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An Evaluation of the Classroom Research Competency Preparation Project for Pre-service Teachers

Boonyapithak Suthasinee
Thaksin University, Thailand

Yoonisil Waiyawut
Srinakharinwirot University, Thailand

Kitrungruang Poranat
Silpakorn University, Thailand

Kasatsuntorn Kittirat
Thaksin University, Thailand

Pia Kaweechate
Thaksin University, Thailand

Botpiboon Uchuphorn
Yala Rajabhat University, Thailand

Taoto Raktawee
Mahamakut Buddhist University, Thailand

Thasuwan Wasinee
Thaksin University, Thailand

Mongkonsawasd Poonkeat
Thaksin University, Thailand

Rattanaphant Thanatcha
Nakhon Si Thammarat Rajabhat University, Thailand

Jingwangsa Piyada
Hatyai University, Thailand

Khongkaew Phacharawit
Matthayompuranawas School, Thailand

Abstract

This study aimed to evaluate the Classroom Research Competency Readiness Project for pre-service teachers utilising Stufflebeam's CIPP model.

Employing a mixed-methods approach, this study involved a sample of 559 participants. This comprised three project advisors, eight committee members, and nine guest speakers selected via purposive sampling, alongside 539 pre-service teachers from Thaksin University selected using simple random sampling based on Yamane's formula. Data were collected through structured interview forms and questionnaires and subsequently analysed using percentage, mean, standard deviation, and content analysis.

The findings revealed that the overall evaluation of the project was at the highest level. Specifically: (1) Context: The project strongly aligned with national policies regarding research competency and demonstrated high practical feasibility. (2) Input: Budget allocation and facilities

were sufficient, supported by policy-based mechanisms to resolve any deficits. (3) Process: Project operations successfully achieved defined goals through inclusive committee participation across all sectors. (4) Product: The initiative effectively encouraged pre-service teachers to genuinely apply their acquired knowledge to pedagogical practice.

For future research, conducting longitudinal studies to track the sustained impact of these RC competencies during actual teaching practicums is recommended. Additionally, investigating the integration of this readiness model with professional learning communities (PLCs) could provide specific insights into collaborative teacher development.

Keywords: CIPP Model, Project Evaluation, Readiness Preparation, Research Competency, Classroom Research

Introduction

Education is the cornerstone of sustainable national development and requires continuous reform to keep pace with global advancements. The Ministry of Education emphasises the importance of both quantitative and qualitative improvements in the educational system. A critical aspect of this reform is enhancing the application of knowledge in real-world contexts. This involves cultivating values of academic excellence, diligence, and resilience among learners (Ministry of Education, 2017).

Instilling research competency in teachers is a fundamental strategy for improving educational quality. The integration of research into practice, known as classroom action research, empowers teachers to systematically identify and solve pedagogical problems (Yoonisil et al., 2025). Consequently, the teacher as a researcher concept necessitates that educators possess specific competencies to conduct research within their unique contexts. The ultimate goal is to enhance student learning outcomes and pave the way for a brighter future for learners.

Despite the globally recognised shift toward the Teacher as Researcher paradigm, a significant gap persists between theoretical instruction in teacher preparation programs and the actual competency readiness of pre-service teachers. Previous evaluations of such readiness initiatives often operate in isolation, focusing predominantly on learning outcomes without systematically assessing the interplay between contextual relevance, resource adequacy, and implementation processes. Without a holistic evaluation mechanism, educational institutions lack the empirical evidence required to sustainably optimise their training models. Therefore, this study aims to address this critical gap by employing Stufflebeam's CIPP model to comprehensively evaluate a competency readiness project and provide a multidimensional framework that can be adapted for quality assurance in broader international teacher education contexts.

To ensure the effectiveness of teacher preparation and address the aforementioned evaluation gap, the Classroom Research Competency Readiness Project was implemented for pre-service teachers at the Faculty of Education, Thaksin University. This project is crucial for equipping future educators with the knowledge and practical skills necessary to conduct classroom research. Recognising the need for evidence-based improvements, this study employs the CIPP model as the conceptual framework to comprehensively evaluate the project across its four dimensions: context, input, process, and product. The findings from this multidimensional evaluation will provide essential empirical information for refining the project and ensuring that it meets the needs of personnel and effectively prepares pre-service teachers for their professional careers.

In recent international contexts, the CIPP evaluation model has been widely advocated as a dynamic tool for continuously improving teacher education, rather than merely providing static outcome judgments. For instance, studies by Nabilah and Suyanto (2025) and Khaksar et al. (2023) highlight that applying the CIPP framework to both pre-service and in-service teacher programs systematically identifies gaps in resource distribution (Input) and pedagogical integration (Process). Furthermore, the development of action research competency is increasingly recognised globally as a complex undertaking that extends beyond theoretical knowledge. According to Insorio (2024), equipping educators with these skills requires hands-on, contextualised training and active mentoring, which empowers teachers to autonomously address pedagogical challenges. Therefore, utilising the CIPP model to evaluate the Classroom Research Competency Readiness Project provides a globally aligned, multidimensional lens to ensure that pre-service teachers are comprehensively prepared in both theory and practice.

Research Objective

This study aimed to evaluate the Classroom Research Competency Readiness Project using Stuffle beam's CIPP model.

Review of Literature

The CIPP Evaluation Model

The theoretical framework for this study is grounded in the CIPP model developed by Daniel L. Stufflebeam. Wiboonsri (2003) and Navarat et al. (2025) describe the CIPP Model as a comprehensive framework for guiding educational evaluation and decision-making. Stufflebeam (1971) defined evaluation as a process of delineating, obtaining, and providing useful information for judging decision alternatives. This model classifies evaluation into four distinct types corresponding to four types of decisions:

- Context Evaluation: Serves planning decisions by identifying unmet needs and formulating objectives.
- Input Evaluation: Structures decisions by determining available resources and alternative strategies.
- Process Evaluation: Implements decisions by monitoring project operations and identifying defects.
- Product Evaluation: Serves recycling decisions by measuring outcomes against objectives to determine whether to continue, terminate, or modify the project.

Stufflebeam's concept of curriculum evaluation emphasises a continuous process that consists of three fundamental steps:

- Step 1: Delineating and clarifying the specific details to be evaluated.
- Answer: Step 2: Obtaining relevant information.
- Step 3: Provide information to serve as a guideline for decision-making.

Furthermore, the evaluation methodology comprises four types of evaluations corresponding to four distinct types of decisions, all of which are interrelated. These relationships are summarised in Figure 1.

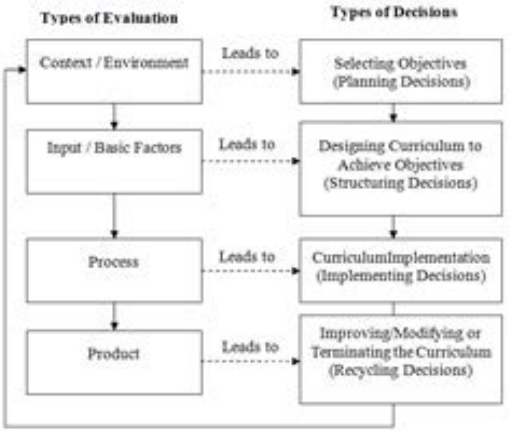


Figure 1 Types of Evaluation and Types of Decisions (Wongyai, 2011)

As illustrated, context evaluation leads to the selection of objectives. However, this stage does not yet encompass input evaluation. The selection of objectives serves as a guideline for project design. Input evaluation subsequently leads to project design decisions, providing data to propose various design approaches and formats. Process evaluation leads to decisions regarding project implementation and quality control. Finally, product evaluation leads to decisions concerning whether to continue, improve, modify, or terminate the project (Wongyai, 2011).

The CIPP model emphasises evaluation to support curriculum decision-making across four dimensions as follows:

Context Evaluation: This evaluation aims to obtain the rationale and principles necessary for defining objectives. The evaluation criteria cover policies, plans, visions, goals, and curriculum structures.

Input Evaluation: This evaluation aims to obtain information to support decisions on how to utilise existing resources and their potential to achieve curriculum objectives. The evaluation criteria cover budgets, facilities, characteristics/qualifications/ properties/ experiences of administrators, learners' background knowledge, media, materials/equipment/ textbooks, curriculum documents, support from the executive committee, and time/duration.

Process Evaluation: This evaluation aims to identify the strengths, weaknesses, or areas for development within the operational model in

comparison with expectations. The evaluation criteria cover curriculum management, supervision, monitoring, instructional management, measurement and evaluation, and educational quality assurance.

Product Evaluation: This evaluation aims to verify the extent to which the outcomes experienced by the learners align with the expected project objectives.

Related Research

The literature review in this research is a review of the literature concerning evaluative research using Stufflebeam's evaluation model (CIPP model). The researcher reviewed 11 such studies (Navarat et al., 2025; Wongthong et al., 2023; Pongnairat, 2023; Somjit, 2023; Jidman, 2022; Thaweewan et al., 2022; Sriphu et al., 2023; Phaphakdee, 2021; Chankaew, 2021; Jaisuesomboon, 2020; and Taewpho, 2020). These studies had consistent objectives: to evaluate projects using Stufflebeam's evaluation model (CIPP model), namely evaluating context, input, process, and product.

The sample groups used in all 11 studies were as follows: (Navarat et al., 2025) included administrators, teachers, staff, and students of the Faculty of Education, Nakhon Si Thammarat Rajabhat University, totalling 792 people using simple random sampling. (Wongthong et al., 2023) included teachers, school board members, students, and parents, totalling 141 people using purposive selection. (Pongnairat, 2023) included the population in Pathum Thani province, totalling 400 people using Yamane's randomisation table. (Somjit, 2023) included evaluation reports using the CIPP model in educational project evaluation from 2002 to 2017, totalling 150 volumes using purposive selection. (Jidman, 2022) included teachers and students, totalling 177 people obtained by purposive selection. (Thaweewan et al., 2022) included school administrators and teachers responsible for the project, totalling 24 people, and 166 students obtained by purposive selection. (Sriphu et al., 2023) included directors, project leaders, and network sectors, totalling 850 people using Yamane's randomisation table. (Phaphakdee, 2021) included administrators, teachers, educational personnel, student parent representatives, and school board members, totalling 120 people by purposive selection. (Chankaew, 2021) included district chiefs, assistant district officers, administrative officers, and contract employees of the integrated sub-district development project, totalling 23 people by purposive selection. (Jaisuomboon, 2020) included school directors, government teachers, basic education institution committees, and students of Wat Yai Ban Bor School, totalling 294 people obtained by purposive selection. (Taewpho, 2020) included administrators, teachers, basic education institution committees, and students, totalling 260 people by purposive selection.

The measurement instruments used to collect data in all 11 studies included interview forms, questionnaires, evaluation forms, report quality evaluation forms, and checklists for CIPP model usage. All measurement instruments were of good quality because they had efficiency values that passed the specified standard criteria. The statistics used in the data analysis for all 11 studies included frequency, percentage, mean, standard deviation, and content analysis.

The research results of all 11 studies yielded consistent results. The research by (Navarat et al., 2025) studied the evaluation of a student development project to have 4 characteristics according to graduate identity and found that the overall project evaluation ($\bar{X}$=3.92, S.D.=0.95) was lower than the decision criteria ($\bar{X}$=3.97), and most aspects were lower than the decision criteria, but when compared to standard criteria, it was at a high level. In terms of Context overall ($\bar{X}$=3.92, S.D.= 0.97), policy was implemented by bringing the Royal Policy to define policy direction in developing the project to align with needs and practical feasibility. In terms of Input ($\bar{X}$=3.90, S.D.=0.98), budget allocation overall was sufficient; for parts where the budget was insufficient, there were problem-solving methods according to budget allocation policy. In terms of Process ($\bar{X}$=3.92, S.D.=0.96), there was operation during the project work to achieve defined goals by appointing a responsible committee, with the deputy dean, student affairs staff, and faculty members taking responsibility to drive the project. In terms of Product ($\bar{X}$=3.94, S.D.=0.96$), students were promoted to have character development, good and correct attitudes toward the country, understanding

of a stable life foundation, strength, morality, good attitude toward employment and honest careers, and development as good citizens.

Wongthong et al., (2023) evaluated the School as Learning Community Promotion Project using the CIPP model of Koh Phangan Suksa School and found that: 1) context,input, and process were all at the highest level for teachers and school board members, and product was at the highest level for teachers and a high level for students and parents. 2) Guidelines for developing the School as Learning Community Promotion Project: interview results yielded concepts promoting the school as a learning community by developing a comprehensive curriculum, creating a learning community, promoting student-centered learning, and promoting teacher collaboration.

Pongnairat (2023) evaluated the Digital Identity Verification System Development Project (DOPA-Digital ID) via the ThaiD application, a case study in Pathum Thani province, and found that, according to the CIPP model, the expectation level and satisfaction level were significantly different at the 0.05 level, with the expectation level of participants higher than satisfaction in all aspects. In terms of satisfaction, the average for each issue was high.

Somjit (2023) conducted a meta-evaluation of using the CIPP model in educational project evaluation: an application of responsive meta-evaluation steps and found that: 1) The quality level of 150 educational project evaluation reports in Thailand using the CIPP model was at the "should be improved" level for all four standards and 30 criteria. 2) The analysis of patterns of CIPP model usage and misconceptions in applying the CIPP model. 3) The evaluation of the quality level of selected educational project evaluation reports using responsive meta-evaluation steps as criteria found that 25 items were implemented, accounting for 48.08%, which was at the "should be improved" level. 4) Guidelines for developing the quality of educational project evaluation reports in Thailand using the CIPP model for decision-making and obtaining correct and complete evaluation results in all dimensions.

Jidman (2022) evaluated a learning resource development project to promote efficient learning management at Tha Tum Municipal School, Surin Province, and found that: (1) Context evaluation results before the project were at a high level ($\bar{X}$=4.30, S.D=0.76); (2) Input evaluation results before the project were at the highest level ($\bar{X}$=4.76, S.D=0.56); (3) Process evaluation results during project operation were at the highest level ($\bar{X}$=4.64, SD=0.56); and (4) Product evaluation results after project operation were at the highest level ($\bar{X}$=4.66, SD=0.64).

Thaweewan et al. (2022) studied the evaluation of the active learning management process development project to promote career skills in the TSQP-2 project at Ban Thung Kha "Boonyakajorn Pracha-asa" School, Phuket, and found that: 1) context evaluation was appropriate at a high level; 2) input evaluation was appropriate at a high level; 3) process evaluation was appropriate at the highest level; and 4) product evaluation of students' career skills showed that overall, more than 80 percent of students had higher post-learning scores than pre-learning scores in all subject groups. Students' application of knowledge was at a high level, and overall satisfaction was at the highest level. It passed the criteria in all four aspects.

Sriphu et al. (2023) studied the project evaluation of the Metropolitan Health and Wellness Institution according to the Department of Health's operational drive issues, fiscal year 2022, and found that the overall operation was at a high level ($\bar{X}$=4.30, S.D.=0.43). When classified by aspect, Context had the highest mean ($\bar{X}$=4.39, S.D.=0.40), followed by Process ($\bar{X}$=4.33, S.D.=0.47), Input ($\bar{X}$=4.30, S.D.=0.47), and Product ($\bar{X}$=4.02, S.D.=0.76) respectively.

Phaphakdee (2021) studied the evaluation of the student care and support system development project at Yasothon Special Education Center and found that: 1) Context was at the highest level, Input was at a high level, Process was at a high level, and Product was at a high level. 2) Impact, Effectiveness, Sustainability, and Transportability overall had means at the highest level.

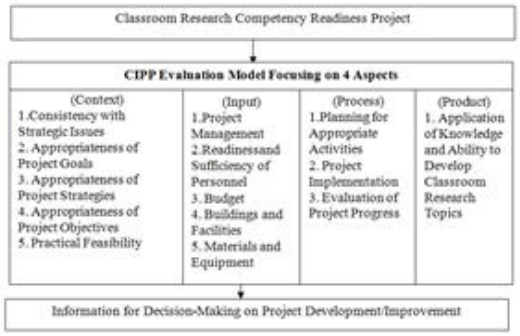
Chankaew (2021) studied the evaluation of the Integrated Sub-district Development Project (Tambon Smart Team) and found that: (1) The project could stimulate consumption little because it was a short-term employment project; (2) The database collected diverse information that was useful for

initial data in area development planning; context factors regarding personnel readiness were key to success; and (3) Regarding promoting participation in solving people's problems, the project achieved objectives through the input factor, namely, project employees.

Jaisuesomboon (2020) studied the evaluation of the Buddhist Way School project of Wat Yai Ban Bor School and found that: 1) The project evaluation overall was at a high level. 2) Recommendations and opinions were divided into five guidelines: defining operational principles, implementation, supervision, systematic teaching management, and continuous self-development.

Taewpho (2020) studied the project evaluation, The King's Philosophy Project for Developing Learning Centers according to the Philosophy of Sufficiency Economy of Wat Rai Khing (Sunthorn Uthit) School and found that the project evaluation was at a high level overall. When considering each aspect, it was found to be at a high level in every aspect, ordered by arithmetic mean from most to least as follows: context, process, input, and product.

Conceptual Framework of the Research



Data Collection

In this research, the researcher employed an evaluative research methodology with the following steps:

Methodology and Research Design

This study employed a mixed-methods research design to comprehensively evaluate the Classroom Research Competency Readiness Project through the lens of Stufflebeam's CIPP model. By systematically integrating both quantitative and qualitative approaches, the research design aimed to triangulate the data, thereby enhancing the comprehensiveness, depth, and reliability of the findings. The quantitative phase involved structured evaluation forms to measure the extent of project outcomes across a large sample, whereas the qualitative phase utilised in-depth interviews to capture the nuanced perspectives of key stakeholders regarding the project's context, input, process, and product. The evaluative research methodology proceeded as follows:

Population and Sample

To evaluate the Classroom Research Competency Readiness Project using Stufflebeam's CIPP model, the researcher defined the population and sample as follows:

Population

The population consisted of project advisors, the project responsibility committee, project guest speakers, project operating staff, and pre-service teachers of the Faculty of Education at Thaksin University (Songkhla and Phatthalung campuses), totalling 3,152 individuals. This comprised three project advisors, eight project responsibility committee members, nine project guest speakers, and 3,132 pre-service teachers of the Faculty of Education at Thaksin University (Songkhla and Phatthalung campuses).

Sample

The sample group consisted of project advisors, the project responsibility committee, project guest speakers, and pre-service teachers of the Faculty of Education at Thaksin University (Songkhla and Phatthalung campuses), totalling 559 individuals. They were obtained via simple random sampling with the following specific sampling procedures:

- **Project Advisors**: Three individuals were selected using purposive sampling. Their qualifications included experience in project administration and knowledge/ability in management, with a history of serving as advisors.
- **Project Responsibility Committee**: Eight individuals were selected using purposive sampling. Their qualifications included prior responsibility for and administration of projects.
- Project Guest Speakers: Nine individuals were selected using purposive sampling. Their

qualifications included knowledge and expertise in research competency and having passed research competency training certified by a higher education institution.

- **Pre-service Teachers**: Pre-service teachers from the Faculty of Education at Thaksin University (Songkhla and Phatthalung campuses). Using Yamane's table (Yamane, 1970) at a 95% confidence level with a 5% error margin, a sample size of at least 539 individuals was required. The researcher determined the sample using a 5% proportion of all students on each campus of the Faculty of Education at Thaksin University. A total of 539 participants were obtained using simple random sampling.

Research Instruments

Construction and Quality Verification

To evaluate the Classroom Research Competency Readiness Project using Stufflebeam's CIPP model, the researcher constructed four research instruments: three interview forms and one evaluation form. These were characterised as five-point rating scales and open-ended questions, with the following details:

Interview forms (for advisors, the project responsibility committee, and project guest speakers) were constructed and verified for quality using similar methods, as follows:

- Studied documents and research related to classroom research competency readiness. 2. Study concepts related to constructing interview forms.
- Constructed interview forms according to the context of Stufflebeam's CIPP model for each aspect to align with the evaluation targets.
- Submitted the completed interview forms to three experts. The results of the item–objective congruence (IOC) index consistency consideration were 1.00.
- Revised and corrected based on the experts' suggestions.
- Prepared complete versions of the data collection instruments.

The evaluation form for pre-service teachers was constructed and verified for quality as follows:

- Studied documents and research related to classroom research competency readiness.
- Studied concepts related to the construction of evaluation forms.
- Constructed the evaluation form according to the context of Stufflebeam's CIPP model for each aspect to align with the evaluation targets.
- The completed evaluation form was submitted to three experts. The result of the item–objective congruence (IOC) index consistency consideration was 1.00.
- Revised and corrected based on the experts' suggestions.
- The evaluation form was tried out with 30 pre-service teachers who were not part of the sample group and studied in the Faculty of Education (or Faculty of Education). Reliability was calculated using Cronbach's alpha coefficient formula (-Coefficient), resulting in a reliability value of 0.96.
- The complete version was prepared for data collection.

Data Collection Methods

Quantitative Data Collection

Data collection using the evaluation form proceeded as follows:

- **Step 1**: We coordinated with pre-service teachers at both campuses of the Faculty of Education at Thaksin University to request their cooperation in data collection.
- **Step 2**: Data were collected on January 18, 2026, following project implementation.
- **Step 3:** The obtained data were used for further analysis.

Qualitative Data Collection

Data collection using interview forms proceeded as follows:

- **Step 1**: Coordinate with project advisors, the project responsibility committee, and project guest speakers to conduct data collection at the specified dates, times, and locations.
- **Step 2:** Interviews were conducted personally on the appointed dates and times.
- **Step 3:** The data obtained from the interviews were organised and categorised according to the issues presented in Table 1 for use in content analysis.

Table 1 Data Collection for the Evaluation of the Classroom Research Competency Readiness Project

Evaluation Aspect	Date of Data Collection	Data Collection Instrument	Key Informant
Context	December 2025, 3		Project Advisors
	December 2025, 17	Interview Forms	Project Committee
	December 2025, 25		Project Guest Speakers
	January 2026, 18	Questionnaire	Pre-service Teachers
Input	December 2025, 3		Project Advisors
	December 2025, 17	Interview Forms	Project Committee
	December 2025, 25		Project Guest Speakers
	January 2026, 18	Questionnaire	Pre-service Teachers
Process	December 2025, 3		Project Advisors
	December 2025, 17	Interview Forms	Project Committee
	December 2025, 25		Project Guest Speakers
	January 2026, 18	Questionnaire	Pre-service Teachers
Product	December 2025, 3		Project Advisors
	December 2025, 17	Interview Forms	Project Committee
	December 2025, 25		Project Guest Speakers
	January 2026, 18	Questionnaire	Pre-service Teachers

Data Analysis and Statistics

To evaluate the Classroom Research Competency Readiness Project, the researcher verified the accuracy and completeness of the data obtained from interview and evaluation forms and subsequently performed data analysis as follows:

Quantitative Data Analysis

- Frequency distribution and percentage were analysed.
- Calculated the mean ($\bar{X}$) and standard deviation (S.D.) and compared them with the interpretation criteria as follows:

Interpretation Criteria

- Mean 4.50 – 5.00 indicates Highest Level
- Mean 3.50 – 4.49 indicates High Level
- Mean 2.50 – 3.49 indicates Moderate Level
- Mean 1.50 – 2.49 indicates Low Level
- Mean 1.00 – 1.49 indicates Lowest Level

3. The interpreted mean values were compared with the decision criteria across the four evaluation aspects: context, input, process, and product.

Determination of Evaluation Decision Criteria

To evaluate the Classroom Research Competency Readiness Project, the results covered four evaluation aspects: context, input, process, and product. Experts jointly considered and defined the decision criteria for the evaluation results, as detailed in Table 2.

Table 2 Criteria for Decision-Making in Each Evaluation Aspect as Determined by Experts

Aspect / Expert	Expert 1	Expert 2	Expert 3	Mean
Context	3.91	4.00	4.13	3.86
Input	3.00	4.00	5.00	4.00
Process	3.00	4.13	5.00	4.13
Product	3.00	3.86	4.95	3.86

Qualitative Data

For the analysis of qualitative data from the evaluation of the Classroom Research Competency Readiness Project, the results obtained from interview forms and questionnaires were organised and categorised by aspect. This data was then subjected to content analysis according to the defined issues.

Results

This evaluative research aimed to assess the Classroom Research Competency Readiness Project using Stufflebeam's CIPP model to obtain

information regarding context, input, process, and product. The researcher presents the results in two parts as follows:

Part 1 General Status of Respondents

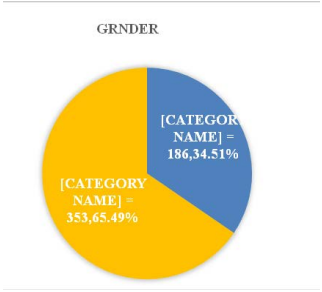


Figure 1 Frequency and Percentage of Respondents Classified by Gender

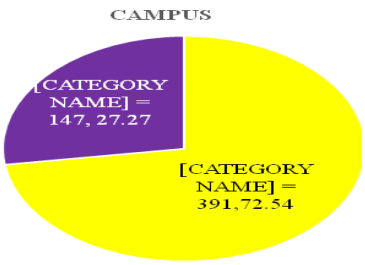


Figure 2 Frequency and Percentage of Respondents Classified by Campus Affiliation

Part 2 Evaluation Data of the Classroom Research Competency Readiness Project

This section presents the overall evaluation data regarding context, input, process, and product, as well as information on problems, suggestions, and guidelines for project development and improvement.

The qualitative findings, including the interview results from project advisors, the project responsibility committee, and project guest speakers, provided an overall opinion on the Classroom Research Competency Readiness Project. It was found that, overall, the project adopted policies regarding classroom research competency development in accordance with the research competency framework of the Teacher Council of Thailand (Khurusapha) and the Ministry of Education. These frameworks were used to determine policy directions, strategic issues, goals, strategies, and objectives for project development, ensuring alignment with needs and practical feasibility.

Regarding Context, the suitability of the project objectives was studied. The objectives were found to be practical, with clearly defined operational plans and goals. The activities effectively developed students' potential in accordance with classroom research competencies. The project presented challenging objectives for students, appropriate to current conditions and educational problems, and practical for implementation. The project was also deemed suitable for the social environment and community needs. The activities were accepted by the operating committee and met the students' needs. Students expressed a desire to participate and were actively involved in project activities, ensuring that the project aligned with policy requirements and was successfully implemented. To support the project, the institution collaborated with all sectors in the Southern region to organise forums and survey the needs of students wishing to participate, using this data as a basis for planning. Furthermore, a responsible committee comprising qualified experts from various sectors was appointed for each project to discuss guidelines for organising the project in alignment with the institutional context and the community area.

Regarding input, budget allocation was sufficient. In cases of insufficiency, policy-based solutions for budget allocation were applied. The majority of the budget was allocated to procuring learning media, materials, and equipment for practical use. Regarding facilities, the institution facilitated buildings, locations, materials, equipment, learning documents, classrooms, and various community learning resources, ensuring sufficiency for the students.

Regarding the process, operations were conducted to achieve the defined goals. A responsible committee was appointed, with participation from all sectors, to drive the project toward its goals. Additionally, a committee was appointed to monitor and evaluate the progress of the project's operations.

Regarding the product, the project successfully encouraged students to genuinely apply the knowledge gained in practice. It instilled positive attitudes toward classroom research and simplified the perspective on developing research topics. The content integrated morality, ethics, and codes of

conduct regarding classroom research with human subjects to align with the project's objectives, indicators, and expected outputs. Furthermore, the project enabled students to apply knowledge, understanding, and experiences from the project to their daily lives, fostering processes and developing participants into novice researchers capable of transferring knowledge to others.

Quantitative Findings, the interview findings from project advisors, the project responsibility committee, and project guest speakers were consistent with the assessment results from the pre-service teachers.

The evaluation results of the Classroom Research Competency Readiness Project using the CIPP model, as assessed by pre-service teachers, revealed that the overall opinion was at the highest level ($\bar{X}$= 4.65, S.D.=0.43), which was higher than the decision criteria ($\bar{X}$=3.96). When considering each aspect, it was found that the aspect with the highest mean was product ($\bar{X}$=4.68, S.D.=0.45), higher than the decision criteria ($\bar{X}$=3.86). When considering each aspect, it was found that the aspect with the highest mean was Product ($\bar{X}$=4.68, S.D.=0.45), higher than the decision criteria ($\bar{X}$=3.86). This was followed by Context ($\bar{X}$=4.65, S.D.=0.43), higher than the decision criteria ($\bar{X}$=3.86); Process ($\bar{X}$=4.64, S.D.=0.47), higher than the decision criteria ($\bar{X}$=4.13); and the aspect with the lowest mean was Input ($\bar{X}$=4.63, S.D.=0.48), which was still higher than the decision criteria ($\bar{X}$=4.00), as shown in Table 3.

Table 3 Comparison of the Mean of Overall Project Evaluation Results against Interpretation Criteria and Evaluation Decision Criteria

Evaluation Aspect	Pre-service Teachers (n = 539)			Decision Criteria	
	Evaluation Results		Interpretation	Criteria Level	Conclusion
	X□	S.D.			
Context	4.65	0.43	Highest	3.86	Higher than criteria
Input	4.63	0.48	Highest	4.00	Higher than criteria
Process	4.64	0.47	Highest	4.13	Higher than criteria
Product	4.68	0.45	Highest	3.86	Higher than criteria
Total	4.65	0.43	Highest	3.96	Higher than criteria

When considering each aspect, the evaluation results of the Classroom Research Competency Readiness Project are as follows:

Considering the evaluation items, the appropriateness of the project objectives was found to have the highest mean score. This was followed by practical feasibility, while the assessment of the social environment and community needs had the lowest mean score, as shown in Table IV.

Upon considering the evaluation items, it was found that the item with the highest mean score was that the personnel responsible for the project possessed good knowledge and understanding of the principles and methods of project implementation. This was followed by the buildings and facilities being conducive to organising activities and the sufficiency of personnel responsible for project implementation, respectively, as shown in Table 5.

The evaluation items revealed that project administrators operating according to the defined plan had the highest mean score. This was followed by organising meetings to prepare for project activity implementation and providing support for materials and equipment in operating project activities, as shown in Table VI.

Upon considering the evaluation items, it was found that the item with the highest mean score was the ability to transfer the body of knowledge to others. This was followed by the ability to apply the knowledge gained in educational institutions as student teachers and the ability to apply the knowledge in daily life, respectively, as shown in Table 7.

Table 4 Evaluation Results of the Classroom Research Competency Readiness Project Regarding Context Compared against Interpretation Criteria and Evaluation Decision Criteria

Context	Pre-service Teachers (n = 539)		Interpretation Criteria	Decision Criteria
	Evaluation Results		Opinion Level	Conclusion
	X□	S.D.		
				(Decision criteria ≥ 3.86)
- Appropriateness of Project Objectives	**4.66**	**0.44**	**Highest**	**Higher than criteria**
1. The project objectives are practically feasible.	4.67	0.51	Highest	Higher than criteria
2. The Student Affairs Division has clear plans and goals for project implementation.	4.64	0.54	Highest	Higher than criteria
3. Activities within the Classroom Research Competency Readiness Project for pre-service teachers at the Faculty of Education, Thaksin University.	4.65	0.57	Highest	Higher than criteria
4. This project has objectives that challenge the students' abilities.	4.64	0.54	Highest	Higher than criteria
5. The project objectives are appropriate for the current conditions and educational problems.	4.69	0.51	Highest	Higher than criteria
- Practical Feasibility	**4.65**	**0.46**	**Highest**	**Higher than criteria**
6. The project can be practically implemented.	4.66	0.52	Highest	Higher than criteria
7. The project is appropriate for the current conditions and practical realities.	4.65	0.55	Highest	Higher than criteria
8. In practice, the project activities can develop students' readiness in classroom research competency for actual application.	4.66	0.55	Highest	Higher than criteria
- Assessment of Social Environment and Community Needs	**4.64**	**0.49**	**Highest**	**Higher than criteria**
9. The project activities are accepted by the students.	4.63	0.54	Highest	Higher than criteria
10. Students in the institution have a desire to participate in the project.	4.64	0.56	Highest	Higher than criteria
11. Students participate in the project activities.	4.65	0.56	Highest	Higher than criteria

Table 5 Evaluation Results of the Classroom Research Competency Readiness Project Regarding Input Compared against Interpretation Criteria and Evaluation Decision Criteria

Input	Pre-service Teachers (n = 539)		Interpretation Criteria	Decision Criteria
	Evaluation Results		Opinion Level	Conclusion
	X□	S.D.		
			(Decision criteria ≥ 4.00)	
- Project Management: Readiness and Sufficiency of Personnel, Budget, Facilities, and Materials and Equipment	**4.63**	**0.48**	**Highest**	**Higher than criteria**
12. The number of personnel responsible for project implementation is sufficient.	4.62	0.55	Highest	Higher than criteria

13. The personnel responsible for the project possess good knowledge and understanding of the principles and methods of project implementation.	4.66	0.55	Highest	Higher than criteria
14. The supporting budget is sufficient to cover project operating expenses.	4.60	0.58	Highest	Higher than criteria
15. The buildings and facilities for organizing activities are conducive to the arrangement of activities.	4.64	0.57	Highest	Higher than criteria
16. The supported materials and equipment are sufficient for conducting project activities.	4.62	0.54	Highest	Higher than criteria

Table 6 Evaluation Results of the Classroom Research Competency Readiness Project regarding Process Compared against Interpretation Criteria and Evaluation Decision Criteria

Process	Pre-service Teachers (n = 539)		Interpretation Criteria	Decision Criteria
	Evaluation Results		Opinion Level	Conclusion
	X□	S.D.		
				(Decision criteria ≥ 4.13)
- Project Implementation (หรือ Operation during Implementation	**4.63**	**0.51**	**Highest**	**Higher than criteria**
17. Materials and equipment support is provided for the implementation of project activities.	4.63	0.56	Highest	Higher than criteria
18. Budgetary support is provided for the implementation of project activities.	4.63	0.58	Highest	Higher than criteria
19. During the activity implementation, operations are conducted appropriately.	4.62	0.59	Highest	Higher than criteria
- Planning for Appropriate Activities	**4.65**	**0.52**	**Highest**	**Higher than criteria**
20. Project administrators develop a project plan.	4.63	0.60	Highest	Higher than criteria
21. Project administrators operate according to the defined plan.	4.67	0.57	Highest	Higher than criteria
22. Meetings are organized to prepare for the implementation of project activities.	4.64	0.60	Highest	Higher than criteria

Table 7 Evaluation Results of the Classroom Research Competency Readiness Project Regarding Product Compared against Interpretation Criteria and Evaluation Decision Criteria

Process	Pre-service Teachers (n = 539)		Interpretation Criteria	Decision Criteria
	Evaluation Results		Opinion Level	Conclusion
	X□	S.D.		
				(Decision criteria ≥ 4.13)
- Application of Knowledge and Abilities in Research Development	**4.68**	**0.45**	**Highest**	**Higher than criteria**
23. Public relations for the project implementation are clear and comprehensive.	4.65	0.56	Highest	Higher than criteria
24. Appropriateness of the duration for implementing activities.	4.64	0.55	Highest	Higher than criteria
25. Overall management system.	4.66	0.56	Highest	Higher than criteria

26. Knowledge and understanding regarding classroom research competency readiness.	4.68	0.53	Highest	Higher than criteria
27. Ability to apply the gained knowledge in educational institutions as pre-service teachers.	4.70	0.53	Highest	Higher than criteria
28. Ability to apply the gained knowledge in daily life.	4.69	0.54	Highest	Higher than criteria
29. Ability to transfer the body of knowledge to others.	4.71	0.50	Highest	Higher than criteria

Discussion

Based on an evaluation of the Classroom Research Competency Readiness Project, the researcher discusses the findings according to the research objectives as follows:

Overall Project Evaluation

The overall evaluation results of the Classroom Research Competency Readiness Project, based on the students' opinions, indicated the highest level of appropriateness and were higher than the decision criteria set by the experts. This is consistent with the interviews with project advisors, the project responsibility committee, and guest speakers, which revealed that policies, including royal policies, were utilised to determine the project's developmental direction to align with the needs and practical feasibility of the readiness project. Budget allocation was sufficient; in cases of insufficiency, policy-based problem-solving methods were applied, and facilities were adequate for the students. Ongoing project operations successfully achieved the defined goals through the appointment of a responsible committee. Furthermore, promoting students' development in classroom research competency enabled them to genuinely apply the gained knowledge to their daily lives and future careers.

These findings are consistent with previous studies (Navarat et al., 2025; Wongthong et al., 2023; Pongnairat, 2023; Somjit, 2023; Jidman, 2022; Thaweenan et al., 2022; Sriphu et al., 2023; Phaphakdee, 2021; Chankaew, 2021; Jaisuesomboon, 2020; and Taewpho, 2020), which evaluated projects using the CIPP model and found them to be appropriate and effective at a good to very good level across all aspects (context, input, process, and product). This reflects that the project was systematically designed and implemented, genuinely responding to the need to develop participants' classroom research competencies. Considering the overall picture:

The context evaluation indicated that the project aligns with educational quality development policies and guidelines, as well as teachers' needs to continuously develop their potential in various areas, and plays a crucial role for teachers as developers of student learning. This resulted in clear project goals and a justified need for implementation.

The input evaluation revealed that the project was ready in terms of the curriculum, guest speakers, media, and supporting resources conducive to research competency development. Organising activities that blended theoretical knowledge with practical training helped participants connect research concepts with real teaching contexts, a key component in practical competency development.

The process evaluation reflected that the project implementation followed the defined plan. Participatory learning activities promoted continuous knowledge exchange and reflection, making participants enthusiastic and fostering a positive attitude toward classroom research. This process helped reduce the anxiety and common obstacles teachers face when conducting research.

Product evaluation findings indicated that participants demonstrated a clear increase in classroom research competencies, encompassing knowledge, understanding, and the ability to design and conduct research. Participants also showed readiness to apply the research process to improve their own classroom learning management, reflecting the project's success in achieving its set objectives.

Context Evaluation Results

The context evaluation results, based on students' overall opinions, indicated the highest level of appropriateness and exceeded the decision criteria. This is consistent with the interviews with project advisors, the responsible committee, and guest speakers, who found that the classroom research competency policies of the Teacher Council of Thailand and the Ministry of Education determined the policy direction, strategic issues, goals, strategies, and objectives of the project. The appropriateness of the project objectives was studied and found to be practically feasible, with clear operational plans and goals. The students accepted the project activities, who expressed a desire to participate and actively engaged in the activities. Consequently, the project aligned with policy requirements and could be clearly translated into practice. This is consistent with studies by Navarat et al. (2025), Wongthong et al. (2023), Pongnairat (2023), Somjit (2023), Jidman (2022), and Thaweenan et al. (2022), who found that the project context aligned with educational policies and the necessity to develop teachers' classroom research competencies—a crucial mechanism for improving learning management quality and elevating student achievement. It aligns with the concept that classroom research is part of the teaching profession's role and a systematic tool for instructional development. Setting project goals that responded to the actual problems and needs of the target group gave the project a clear direction and made its implementation worthwhile.

Input Evaluation Results

The input evaluation results, based on the overall opinions of the students, indicated the highest level of appropriateness and were higher than the decision criteria. This is consistent with the interviews with project advisors, the responsible committee, and guest speakers, who found that the overall budget allocation for the project was sufficient. Any budgetary constraints were addressed in accordance with the resource allocation policies. Regarding facilities and classrooms, the educational institution facilitated buildings, locations, materials, equipment, learning documents, classrooms, and various community learning resources, ensuring sufficiency for the students. This aligns with the studies by Navarat et al. (2025), Sriphu et al. (2023), Phaphakdee (2021), Chankaew (2021), Jaisuesomboon (2020), and Taewpho (2020), who evaluated projects using the CIPP model and found appropriateness in course structure, guest speakers, media, training materials, and project duration. Specifically, organising activities that emphasised both theory and practice enabled participants to connect academic knowledge with the real context of classroom learning management. Having guest speakers with direct expertise in educational and classroom research ensured a correct understanding and reduced errors in applying the research process, aligning with the competency development concept that emphasises knowledge, skills, and attitudes concurrently.

Process Evaluation Results

The process evaluation results, based on the overall opinions of the students, indicated the highest level of appropriateness and were higher than the decision criteria. This is consistent with the views of the project advisors, responsible committee, and guest speakers, who found that operational levels and ongoing project implementation were conducted to achieve the set goals. A responsible committee was appointed to drive the project toward its goals, and a separate committee was appointed to evaluate the progress of project operations. These findings are consistent with Navarat et al. 's (2025) study, as well as those of Wongthong et al. (2023), Thaweenan et al. (2022), Sriphu et al. (2023), Phaphakdee (2021), Chankaew (2021), and Jaisuesomboon (2020), who found that project activities were implemented according to the defined plan. Participatory learning methods, such as discussions, practical exercises, group work, and exchanging learning from real experiences, were utilised, resulting in participants being enthusiastic and actively involved in the learning process throughout the project's duration.

Product Evaluation Results

The product evaluation results, based on the overall opinions of the students, indicated the highest level of appropriateness and exceeded the decision criteria. This is consistent with the interviews with

project advisors, the responsible committee, and guest speakers, which revealed that the project successfully encouraged students to genuinely apply the gained knowledge into practice. It instilled positive attitudes toward classroom research and simplified the perspective on developing research topics. Content regarding morality, ethics, and research codes of conduct was integrated to continuously align with project objectives, indicators, and outputs. Furthermore, participants could apply the knowledge, understanding, and experience gained from the project to their daily lives, internalising the processes and developing themselves into novice researchers. This is consistent with studies by Navarat et al. (2025), Wongthong et al. (2023), Pongnairat (2023), Somjit (2023), and Taewpho (2020), who evaluated projects using the CIPP model and found that participants had increased classroom research competencies. This included knowledge and understanding of research steps, research design capabilities, tool development, and basic data analysis, along with positive attitudes toward classroom research. Additionally, the majority of participants were able to develop classroom research proposals or plans that aligned with their own teaching contexts, reflecting that the project tangibly achieved its objectives in preparing research competencies and showed a strong potential for participants to use the research results to improve future learning management.

Study Limitations

Although this study provides a comprehensive evaluation of the Classroom Research Competency Readiness Project using the CIPP model, certain limitations should be acknowledged. First, the research was conducted exclusively within the Faculty of Education at Thaksin University. Consequently, the findings regarding the project's context, input, and processes are closely tied to the specific institutional environment, administrative structure, and resource availability of this university. Caution should be exercised when generalising these results to other educational institutions with varying contexts. Second, although the mixed-methods approach robustly triangulates the data, the evaluation represents a specific timeframe immediately following the project's implementation. The long-term, longitudinal impacts of the readiness program on PSTs ' sustained research practices throughout their professional careers were beyond the scope of this study.

Conclusions

A multidimensional evaluation utilising the CIPP model reveals that robust institutional support and resource adequacy (input) serve as fundamental catalysts for project success. When coupled with rigorous, participatory planning and active committee engagement (process), broad national educational mandates (context) can be effectively translated into tangible outcomes. Ultimately, the successful development of PSTs, classroom research competencies (product) is not an isolated achievement but rather a direct result of a highly synergistic operational ecosystem. This suggests that future teacher preparation programs must prioritise holistic structural alignment over mere instructional delivery to ensure sustainable professional development.

Research Recommendations

Based on the highest-rated product outcome regarding the 'ability to transfer the body of knowledge to others' $\bar{x}$=4.71, educational institutions should establish structured peer-mentoring systems or professional learning communities (PLCs). In these settings, pre-service teachers who have completed the readiness project can actively serve as mentors to junior students, institutionalising the research competency within the university culture.

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Author Details

Boonyapithak Suthasinee, *Thaksin University, Thailand*

Yoonisil Waiyawut, *Srinakharinwirot University, Thailand*

Kitrungruang Poranat, *Silpakorn University, Thailand*

Kasatsuntorn Kittirat, *Thaksin University, Thailand,* ***Email ID****: kittirat@tsu.ac.th*

Pia Kaweechate, *Thaksin University, Thailand*

Botpiboon Uchuphorn, *Yala Rajabhat University, Thailand*

Taoto Raktawee, *Mahamakut Buddhist University, Thailand*

Thasuwan Wasinee, *Thaksin University, Thailand*

Mongkonsawasd Poonkeat, *Thaksin University, Thailand*

Rattanaphant Thanatcha, *Nakhon Si Thammarat Rajabhat University, Thailand*

Jingwangsa Piyada, *Hatyai University, Thailand*

Khongkaew Phacharawit, *Matthayompuranawas School, Thailand*