropriateness of the developed system and are aligned with the principles of lifelong learning.

2. Teachers' Ability to Design and Conduct Classroom Research: Transforming Knowledge into Practice

The evaluation of teachers' abilities revealed performance at the highest level, indicating the success of the model in bridging theoretical knowledge and practical application. The highest scores were found in innovation development, research report writing, and dissemination of research findings. These results reflect the multidimensional and comprehensive development of teachers' competencies and are consistent with the findings of Darling-Hammond et al. (2017), who reported that effective professional development requires authentic practice and collegial support. The results of this study further confirm that participatory management can create a supportive environment for teacher learning and professional growth.

3. Supervision and Classroom Observation Results: Confirming Changes in Actual Practice

The supervision and classroom observation results, which were rated at the highest level, provide strong evidence that teachers were able to apply the developed competencies effectively in real classroom contexts. This outcome is particularly significant as it is based on evaluations conducted by experienced supervisors observing authentic instructional practices. According to Cochran-Smith and Lytle (2009), supervision outcomes also reflect the development of a Professional Learning Community (PLC) within schools. Similarly, DuFour and Eaker (2008) asserted that collaborative teacher learning leads to improved instructional practices and student achievement.

The feedback and professional dialogue observed during supervision indicate the establishment of a strong culture of collaborative learning.

4. Improvement in Learners' Quality: Impact on the Ultimate Educational Goal

The evaluation results showed that 89.5% of students achieved performance at a good level or above, representing a meaningful outcome and confirming that teacher competency development leads to tangible improvements in learner quality. This finding is consistent with Hattie (2012), whose meta-analysis identified teachers as the most influential factor affecting student achievement (effect size = 0.32). In particular, students demonstrated the highest performance in complex problem-solving skills and process skills (91.0%), reflecting the development of higher-order thinking skills essential for 21st-century learning, including critical thinking, communication, collaboration, and creativity.

The improvement in creative and innovative thinking skills (91.0%) is also consistent with Wagner (2012) concept of "survival skills" in the digital era. Balanced development was observed in basic skills (89.6%), learning ability (89.6%), and integrated work skills (89.2%), indicating holistic learner development.

5. Mechanisms of Change: An In-Depth Analysis of Success Factors

The success of the participatory management model can be explained through multiple theoretical frameworks. Senge (1990) concept of the learning organization provides a foundation for understanding the system's effectiveness, while systems thinking is evident in both the design and outcomes of the developed model.

6. Theoretical and Practical Implications: Developing a New Model

The implementation results provide substantial empirical evidence. First, they confirm the effectiveness of participatory management in the Thai educational context, where empirical studies have previously been limited. This finding is consistent with McNiff and Whitehead (2011), who emphasized the use of action research as a tool for organizational and teacher development, even in contexts with limited resources and infrastructure, through effective utilization of human capital and collaboration.

7. Implications for Educational Policy: Systemic Recommendations

The findings have significant implications for national teacher development policies. In particular, integrated teacher development emphasizing participation can lead to tangible improvements in educational quality. These results align with Thailand's 20-Year National Strategy (2018–2037), which emphasizes human capital development and the creation of a learning society. Furthermore, the findings support educational reform approaches that emphasize decentralization and strengthening school-level autonomy.

8. Limitations and Challenges: A Balanced Perspective

Despite the high level of success, certain limitations and challenges should be considered. The primary limitation is that the implementation was conducted in only one school and within a limited timeframe, which may not fully reflect the long-term sustainability of change.According to Rogers (2003) diffusion of innovations theory, scaling the model to other schools may face challenges related to contextual differences, personnel readiness, administrative support, and sustaining change over time.

9. Recommendations for Future Development: Building Sustainability

Future development should include longitudinal studies to examine the sustainability of change and system adaptability to emerging challenges. Comparative studies with schools in similar contexts are recommended to enhance the generalizability of findings.

The development of inter-school learning networks is also strongly recommended. In line with Hargreaves and Fullan (2012), professional exchange among teachers and schools should be strengthened. Additionally, more comprehensive impact evaluation systems should be developed, including assessments of economic and social impacts, to provide clearer evidence for teacher and educational development. Overall, the implementation of the participatory management model to enhance teachers' classroom research competency demonstrates high effectiveness and successfully achieves the objectives of improving educational quality. The findings confirm tangible benefits at both teacher and learner levels and contribute new knowledge that can be adapted and applied in broader educational contexts.

Phase 4 Research: Evaluation of the Participatory Management Model to Enhance Teachers' Classroom Research Competency for Improving Learner Quality at Ban Pa (Billasapachasan) School.

The results of the system evaluation indicated that teachers, students, and parents reported a high level of satisfaction with the model. In particular, teachers confirmed that the system effectively enhanced their classroom research competencies and could be practically applied to their instructional practices. Parents and members of the supervision committee perceived the model as beneficial to improving learner quality and appropriate for the context of a small-sized school. This evaluation highlights the success of developing a system that demonstrates both appropriateness

and feasibility, which aligns with quality development criteria in educational systems. These findings also reflect Sergiovanni (1994) concept of community leadership, emphasizing the importance of shared participation and collective acceptance among all stakeholders in developing effective and sustainable educational systems.

1. Effectiveness of the Participatory Management Model

The evaluation of the developed participatory management model revealed that the system demonstrated effectiveness at a high to the highest level. This is attributable to the systematic research and development process through which the model was created, including problem and needs analysis, system design and development, and field implementation. Consequently, the model is comprehensive and well aligned with the actual context of the school. The high effectiveness of the model is consistent with Sergiovanni (2006), who asserted that successful participatory management must be context-responsive and developed through collaborative processes involving all stakeholders. Furthermore, this finding is supported by the study of Dechakup and Yindeesuk (2016), which reported that participatory management models developed through step-by-step refinement and iterative implementation are more effective than models adopted directly from external sources.

2. Enhancement of Teachers' Classroom Research Competency

The evaluation results indicated that the participatory management model effectively enhanced teachers' classroom research competency. Teachers demonstrated a clear increase in their knowledge and understanding of the classroom research process. They also developed skills in identifying student learning problems, designing instructional

innovations to address these problems, and conducting classroom research in a systematic manner. The improvement in teachers' classroom research competency can be attributed to the participatory management approach, which emphasizes involvement at every stage, including planning, implementation, monitoring and evaluation, and continuous improvement. This finding is consistent with Joyce and Showers (2002), who emphasized that sustainable teacher competency development requires ongoing support and collaborative learning among teachers.

Moreover, the model facilitated opportunities for teachers to exchange experiences and engage in collaborative learning, leading to the establishment of a Professional Learning Community (PLC). This community-based approach is a critical factor in sustainable teacher development, as highlighted by DuFour and Eaker (2008), who identified PLCs as one of the most effective strategies for professional learning and school improvement.

Recommendations

1. Recommendations Based on the Findings of This Study

1.1 Input Factors The school demonstrates an urgent need to develop academic forums, such as research fairs, to disseminate classroom research outcomes, as well as to allocate sufficient budgets to support classroom research activities. These factors are essential for enhancing teachers' classroom research competencies and ultimately contributing to the improvement of learner quality.

1.2 Process Factors The findings reflect a strong need for development across all dimensions of the participatory management process, particularly in establishing professional learning communities and cultivating

an organizational culture that supports classroom research. These elements serve as a crucial foundation for continuously enhancing teachers' classroom research competencies.

1.3 Output Factors Development efforts should prioritize strengthening teachers' abilities to apply technology and data analysis skills. This will enable teachers to effectively use data to improve instructional practices and to create innovations that respond to the needs of learners in the 21st century.

1.4 Outcome Factors The results indicate successful outcomes in developing teachers' competencies across all dimensions of classroom research, especially in learning capacity, basic skill development, and the effective integration of skills for professional practice.

1.5 Feedback Factors Schools should emphasize the development of systematic feedback mechanisms that encourage reflection and input from teachers, parents, and students in order to sustainably enhance participatory management practices.

2. Recommendations for Future Research

2.1 Expansion to Other Schools The developed system has strong potential for expansion to other schools within the same educational jurisdiction and beyond. However, contextual adaptations may be required to suit the specific characteristics of each school. Educational service area offices should consider establishing policies that promote classroom research through participatory management approaches.

2.2 Development of Support Systems There should be a strong and sustainable support system, such as establishing district-level classroom research development centers, creating networks of teacher-researchers,

and developing effective mentoring systems. These mechanisms would ensure continuity and long-term sustainability of implementation.

2.3 Improvement of Teacher Performance Evaluation Systems Teacher performance evaluation systems should be revised to align with classroom research practices, ensuring that evaluation criteria emphasize the quality and impact of research on learner development rather than focusing solely on the quantity of research outputs.

References

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.

Dechakup, P., & Yindeesuk, P. (2016). *Teaching students to do projects, teaching teachers to conduct classroom action research*. Chulalongkorn University Printing House.

DuFour, R., & Eaker, R. (2008). *Revisiting professional learning communities at work: New insights for improving schools*. Solution Tree Press.

Erawan, P. (2002). *Classroom research*. Dokya Academic Publishing.

Fullan, M. (2007). *The new meaning of educational change*. Routledge.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice, 8*, 381–391.

Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.

Hattie, J. A. C. (2012). *Visible learning for teachers: Maximizing impact on learning*. Routledge.

Jaemmee, J. (2021). *Guidelines for developing participation of school boards in educational management under the Sing Buri Primary*

Educational Service Area Office [Master's thesis, M.Ed.].
Phranakhon Si Ayutthaya Rajabhat University.

Joyce, B. R., & Showers, B. (2002). *Student achievement through staff development* (3rd ed.). Association for Supervision and Curriculum Development.

Koettham, C. (2002). *Learner-centered teaching techniques*. Thai Wattana Panich Printing.

McNiff, J., & Whitehead, J. (2011). *All you need to know about action research* (2nd ed.). Sage Publications.

Phirormrak, K. (2001). *Learning and practice: Classroom research* (4th ed.). Nam Chang Printing.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Senge, P. (1990). *The fifth discipline: The art and practice of the learning organization*. Doubleday/Currency.

Sergiovanni, T. J. (1994). *Building community in schools*. Jossey-Bass.

Sergiovanni, T. J. (2006). *The principalship: A reflective practice perspective*. Pearson Education.

Sitthisombun, M. (2003). *Research methodology*. Faculty of Education, Naresuan University.

Srisawat, B. (2017). *Introduction to research* (10th ed.). Suwiriyasan.

Wagner, J. (2012). International trade and firm performance: A survey of empirical studies since 2006. *Review of World Economics, 148,* 235–267.

Wannsuk, D. (2020). *Teachers' participation in implementing the student care and support system at Rittiyawannalai School* [Master's thesis, M.Ed.]. North Bangkok University.

Wongrattana, C. (2017). *Experimental research designs and statistical analysis: Fundamental concepts and methods*. Chulalongkorn University Press.

Wongwanich, S. (2014). *Classroom action research* (17th ed.). Chulalongkorn University Press.

Wongwanich, S. (2019). *Needs assessment research* (4th ed.). Chulalongkorn University Press.

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