

## Research Article

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# THE DEVELOPMENT OF SUPERVISION MODEL USING PROFESSIONAL LEARNING COMMUNITY TO ENHANCE 21<sup>st</sup> CENTURY LEARNING MANAGEMENT POTENTIALS OF PRIVATE SCHOOL TEACHERS

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### Abstract

This research aimed to develop a supervision model and explore the outcomes of using the model via professional learning communities (PLCs) to enhance the 21<sup>st</sup> century learning management potentials of private school teachers. The research methodology was divided into two phases as follows: 1) developing the model examined in terms of its quality by six connoisseurs and 2) exploring the model utilization outcomes whose sample groups were three administrators, one academic teacher, and 50 teachers in three private schools. The tools were evaluation forms on model quality; the 21<sup>st</sup> century learning management plan, units, and ability; professional learning organization attributes; and model satisfaction. The data were analyzed via mean, standard deviation, t-test values, and content analysis.

The findings revealed that the model consisted of five components that were 1) objectives, 2) principles and concepts, 3) supervision content, 4) supervision personnel, and 5) supervision processes. The evaluation outcomes of all standards were at the highest level ( $\bar{X} = 4.80$ , S.D. = 0.32). Teachers possessed 21<sup>st</sup> century learning management potentials in learning management design and behavior focusing on a learner-centered approach at the highest level. School characterized a professional learning organization and possessed model satisfaction at the highest levels.

**Keywords:** Supervision Model, 21<sup>st</sup> Century Learning Management Potentials, PLCs

## Introduction

Learners' three key learning skills in the 21<sup>st</sup> century consisted of life and career skills, learning and innovation skills, and communication and technology skills. These skills drove the 21<sup>st</sup> century teachers to possess learning management design and behavior so that the learners acquired them. Educational organizations both private and public at all levels attempted to enhance teachers' potentials in order for them to gain knowledge and proper learning management skills. Teachers were considered key individuals in fostering learners' learning in both knowledge and behavior. Whether it was good or not depending on learning rooted in the teachers' operation. Teachers were key variables in developing educational management quality (Panich, 2016, p. 32).

A supervision model was considered a compass, a plan, or an operating path in mobilizing efficient instructional management which was harmonious and appropriate to situations and contexts of supervisors and supervisees. Due to the 21<sup>st</sup> century educational management policies focusing on creating a friendly supervision atmosphere, personnel's participation was enhanced, especially participation and development based on personnel's or organizations' needs. This was a challenging mission for supervisors whose main roles were to support their team members. They also monitored, followed up, and evaluated teachers' performance on developing learners' quality through teachers' efficient operation. Thus, the model assisting administrators and educational personnel to change their concepts and behavior had to be figured out. This aimed to mobilize education so that it was in line with the National Education Act of B.E. 2542 and Amendments (Second National Education Act B.E. 2545 and Amendments (Third National Education Act B.E. 2553 and other relevant policies from the Ministry of Education to educational institutions. (Office of the National Education Commission, 2011)

However, the former supervision emphasized implementing based on policies by allowing outsiders to supervise. This was in line with the researcher's experience in supervising in that the supervision aimed to follow up performance rather than operational processes. As a result, instructional development was not needed by teachers. Most teachers' attitudes were negative toward the supervision; the development was not quite successful. Moreover, they were considered the main mechanism of schools' original affiliations in mobilizing educational reform policies in that they develop learners' quality through teachers by enhancing teachers' potentials. Structures, curricula, learners' needs, and a learning atmosphere were then developed. Sectors relevant to educational management had to be aware of the importance of mobilizing to develop their organizations.

This caused the 21<sup>st</sup> century supervision to be adjusted by developing supervision knowledge and necessary skills.

This model was developed based on PLCs' principles to enhance the 21<sup>st</sup> century learning management potentials of private school teachers. Many scholars, namely Hord (1997, pp. 2-23) and Hord and Sommers (2008, p. 10), mentioned five attributes of managing organizations to become PLCs and factor components facilitating PLCs to be efficient and effective. Not only was this model used to mobilize efficient learning management to be in line with supervisors' and supervisees contexts and the 21<sup>st</sup> century learning management policies, but it also lessened the aforementioned supervisory situations.

### **Research Objective**

To develop a supervision model and explore the model utilization outcomes using PLCs to enhance the 21<sup>st</sup>-century learning management potentials of private school teachers.

### **Research Methodology**

This model development applied PLCs and collaborative supervision principles. The research methodology was research and development as follows:

#### **1. Population and Sample Groups**

The population consisted of 1,351 administrators, academic teachers, and teachers in private schools in Chiang Rai province in Academic Year 2019. Sample groups were administrators, academic teachers, and teachers teaching at a basic education level, whose curriculum were in line with the Basic Education Core Curriculum B.E. 2551. Three schools voluntarily participated, namely one small-sized school, one medium-sized school, and one large-sized school as shown in Table 1.

**Table 1:** Sample groups for exploring the supervision model utilization outcomes

School Sizes	Administrators	Academic teachers	Academic teachers and teachers	Level Heads, substance group heads, and teachers	Substance group heads and teachers	Teachers	Total
Small	1	-	1	-	5	-	7
Medium	1	-	1	2	5	2	11
Large	1	1	2	4	12	16	36
<b>Total</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>22</b>	<b>18</b>	<b>54</b>

2. **Research Tools** were evaluation forms on 1) the model quality comprising of four standards: utility, feasibility, propriety, and accuracy, 2) the 21<sup>st</sup> century learning management units, 3) the 21<sup>st</sup> century learning management plan consisting of the setting of topics, standards, indicators, learning outcomes and content, periods of time, media, tools, learning sources, work load, and evaluation methods, 4) the 21<sup>st</sup> century learning management ability consisting of lesson introduction, instructional management, a learning atmosphere, and the utilization of media, innovation, and technology, 5) professional learning organization attributes on the cooperation in assessing needs, design, and plans, and 6) model satisfaction toward the processes and operational outcomes.

3. **Data Collection** was divided into two phases as detailed below:

**Phase 1:** Model development was conducted in three steps as follows:

Step 1: Exploring the supervision needs via a questionnaire regarding supervision needs. The questionnaire was evaluated by eight experts, and it was found that the IOC ranged from 0.75 to 1.00. The Cronbach's alpha reliability coefficient value of 'Part 1: Current Conditions' was 0.99 and that of 'Part 2: Expectations' was 0.98. The data were collected from 306 administrators, academic teachers, and teachers selected by a stratified random sampling based on school sizes. The sample-group size was set via Krejcie and Morgan's table at a 95% reliability interval. The data on respondents' conditions were analyzed by frequency, percentage, mean, and standard deviation. The needs were ordered from the highest to the least by a modified priority needs index ( $PNI_{Modified}$ ) (Wongwanich, 2015). The problems and suggestions were analyzed by content analysis.

**Table 2:** Population and sample groups used to explore the supervision needs

General Information		Population	Sample Groups	Returned Rates	
				Number	Percent
Administrators	Small-sized schools	7	7	7	100
	Medium-sized schools	16	16	11	68.75
	Large-sized schools	11	11	7	63.63
<b>Total</b>		<b>34</b>	<b>34</b>	<b>25</b>	<b>73.52</b>
Academic teachers	Small-sized schools	10	10	9	90.00
	Medium-sized schools	28	28	8	28.57
	Large-sized schools	32	32	10	31.25
<b>Total</b>		<b>70</b>	<b>70</b>	<b>27</b>	<b>38.57</b>
Teachers	Small-sized schools	55	15	15	100
	Medium-sized schools	181	56	38	67.85
	Large-sized schools	1,011	325	201	61.84
<b>Total</b>		<b>1,247</b>	<b>396</b>	<b>254</b>	<b>64.14</b>
<b>Overall Total</b>		<b>1,351</b>	<b>500</b>	<b>306</b>	<b>61.20</b>

Step 2: Drafting the model and its manual by applying the needs analysis outcomes that were ordered from the highest to the least from Phase 1; the synthesis outcomes of documents and research; domestic and foreign knowledge bodies regarding developing supervision models; the principles and theories regarding PLCs and participatory supervision; models and methods in enhancing the 21<sup>st</sup> century learning management potentials for teachers; and policies and emphases of the Ministry of Education to determine components.

Step 3: Examining the model quality and the manual by six connoisseurs. The tool was an evaluation form consisting of two parts. Part 1 was in a 5-rating scale format comprising of four standards. Part 2 was suggestions. It was found that the IOC ranged from 0.60 to 1.00. The data were analyzed by mean and standard deviation. The connoisseurs' suggestions were analyzed by content analysis.

**Phase 2:** Exploration of the model utilization outcomes was considered from teachers' potentials in managing instruction and designing learning management, including their behavior in managing a learner-centered approach. The school attributes of being PLCs and administrators' and teachers' satisfaction with the model were also taken into account. It was performed in three steps as follows:

Step 1: Constructing a tool for data collection and identifying its quality were conducted by 1) exploring relevant documents and research, 2) determining content scopes and questions from the data gained, 3) constructing a 5-rating scale evaluation form, 4) having thesis advisors examine accuracy and language usage in questions and adjusting them based on their advice, 5) having five experts in evaluation assess the Index of Item-Objective Congruence via evaluation forms on the 21<sup>st</sup> century learning management units (IOC = 0.60 - 1.00), learning management plans (IOC = 0.80 - 1.00), and learning management abilities (IOC = 0.60 - 1.00); professional learning organization attributes (IOC = 0.60 - 1.00); and model satisfaction (IOC = 1.00), and 6) modifying and printing a perfect version.

Step 2: Trying out the model. Initially, school personnel was prepared by attending a meeting. The model's operation guidelines, roles and duties of those relevant, conditions of success, and prospective benefits were also identified. After that, the model was tried out 17 days in small-sized schools, 19 days in medium-sized schools, and 29 days in large-sized schools. Educational supervisors, supervisory committees, and those relevant cooperated in the followings:

1) Evaluate the first learning management units, plans, and behavior, i.e. the pre-test, so that they could cooperate in exploring learning management conditions by analyzing supervision conditions, expectations, and needs. Then, the supervision needs were summarized. The tools were evaluation forms on the 21<sup>st</sup>-century learning management units, plans, and abilities. It was tried out 5 days in small-sized schools, 6 days in medium-sized schools, and 11 days in large-sized schools.

2) Prioritize the importance of the supervision needs gained from Number 1 and cooperate in setting guidelines in enhancing, correcting, and developing goals to design and plan the supervision. This was operated a day in each school.

3) Review the plan in Number 2 and cooperate in supervising by inviting educational supervisors specializing in providing learning units, learning management plans, and learning activity management in the 21<sup>st</sup> century. Administrators and teacher groups who were the sample groups cooperated in exchanging their learning. Teachers then spent a week modifying learning management units and plans and cooperated in evaluating learning management units, plans, and behavior for the second round, i.e. the post-test, including analyzing and assessing the outcomes using the same tools as those in Number 1. This was operated 10 days in small-sized schools, 11 days in medium-sized schools, and 16 days in large-sized schools.

4) Review the steps set collectively in Number 2, determine methods, roles, and duties in following up, analyze supervision outcomes, and conclude the evaluation outcomes of the overall supervision by discussing, reflecting thoughts, and exchanging talk in each need. They then cooperated in synthesizing supervision achievement and reflection outcomes of a future image; they set guidelines for conducting the following supervision. The tools were evaluation forms on the professional learning organization and the satisfaction with the model. This was operated a day in each school.

Step 3: Analyzing the data by mean and standard deviation. The trying-out outcomes with the schools were reflected.

#### 4. Data Analysis

The quantitative data were analyzed by mean, standard deviation, and t-test. The problems and suggestions were analyzed by content analysis.

### Research Findings

1. The model development outcomes revealed that the model consisted of five components which were 1) objective, 2) principles and concepts, 3) supervision content, 4) supervision personnel, and 5) supervision processes. The evaluation outcomes of the overall model quality were at the highest levels ( $\bar{X} = 4.80$ , S.D. = 0.32), and those of all standards were at the highest levels, i.e. utility standards ( $\bar{X} = 4.75$ , S.D. = 0.37), feasibility standards ( $\bar{X} = 4.64$ , S.D. = 0.48), propriety standards ( $\bar{X} = 4.90$ , S.D. = 0.22), and accuracy standards ( $\bar{X} = 4.92$ , S.D. = 0.20).

Component 1: Objective enhancing the 21<sup>st</sup>-century learning management potentials of private school teachers in learning management design and behavior.

Component 2: Principles and concepts in operating the model which were PLCs and participatory educational supervision.

Component 3: Supervision content consisting of skills in designing learning management and learning management behavior regarding a learner-centered approach which consisted of skills in 1) questioning, 2) teaching learners to seek for answers by themselves through practicing, 3) selecting knowledge in line with practical environments, 4) constructing knowledge and examining knowledge quality, 5) teaching learners to think critically, 6) teaching learners to be able to apply the knowledge gained, and 7) evaluating learners to possess the 21<sup>st</sup> century skills.

Component 4: Supervision personnel consisting of educational supervisors, administrators, teacher supervisors, a teacher committee, and school administrative board and student guardian's representatives.

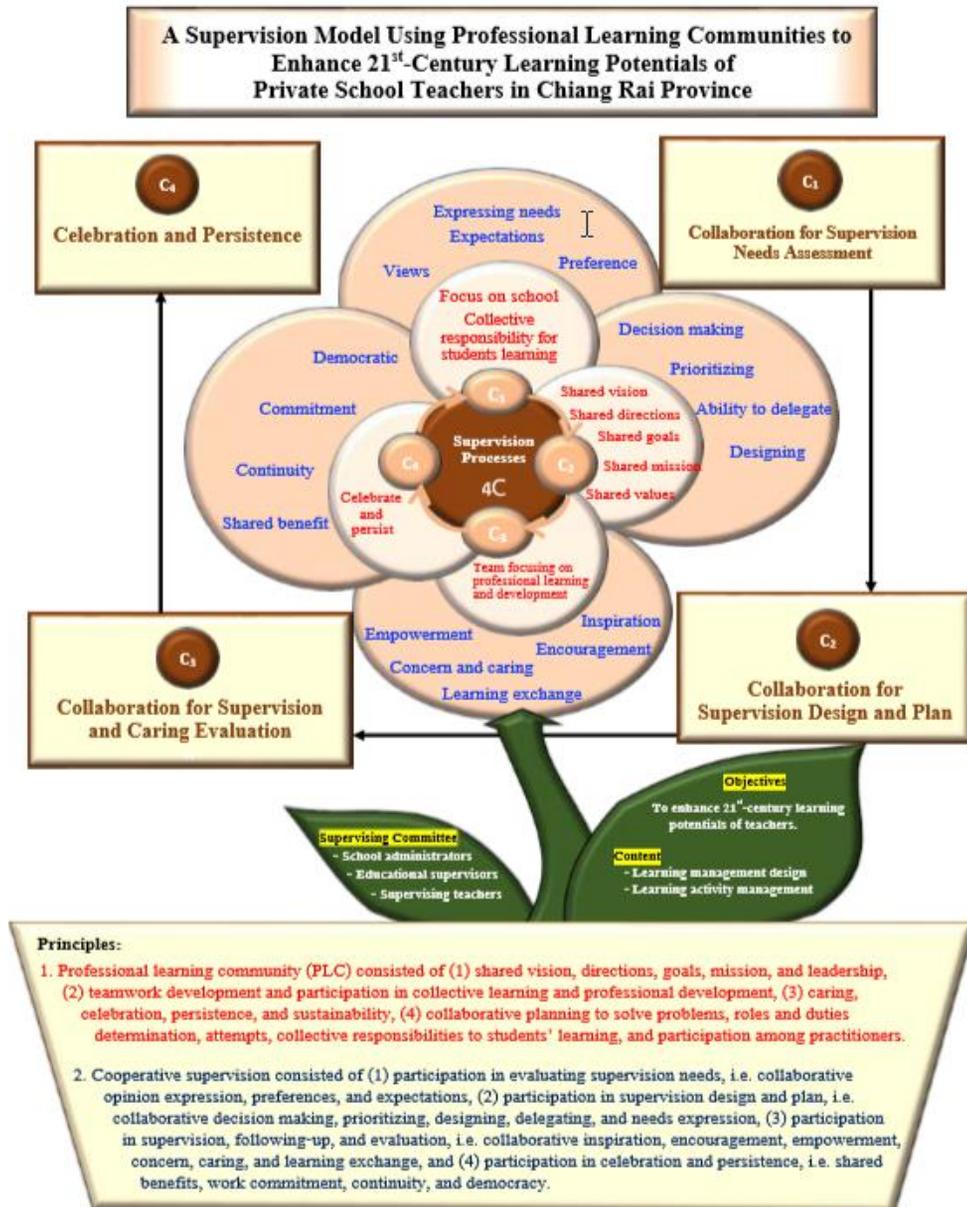
Component 5: Supervision processes comprising of four steps. Component principles and PLCs processes were applied with participatory educational supervision principles. The precedence was mainly given to the first five needs that personnel in each position, at least two positions and two sizes, needed harmoniously. Each step was detailed as follows:

Step 1: Collaboration for Supervision Needs Assessment ( $C_1$ ): educational supervisors, a supervising committee, and those relevant collectively evaluated the schools' supervision needs.

Step 2: Collaboration for Supervising Design and Plan ( $C_2$ ): educational supervisors, a supervising committee, and those relevant designed and planned the supervision based on the supervision needs gained from Step  $C_1$ .

Step 3: Collaboration for Supervision and Caring Evaluation ( $C_3$ ): educational supervisors and a supervising committee cooperated supervising and following up on the supervision outcome evaluation in learning management design and behavior.

Step 4: Celebration and Persistence ( $C_4$ ): educational supervisors, a supervising committee and those relevant cooperated in evaluating the supervision in designing the schools' learning management as shown in Figure 1.



**Figure 1** The supervision model using PLCs to enhance the 21<sup>st</sup>-century learning management potentials of private school teachers

2. Utilization outcomes of the model were as follows:

2.1 Teachers possessed potentials in managing 21<sup>st</sup>-century learning. They could design learning management and possess learning management behavior based on the learner-centered approach at the highest level as illustrated in Table 3.

**Table 3:** Evaluation outcomes of teachers' 21<sup>st</sup> century learning management potentials in learning management design and behavior

Learning Management Potentials	Sample Groups	Before the supervision		After the supervision		t	Sig.
		$\bar{X}$	S.D.	$\bar{X}$	S.D.		
Learning units	50	3.72	0.07	4.97	0.02	118.651*	0.000
Learning management plans	50	3.37	0.04	4.97	0.03	259.612*	0.000
Learning management behavior	50	3.08	0.16	4.85	0.68	80.298*	0.000

\*statistical significance at .05 level

2.2 Schools possessed the attributes of being PLCs at the highest level ( $\bar{X}$  = 4.96, S.D. = 0.20) as demonstrated in Table 4.

**Table 4:** Evaluation outcomes of schools' PLCs attributes

No.	Items	$\bar{X}$	S.D.	Meaning
1	Collaboration for Supervision Needs Assessment: C <sub>1</sub>	4.99	0.11	Highest
2	Collaboration for Supervision Design and Plan: C <sub>2</sub>	4.93	0.26	Highest
3	Collaboration for Supervision and Caring Evaluation: C <sub>3</sub>	4.97	0.16	Highest
4	Celebration and Persistence: C <sub>4</sub>	4.94	0.24	Highest
<b>Total</b>		<b>4.96</b>	<b>0.20</b>	<b>Highest</b>

2.3 School administrators and a teacher committee were satisfied with the model at the highest level ( $\bar{X}$  = 4.92, S.D. = 0.27) as displayed in Table 5.

**Table 5:** Mean and standard deviation of satisfaction levels toward the model

No.	The supervision model enhanced the followings:	$\bar{X}$	S.D.	Meaning
1	Teachers' 21 <sup>st</sup> century learning management potentials	4.93	0.26	Highest
2	Teachers to develop themselves continually	4.91	0.29	Highest
3	Teachers to possess morale in their duties	4.96	0.19	Highest
4	Teachers to possess a participatory working culture	5.00	0.00	Highest
5	The 21 <sup>st</sup> century learning management potential enhancement of teachers systematically	4.96	0.19	Highest
6	All relevant parties to learn and support so that the changes regarding goals could be constructed	4.93	0.26	Highest

No.	The supervision model enhanced the followings:	$\bar{X}$	S.D.	Meaning
7	All relevant parties to reflect the operational outcomes, criticize, and feedback on learners' development outcomes	4.83	0.38	Highest
8	Cooperative operation between school administrators, a teacher committee, and a supervising committee	4.81	0.39	Highest
9	Schools to become learning organizations	4.93	0.26	Highest
10	The supervision and following-up of school administrators, a teacher committee, and a supervising committee	4.98	0.14	Highest
<b>Total</b>		<b>4.92</b>	<b>0.27</b>	<b>Highest</b>

## Summary and Discussion

According to the exploration outcomes, it revealed that the model consisted of five components: 1) an objective aiming to enhance the 21st-century learning management potentials of private school teachers, 2) principles and concepts of professional learning communities and participatory educational supervision, 3) supervision content which was skills in designing learning management and learning management behavior regarding a learner-centered approach, 4) supervision personnel consisting of educational supervisors, school administrators, teachers assigned to be supervisors, a teacher committee, representatives of school administrative board, and representatives of student guardians, and 5) supervision processes comprising of four steps, namely Step 1: Collaboration for supervision needs assessment ( $C_1$ ), Step 2: Collaboration for supervision design and plan ( $C_2$ ), Step 3: Collaboration for supervision and caring evaluation ( $C_3$ ), Step 4: Celebration and persistence ( $C_4$ ). The evaluation outcomes of all standards were at the highest levels. This was in line with those of many educators, namely Varo Pengsawat (2010, p. 9) mentioning that researchers built a model based on a hypothesis gained from exploring concepts, theories, and relevant research. The findings were used in setting model components. Causal principles were a key foundation in prioritizing components. A model reliability test and a model try-out in real circumstances could present the significance of the model's minor components and various variables. The researcher might modify the model by deleting components or variables showing no influence or less importance from the model.

The supervision model processes were developed based on PLCs and participatory educational supervision principles. Thus, teachers participated in the supervision processes. This enabled them to possess visions, directions, goals, mission, values, shared leadership, and cooperation in developing learning units and learning management plans. A friendly and cooperative

atmosphere was then created. As a result, teachers could possess the 21<sup>st</sup> century learning management potentials and design and demonstrate learning management behavior of the learner-centered approach at the highest level as each model component was related with one another, especially in Component 5: Supervision Processes. This was in line with Yurarach (2001) who mentioned that each model process showed teachers' potential enhancement methods prioritized based on supervisees' needs. For instance, Step 1 enabled teachers to focus on developing their schools and sharing responsibilities for learners' learning via cooperative evaluation in learning units and management plans. Step 2 promoted the development to be in line with their needs leading to problem-solving and ultimate care needed in authentic conditions. This was in line with Maslow's hierarchy of needs theory (Klinkularb, 1999, pp. 23-24).

Besides, it was found that the developed model enhanced schools to possess professional learning organization attributes; administrators and teacher committees were satisfied with the model at the highest level as PLCs application was used in the model. Many educators, namely Katkasem (2014), also used PLCs' principles to develop the potentials and efficacy of the organizational operation.

## **Recommendations**

### **1. Recommendations for Utilizing the Model**

1.1 According to the research findings, the knowledge body development and the model processes were based on each teacher's fundamental need whose problems, needs, potentials, roles, and positions were different. Thus, the priority that had to be taken into account was participation in evaluating problems, chances for individual teachers to express opinions and needs, and alternatives for guidelines, methods, or models in developing themselves.

1.2 According to the research findings, the development had to derive from the organizations' needs and the organizational personnel had to participate in the operation from the beginning to the end. Thus, organizational leaders had to believe in the principles of PLCs and participatory supervision.

### **2. Recommendations for Further Research**

According to the model utilization in schools, each school contained different supporting factors and obstacles; thus, further research on comparing the model utilization outcomes in private schools that were different, such as international schools and charity schools, was supposed to be conducted.

## References

- Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory.
- Hord, S. M., & Sommers, W. A. (2008). *Leading professional learning communities: Voices from research and practice*. Thousand Oaks, CA: Corwin Press.
- Katkasem, K. (2014). *Local learning community development of municipal schools with participatory action research* (Doctoral dissertation). Phitsanulok: Naresuan University.
- Klinkularb, P. (1999) *Educational supervision: theory and practice*. Bangkok: Srinakharinwirot University.
- Office of the National Education Commission. (2011). *National Education Act of B.E. 2542 and Amendments (Second National Education Act B.E. 2545 and Amendments (Third National Education Act B.E. 2553*. Bangkok: Pimdeekarnpim.
- Panich, V. (2016). *Entertainment of teachers' life into the learning community*. Bangkok: SR Printing Mass Product.
- Pengsawat, V. (2010). Research on model development. *Rajabhat Sakon Nakhon University Journal*, 2(4), 1-16.
- Wongwanich, S. (2015). *Needs assessment research*. Bangkok: Chulalongkorn University Press.
- Yurarach, S. (2001). The approach of the synthesis of needs assessment works. *Journal of Education Naresuan University*, 13(2), 31-54.