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The Need in Enhancing the Standard of Teaching related to Assessment as Learning Indicators - Summative Assessment Indicators Leading to School Quality Curriculum Development

Waiyawut Yoonisil

Srinakharinwirot University, Thailand

Kittirat Kasatsuntorn

Thaksin University, Thailand

 <https://orcid.org/0009-0003-5183-0514>

Raktawee Taoto

Mahamakut Buddhist University, Thailand

Jakchai Trakoonosot

Bansomdejchaopraya Rajabhat University, Thailand

Wachiraya Sadsang

Prasarnmit Demonstration School (Elementary), Thailand

Setthawut Penthinapong

Independent Scholar, Thailand

Kaweechate Pia

Bankungwangwua School, Thailand

Abstract

This research aims to study the need to enhance the standard of teaching related to assessment as learning indicators and summative assessment indicators, leading to the development of a high-quality school curriculum. It is survey research with eighty participants selected using multi-stage sampling. The research tools included questionnaires assessing conditional needs. Data analysis was conducted using means, standard deviation, and PNI (Priority Need Index) Modified.

The research results indicate that the need to enhance the standard of teaching related to assessment as learning indicators and summative assessment indicators is crucial for developing a high-quality school curriculum. Overall, the current condition of the need to raise the standard of teaching is at a moderate level ($\bar{X}=3.25$), while the desired condition is at a high level ($\bar{X}=4.49$). The overall need index is 0.276. When considering individual aspects, it was found that the design of up-to-date learning materials has the highest need index. This is followed by classroom research and school curriculum development, respectively.

Keywords: Needs Analysis, Guidelines for Enhancing Research Competencies, The School Curriculum

Introduction

The modern world is experiencing rapid and continuous transformations across various contexts, including society, culture, economy, politics, science, governance, technology, and communication. Despite these changes, education remains a fundamental mechanism for enhancing the quality of human life, enabling individuals to sustain themselves amid such shifts. Effective education stimulates the potential for self-directed learning ([McKinsey Report, 2007](#)). This implies

that in the realm of educational management, teachers play a pivotal role in driving and encouraging learners' development through the curriculum, which serves as the guiding framework for students to achieve their full potential. Consequently, educational institutions bear a significant responsibility in developing school curricula that lead to efficient classroom teaching and learning, thereby assuring parents and communities that students meet both national curriculum standards and local needs.

To fulfill this mandate, educational institutions must design curricula that not only encompass the core basic education framework but also address the specific issues and requirements of the community and locality. Key responsibilities of educational institutions include developing school curricula, promoting and supporting staff development, allocating budgets and resources, monitoring curriculum implementation, and overseeing internal evaluations to ensure the effectiveness of teaching and learning ([Radchakom, 2014](#)). Teacher self-development is a critical factor in effective teaching practice. In this era of globalization, it is imperative for teachers to continually develop themselves and refine their teaching methods to keep pace with societal changes and meet increasing public expectations. Currently, significant challenges exist in the development of teachers and educational personnel. Evidence shows that teachers face issues related to the quality of school curriculum development, indicator analysis, the integration of lesson plans into classrooms, the development of assessment tools aligned with indicators, the design of teaching processes, the creation of modern learning materials, and the conduct of classroom research ([Office of the Education Council, 2014](#)). Despite these challenges, it is essential for teachers and educational personnel to receive ongoing professional development to enhance their knowledge and skills in curriculum design, aligning indicators with teaching practices, effectively implementing lesson plans in classroom.

Given these challenges, this study aims to investigate the essential needs for raising teaching standards to align with both intermediate and terminal indicators, ultimately leading to the development of high-quality school curricula. The findings are intended to provide a framework for the professional

development of teachers and educational personnel, offering valuable insights for educational institutions and related agencies to plan and guide future professional development initiatives effectively.

Research Objective

To investigate the needs for enhancing teaching standards by aligning them with both intermediate and terminal indicators, thereby fostering the development of a high-quality school curriculum.

Review of Literature

Needs Assessment

Needs assessment is the process of identifying gaps between the current state and the desired state ([Reviere et al., 1996](#)). It aims to determine the discrepancies between what currently exists and what ideally should be ([Wongwanich, 2019](#)). This involves clearly defining the desired outcomes and evaluating the existing conditions to understand their characteristics. The results are then analyzed to identify necessary changes ([Kaufman et al., 1993](#); [Witkin, 1984](#)).

The data gathered from a needs assessment can be prioritized to inform decision-making, planning, and the development of appropriate strategies. This process is crucial for facilitating constructive and positive changes in educational management or outcomes. Changes derived from needs assessments lead to creative and beneficial transformations in educational processes and results ([Pengyawong, 2022](#)).

School Curriculum

A thorough understanding of the school curriculum ([Nicholls & Nicholls, 1993](#); [Good, 1973](#)) is essential for effective educational management. The school curriculum encompasses the planning and organization of comprehensive learning activities for students, designed to foster significant transformations in their knowledge and skills ([Sangthong, 2021](#)).

Beyond the act of teaching, the curriculum plays a vital role in shaping educational activities. Without a clearly defined curriculum, teachers would lack the necessary direction in their instruction ([Kraiserm, 2010](#)). The school curriculum provides the

framework for education, guiding the dissemination of knowledge, the development of skills, and the instillation of positive values and attitudes in students, ultimately facilitating their overall development.

The curriculum outlines what students will learn as well as detailing what teachers will teach and how they will teach it. In order to guarantee that students meet the desired quality and goals, standards and criteria must be utilized as instruments for assessment and evaluation.

Related Research

A review of seven survey-based studies aimed at understanding the needs for developing school curricula ([Chanprasat, 2017](#); [Intachaisri, 2023](#); [Thongdee, 2018](#); [Suknaisith & Kampan, 2017](#); [Techawattanasiridumrong & Channate, 2021](#); [Pengyawong, 2022](#); [Niruttinanont et al., 2022](#)) reveals a common objective to examine the essential needs, compare current conditions with desired conditions,

explore strategies, assess requirements, and analyze needs for effective curriculum development. This is explained in table 1.

Conceptual Framework of the Research

Enhancing Teaching Standards Aligned with Formative and Summative Indicators for Quality Classroom Implementation:

- Curriculum Development for Schools
- Background and Significance of the School Curriculum
- School Curriculum Design
- Analysis of Curriculum Indicators
- Differentiation between Formative and Summative Indicators
- Application of Formative and Summative Indicators in Curriculum Development and Enhancement
- Design and Creation of Diverse Tools for Formative and Summative Assessment
- Classroom Implementation of the School Curriculum
- Integration of Indicators into Classroom Practices
- Lesson Plan Development
- Improvement and Development of Classroom Teaching Methods
- Appropriate Classroom Assessment and Evaluation Techniques
- Classroom-Based Research
- Design of Modern Learning Materials

The Necessity of Elevating Teaching Standards Aligned with Formative and Summative Indicators for the Development of a High-Quality School Curriculum

Table 1

Study	Focus Area	Sampling Methods	Findings
Chanprasat (2017)	Development of competencies in assessment and evaluation indicators.	Multi-stage random sampling with 361 participants	found that the overall need for developing assessment and evaluation competencies had a PNI value of 0.21
Intachaisri (2023)	Self-development according to teacher competencies in Thailand.	Multi-stage random sampling with 128 participants	Reported a PNI value of 0.132 for teacher self-development competencies.
Thongdee (2018)	Development of competencies in authentic assessment indicators.	Simple random sampling based on Taro Yamane's formula with 330 participants	identified a PNI value of 0.391 for authentic assessment competencies.
Suknaisith and Kampan (2017)	Development of 21st-century teacher competencies.	Systematic random sampling with 20 participants	noted that the PNI for 21st-century teacher competencies ranged from 0.099 to 0.218.
Techawattanasiridumrong and Channate (2021)	Competency-based curriculum development	Systematic random sampling with 180 participants,	found the overall curriculum management status to be high, with a mean of 3.54, while curriculum usage issues were moderate, with a mean of 3.19. The need for competency-based curriculum development was high, with a mean of 4.02.



Pengyawong (2022)	Development of 21st-century teaching practices.	Stratified random sampling with 285 participants	found a PNI value of 0.638 for the development of 21st-century teaching practices in primary education.
Niruttinanont et al. (2022)	Development of school administrators' competencies.	Stratified random sampling with 292 participants	highlighted that the current and desired competency levels of school administrators were generally high. The primary need for competency was achievement orientation, followed by analytical and synthetic thinking. The proposed development strategies for all eight competencies were comprehensive and applicable.

Data Collection

Population and Sample

The population for this study comprises educational personnel from 193 schools under the jurisdiction of the Office of Primary Education Service Area 3, Songkhla, totaling 849 individuals. The sample includes 80 educational personnel, consisting of principals, vice-principals, and teachers from the designated special area. The sample was obtained through a multi-stage sampling process as outlined below:

Stage 1: Cluster Sampling

1.1 The grouping factor was the Office of Primary Education Service Area 3, Songkhla, which is divided into three clusters based on educational service areas.

1.2 One educational service area was randomly selected using a simple random sampling method, specifically a lottery. The selected area was the Office of Primary Education Service Area 3, Songkhla, identified as a high-risk area for security concerns in the southern border provinces, with a total of 849 personnel.

Stage 2: Stratified Sampling

2.1 Within each district, schools were divided into three categories based on their size: small, medium, and large schools.

2.2 A simple random sampling method, namely a lottery, was utilized to select schools randomly from each stratum. Saphankian School, Lamloong School, Phruwa School, and Pareet School, all medium-sized schools from Nathawi District, Songkhla Province, were chosen, with a total of 165 staff members.

Stage 3: Simple Random Sampling

In the final stage, educational personnel from the selected schools in the special area specifically from Saphankian School, Lamloong School, Phruwa School, and Pareet School in Nathawi District, Songkhla Province were randomly sampled, resulting in a total of 80 participants.

Research Instruments

The research employed a survey to identify the essential needs for enhancing teaching standards aligned with formative and summative indicators, aimed at developing a high-quality school curriculum. The survey was divided into two sections:

Section 1: Respondent Demographics

This section gathered demographic information, including gender, age, educational qualifications, highest degree obtained, job position, subject area taught, and grade level taught. These were closed-ended questions using a checklist format.

Section 2: Needs for Enhancing Teaching Standards

This section detailed the needs for improving teaching standards aligned with formative and summative indicators for quality curriculum development. It included participation in meetings, training sessions, seminars, and site visits related to enhancing teaching standards. These were closed-ended questions using a checklist format.

Additionally, this section addressed both the current state and desired state based on identified needs, divided into 14 items: Development of the school curriculum, Background & significance of school curriculum, Design of the school curriculum,

Analysis of curriculum indicators, Differentiation between formative and summative indicators, Application of formative and summative indicators in curriculum development and improvement, Design and creation of diverse tools for assessing formative and summative indicators, Implementation of the school curriculum in classrooms, Integration of indicators into classroom practices, Lesson plan development, Improvement and development of classroom teaching methods, Appropriate classroom assessment and evaluation, Classroom-based research and Design of modern learning materials.

These items were measured using a 5-point Likert scale (1=very low, 2=low, 3=moderate, 4=high, 5=very high).

The survey's content validity was assessed by three experts, and all of the items met the minimum criteria of 0.50, with an Item-Objective Congruence (IOC) value of 1.00. Thirty individuals who were not part of the research sample used the tool for assessment. According to Streiner, the results showed a Cronbach's Alpha (α) value of 0.974, confirming strong reliability by above the 0.80 criterion.

Results

Data Analysis

To analyze the essential needs for enhancing teaching standards aligned with formative and

summative indicators for developing a high-quality school curriculum, we calculated the mean (\bar{x}) and standard deviation (S.D.). The results were interpreted by comparing the current state and the desired state based on a 5-point Likert scale (Srisaard, 2017). Following this, the data were analyzed and ranked using the modified Priority Needs Index ($PNI_{modified}$) method (Wongwanich, 2019), which assesses the gap between current and desired states.

Research Findings

The study on the essential needs for enhancing teaching standards aligned with formative and summative indicators for developing a high-quality school curriculum produced the following results:

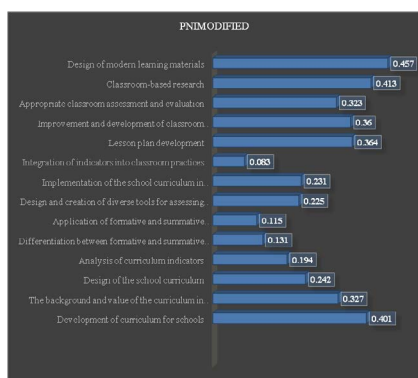
The current state of essential needs for enhancing teaching standards was found to be at a moderate level overall ($\bar{x}=3.25$, S.D.=0.19). In contrast, the desired state of these needs was rated at a high level overall ($\bar{x}=4.49$, S.D.=0.53). The overall Priority Needs Index ($PNI_{modified}$) for enhancing teaching standards was calculated to be 0.276.

When examining specific aspects, the highest $PNI_{modified}$ was found in the design of modern learning materials ($PNI_{modified}=0.457$), followed by classroom-based research ($PNI_{modified}=0.413$), and the development of the school curriculum ($PNI_{modified}=0.401$). These findings are detailed below.

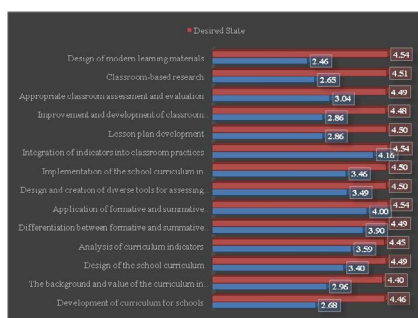
Table 2 Current and Desired States, and Priority Needs Index for Enhancing Teaching Standards Aligned with Formative and Summative Indicators for Developing a High-Quality School Curriculum

Item	Current State (\bar{x})	S.D.	Level	Desired State (\bar{x})	S.D.	Level	$PNI_{Modified}$	Rank
Development of curriculum for schools	2.68	0.85	Moderate	4.46	0.64	High	0.401	3
The background and value of the curriculum in schools	2.96	0.80	Moderate	4.40	0.69	High	0.327	6
Design of the school curriculum	3.40	0.61	Moderate	4.49	0.60	High	0.242	9
Analysis of curriculum indicators	3.59	0.57	Moderate	4.45	0.67	High	0.194	11
Differentiation between formative and summative indicators	3.90	0.77	High	4.49	0.60	High	0.131	12
Application of formative and summative indicators in curriculum development and improvement	4.00	0.66	High	4.54	0.55	Very High	0.115	13
Design and creation of diverse tools for assessing formative and summative indicators	3.49	0.50	Moderate	4.50	0.55	High	0.225	8

Implementation of the school curriculum in classrooms	3.46	0.50	Moderate	4.50	0.60	High	0.231	10
Integration of indicators into classroom practices	4.16	0.74	High	4.54	0.57	Very High	0.083	14
Lesson plan development	2.86	0.47	Moderate	4.50	0.62	High	0.364	4
Improvement and development of classroom teaching methods	2.86	0.63	Moderate	4.48	0.62	High	0.360	5
Appropriate classroom assessment and evaluation	3.04	0.68	Moderate	4.49	0.57	High	0.323	7
Classroom-based research	2.65	0.48	Moderate	4.51	0.53	Very High	0.413	2
Design of modern learning materials	2.46	0.71	Moderate	4.54	0.57	Very High	0.457	1
Overall	3.25	0.19	Moderate	4.49	0.53	High	0.276	



The first chart shows the priority order of the indices of essential needs for enhancing teaching standards in alignment with interim and final indicators towards the productive development of high-quality school curricula.



The second chart shows the average values of the current state and desired state of necessary requirements for improving teaching standards corresponding to interim and final indicators towards the productive development of high-quality school curricula.

Discussion

The study revealed that the overall Priority Needs Index (PNI_{modified}) for enhancing teaching standards that align with formative and summative indicators to develop a high-quality school curriculum was 0.276. When analyzing specific aspects, the highest priority need was identified in the design of modern learning materials (PNI_{modified}=0.457), followed by classroom-based research (PNI_{modified}=0.413), and the development of the school curriculum (PNI_{modified}=0.401).

This indicates a significant need for self-development among the personnel in the four schools, particularly in the areas of designing modern learning materials, conducting classroom-based research, and curriculum development. Furthermore, continuous professional development in these areas for administrators, teachers, and educational personnel will promote collaborative learning and networking, facilitating the exchange of knowledge and best practices. This also includes innovative approaches to designing learning materials, conducting classroom research, and implementing curriculum development, ensuring that all educational personnel advance together.

Consequently, teachers will be better prepared to design learning materials that align with various indicators, create innovative solutions to classroom challenges, conduct research to address classroom issues, and apply curriculum development effectively.

Based on the primary information derived from this analysis, the researchers have made

an effort to utilize the approach for formulating policies, strategies, and methods for enhancing the development of teaching standards aligning with both interim and final indicators contributing to high-quality classrooms. Additionally, the mentioned information will be utilized in order to develop assessment criteria for interim and final indicators and it will also be used as a guideline for the development of short-term training programs for collective groups of employees, workers, or staff in an organization or in an educational institution so as to augment more effective teaching standards that correspond to both interim and final indicators. In addition to ensuring high-quality education, the major objective is to subsidize teachers' knowledge and competency in teaching standards aligning with interim and final indicators, resulting in the productive development of school curricula.

These findings are consistent with those of [Chanprasat \(2017\)](#), [Intachaisri \(2023\)](#), [Suknaisith and Kampan \(2017\)](#), and [Niruttinanont et al. \(2022\)](#), who emphasized the need for teacher development in competencies related to competency-based curriculum development, indicator analysis, technical and design skills, activity-based curriculum design, classroom research, and assessment to improve teacher quality in alignment with curriculum contexts.

Moreover, [Thongdee \(2018\)](#) found that teachers lacked the necessary skills and understanding for authentic assessment processes that align with curriculum indicators, while students were unfamiliar with the procedures for engaging in authentic assessment. [Pengyawong \(2022\)](#) also supported these findings, indicating that teachers' 21st-century learning design needs included knowledge of standard-based curriculum analysis, which had the highest priority needs index. This may be because teachers are developing learning management plans that align with curriculum standards, demonstrating their understanding of standard-based curriculum analysis.

Recommendations for Implementing Research Findings

To enhance the quality of instruction, schools and colleges should use the findings which suggest an

important need for improvement to produce plans and policies. These ought to be aligned with formative and summative assessment metrics in order to ensure excellent instruction in the classroom.

School administrators need to provide significant thought to planning and carrying out short-term courses for their personnel. To achieve effective classroom outcomes, these programs need to focus on enhancing teaching standards in line with formative and summative assessments.

Recommendations for Further Study

Models for developing competencies in regard to formative and summative assessments should be a focus of future research. These models need to be aligned to how evaluation methods are designed and how learning objectives are assessed.

To ensure an accurate examination of the efficiency of teaching and learning, future studies should concentrate on developing evaluation criteria that are complementary with formative and summative characteristics.

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Author Details

Dr. Waiyawut Yoonisil, Srinakharinwirot University, Thailand, **Email ID:** wai959@gmail.com

Kittirat Kasatsuntorn, Thaksin University, Thailand

Raktawee Taoto, Mahamakut Buddhist University, Thailand

Jakchai Trakoonosot, Bansomdejchaopraya Rajabhat University, Thailand

Wachiraya Sadsang, Prasarnmit Demonstration School (Elementary), Thailand

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