

The Development of Professional Learning Community for Supervision in a Small Secondary School in the Lower Northern Region, Thailand

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Abstract

The objectives of this research were to develop a professional learning community model (PLC) for supervision in small secondary schools in the lower northern region. The professional learning community model for supervision in small secondary schools in the lower northern region consists of 13 components, administrative roles, PLCS board roles, teacher roles, supervisory education roles, network roles, departmental characteristics administration, teacher characteristics, PLCS board characteristics, 2S 4Ms Contextual Studies, PLCS Hours Assignment, PLC Processes, PLCS Agreements, and PLCS Tools. The results of the analysis of the professional learning community model (PLC) for supervision in small secondary schools in the lower northern region was found that it consistent with the empirical data. $\chi^2_{53.302} = 2$, $df\ 40$, P-Value of χ^2 is 0.0776, RMSEA = 0.028, CFI = 0.996, TLI = 0.993, SRMR = .0017. The development of learning management to hold students as a priority should be provide help and give advice to develop the skills of teachers in teamwork and also brainstorming skills the process of psycho education in order to create a friendly atmosphere in the school.

Keywords: Development of Professional Learning Community; Supervision for Small - Sized Secondary Schools.

1. Introduction

Nowadays, the progress of the world is happening at a rapid pace including competition in all professions. Due to the development of advanced technology, Thailand is the country that has to keep up with this change. The development of human resources is the heart of the country's development. As in the 12th National Economic and Social Development Plan, the principle of Thailand's development is the sufficiency economy philosophy. People are the center of development under the -20year national strategy. It can be seen that Thailand has a slow competitive ranking. due to low quality Investment in research and development is still low.

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In addition, Thailand faces the risk of free movement of people to make it competitive in the world market. Therefore, the 12th National Economic and Social Development Plan has identified one of the main development issues, manpower preparation and empowerment of people of all ages, inspiring Thai people to have values according to good social norms, being good people, having the skills necessary to live in the 21st century, preparing the manpower in science and technology to change the world in the future [1].

Small schools have been a challenge for education administrators and the ministry of education, has been trying to solve the problem from past to present. It was found that the fertility rate has decreased, causing the population of primary and secondary school age to decrease. This coupled with the high rate of population migration from rural to urban areas has made students a feeder to smaller secondary schools scattered across the country which decreased in order of realization that a large number of small educational establishments will affect the management, especially in the management of teacher manpower [2].

From the study of Behavioral Science Research Institute, confirms that PLC implementation leads to qualitative changes both professionally and student achievement [3]. It was found that PLC affects teachers by reducing teachers' feelings of loneliness in teaching, increased sense of commitment to the mission, and goals of the school by increasing the enthusiasm to actively fulfill the mission to share learning and taking responsibility for the overall development of students. PLC is a learning force that results in better classroom teaching practices. In addition, the acknowledgment of various information, it has a positive effect on improving professional development at any time. As a result, they are inspired to develop and devote themselves professionally to their students. This is both a value and a morale booster for better performance, which is also able to reduce the unemployment rate, it was found that the progress in modifying the learning management method to match the learner characteristics was more noticeable and faster than the old school. There is an obligation to create new changes to appear prominently and sustainably in terms of positive effects on learners, it was found that PLC affects learners, difference in academic achievement between students with no backgrounds and clearly reduced. The participation of teachers in the educational institutions is important for raising the level of achievement. This will allow new teachers to continue working quickly and able to solve problems with a small number of teachers but a large workload, due to supervision through learning communities, reduces work loneliness, and help develop teachers' working potential and assessment for educational personnel in the new system. Therefore, if there is a learning community among teachers in small secondary schools, it will help teachers to attend training courses. Therefore, the researcher is interested in studying the development of a professional learning community (PLC) model to improve the quality of teaching and learning in small secondary schools in the lower northern region.

2. Research objectives

1. To study the condition problems and components of the community of professional learning teachers (PLC) for supervision in small secondary schools in the lower northern region.
2. To draft a Professional Learning community (PLC) model for supervision in small secondary schools in the lower northern region.

3. To examine and assess the Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region.

4. To confirm the consistency of the Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region is consistent with the empirical data.

3. Research methodology

This research was a mixed method research. The instrument used in this research step was a questionnaire for the opinions of teachers, administrators and academic departments or supervisors of small secondary schools in the lower northern region.

Step 1: Study the condition, problems and components of the Professional Learning community (PLC) for supervision in small secondary schools in the lower northern region.

Step 1.1 Study the condition and problems of the Professional Learning Community (PLC) for supervision in small secondary schools in the lower northern region.

Step 1.2 Study the composition of the Professional Learning Community (PLC) for supervision in small secondary schools in the lower northern region.

Step 2 Draft a Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region through a workshop.

Step 3: Examine and assess the professional learning community model for teachers. (PLC) for supervision in small secondary schools in the lower northern region by qualified

Step 4: Confirm the Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region. with a statistical program

4. Summary of research results

The presentation of the results of the data analysis, the researcher used the data to calculate the Inter correlation coefficient of the components to determine the relationship characteristics of the sample for determining the suitability of the matrix to be used in the composition analysis. by considering the relationship of the elements to be analyzed From the study, it was found that the components are related as shown in Table .1

Table 1: The correlation coefficient between the 13observed variables of the Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region.

	A	B	C	D	E	F	G	H	I	J	K	L	M
A	1	.584**	.561**	.295**	.214**	.534**	.493**	.408**	.504**	.387**	.513**	.493**	.575**
B		1	.584**	.561**	.295**	.214**	.534**	.493**	.408**	.504**	.387**	.513**	.493**
C			1	.584**	.561**	.295**	.214**	.534**	.493**	.408**	.504**	.387**	.513**
D				1	.741**	.259**	.405**	.525**	.503**	.241**	.408**	.424**	.414**
E					1	.302**	.431**	.542**	.461**	.220**	.299**	.295**	.430**
F						1	.302**	.431**	.542**	.461**	.220**	.299**	.295**
G							1	.695**	.611**	.531**	.686**	.611**	.648**
H								1	.723**	.667**	.730**	.492**	.660**
I									1	.639**	.788**	.572**	.639**
J										1	.704**	.478**	.559**
K											1	.685**	.663**
L												1	.547**
M													1

** Statistically significant at 0.01 level

From Table 1, all correlations were found to have a statistically significant positive correlation at the 0.01level. The correlation level was between .0.788 – 0.214

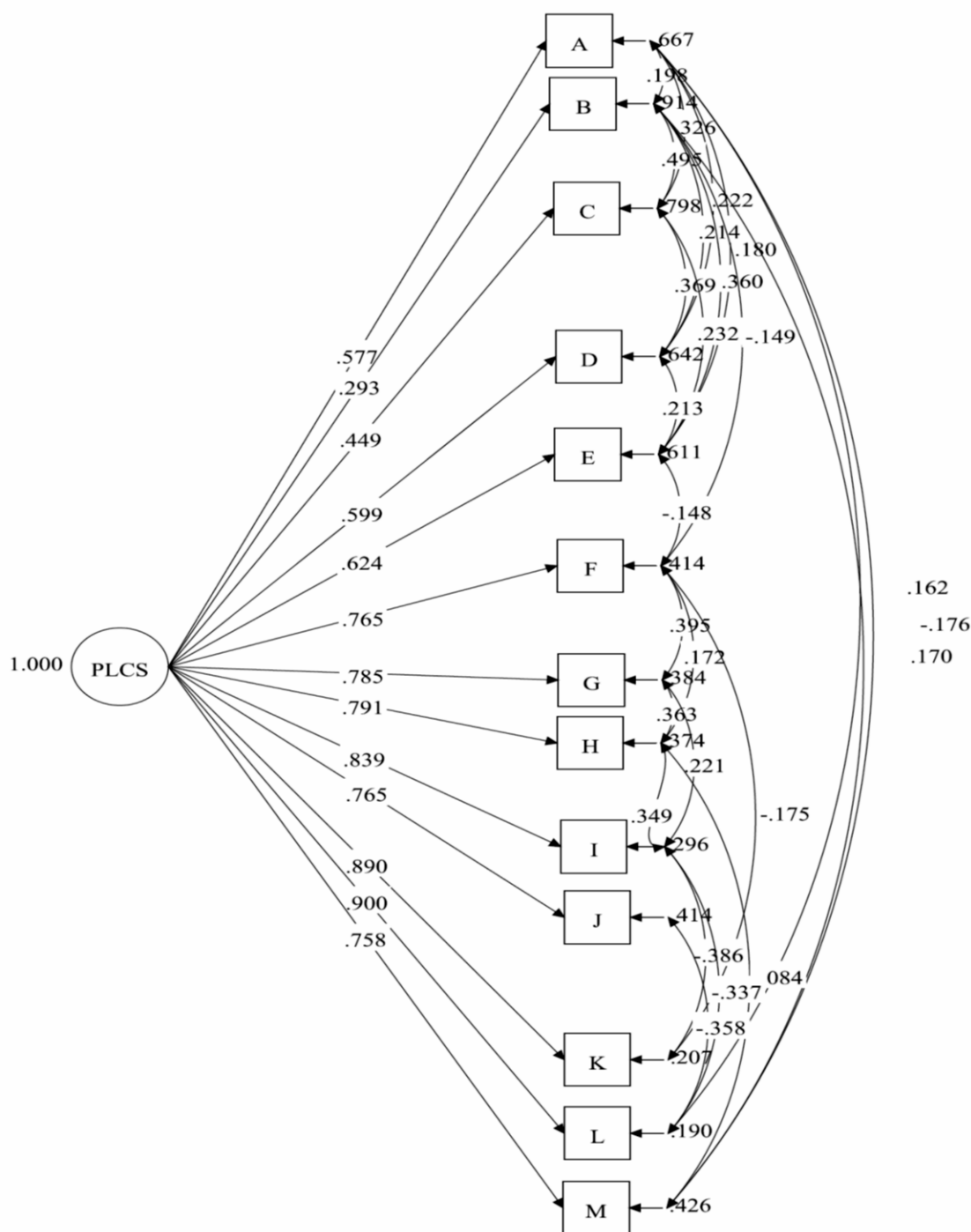


Figure 1: shows a model from the corroborative component analysis of the Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region.

From Figure 1, it is found that the weight value of the PLC agreement component has a component weight of 0.900 which is the highest, followed by process component, PLC with component weight of 0.890 and context study component 2S 4Ms with component weight of 0.839, respectively. The role components of PLCS committees were weighted equal to .0293. The weight of the composition was 0.449 and the role of the

management component. have an element weight of 0.577, respectively. The researcher used the data to calculate the Inter correlation coefficient of the components to determine the relationship characteristics of the sample for determining the suitability of the matrix to be used in the composition analysis by considering the relationship of the elements to be analyzed. From the above study it was found that the components were related as shown in Table .2

Table 2: The correlation coefficient between the observable variables which are components of the Professional Learning Community (PLC) process for supervision in small secondary schools in the lower northern region.

	Analysis	Method	Planning	Do	Evaluation	Reflection
Analysis	1	.856**	.695**	.596**	.652**	.687**
Method		1	.716**	.739**	.681**	.802**
Planning			1	.756**	.725**	.790**
Do				1	.645**	.797**
Evaluation					1	.823**
Reflection						1

**Statistically significant at 0.01 level

From Table 2, it was found that the correlation coefficient between the observed variables for all 6 components of the Professional Learning Community (PLC) process for supervision in small secondary schools in the lower northern region found that the All correlations had a statistically significant positive correlation at the 0.01 level. The correlation level was between .0.856 – 0.596

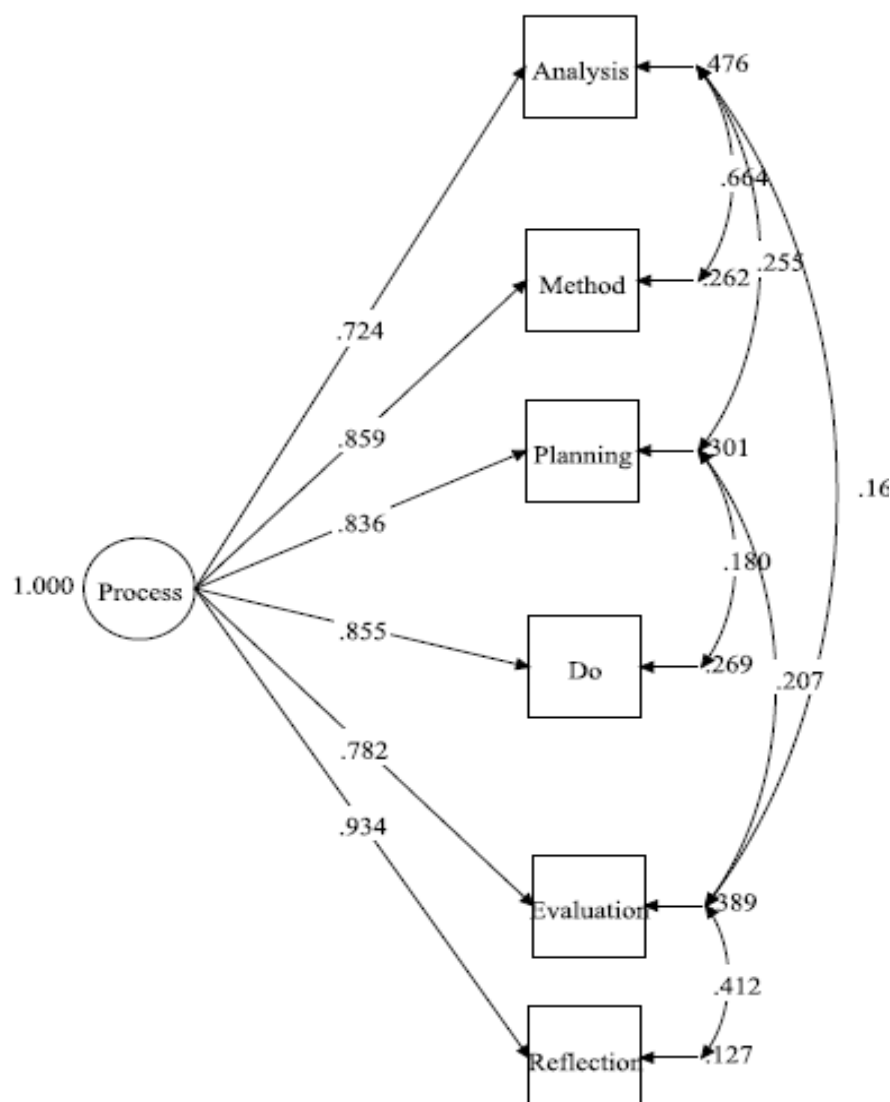


Figure 2: shows the model from the confirmation element analysis.

Chi-Square =7.768, df =3, P-Value =0.0511, RMSEA =0.062

CFI =0.998, TLI =0.990, SRMR =0.009

From Figure 2, it was found that the weight of the teacher components reflected the learning management effect.)Reflection) has an element weight of 0.934, which is the most followed by the component The method of problem solving (Method) found together with the weight of the composition. equal to 0.859 and the teacher component of learning management (Do) according to the learning plan has the component weight was 0.855, respectively. The component with the least weight component was the teacher component, analyzing the problem or what needs to be developed (Analysis) for the students. The component weight was 0.724, the teacher component assessed problem solving or development (Evaluation) had a weight component of 0.782, and the teacher component made a learning management plan (Planning) to solve problems or develop students. have a component weight of 0.836, respectively.

Therefore, it can be concluded that The results of the research can be summarized as follows: PLCS board role, teacher role, supervisory education role, network role Administrative features Teacher features PLCS board features Context study 2S 4Ms PLCS hours assignment PLC process PLC agreement and PLCS tools and organize the PLCS process sub-steps into 6 sub-steps as follows: (1 Teachers jointly analyze the problem or What needs to be developed (Analysis) for students (2 Teachers study methods of development or approaches to problem solving (Method) that meet together (3 Teachers make plans for learning management (Planning) to solve problems or develop students (4 Teachers manage learning (Do) according to the learning plan that has been laid out, (5 teachers assess the results of problem solving or development (Evaluation) and (6 teachers reflect on the results of learning management (Reflection).

5. Discuss the results of the research.

.1 The results of the study of the condition Problems and Components of Professional Learning Community (PLC) for Supervision in Small Secondary Schools in the Lower Northern Region

1.1 The results of the study of problem conditions found that the aspect that was most practiced was the role of management, followed by the conceptual aspect. The least practical aspect is information management. followed by the study of current status and meeting, respectively, which can be seen that the management role was the most practiced. This is accordance with the research by Itthipol Heeman (2019 which discusses the problem of small secondary schools with insufficient number of teachers in all classes and not complete the subject matter according to the curriculum and the lack of teachers in all subjects makes teachers teach more than appropriate and therefore unable to allocate meeting time.

From the study of the problem, it was found that the teacher's group activities had the most problems. followed by data management Teachers' group activities were more problematic with the lack of empirical evidence in PLC group discussions. Teachers tended to solve problems by themselves rather than teamwork. Teachers rarely have the opportunity to share their own experiences or learn from the experiences of others. This is because teachers in small secondary schools have a lot of teaching time, so they don't spend time together discussing the problems of day-to-day learning management. As a result, teachers have to mainly solve problems on their own and lack of learning from their peers. This is consistent with the study of the problem conditions of building a vocational learning community in schools in the Secondary Education Service Area Office, District 1 and District 2, Bangkok. The most common problem is teachers do not attend the scheduled PLC meetings, teachers do not observe teaching peers, and teachers are burdened with heavy workload, which often prevents them from completing all procedures. [4]

1.2 The effect of the composition of the Professional Learning Community (PLC) for supervision in small secondary schools in the lower northern region, from interviews with experts suggested as follows: the elements specified are complete, but should use angles look at it from a management perspective to make it practical may be built as a mechanism for continuous and sustainable operations There should be a clear policy on the school PLC and how school administrators support the learning community of school teachers. There are also suggestions on the implementation of the best practices of Lam Plai Mat Pattana School. to insert into the major

elements such as the use of psychoeducation activities The use of aesthetic conversation and AAR (After Action Review) activities, etc., because the experts interviewed were close and made an MOU with Lam Plai Mat Pattana School. The process of psychoeducation is a recognized process that can create or modify beliefs that are cognition and traditional skills [5]. (external intelligence) with learning tools born within the individual's self (internal wisdom) that will not be deceived by traditional beliefs. resulting in a lump of inner belief which is the reference base for a more complete and balanced teacher's thoughts or actions.

6. Pattern creation effect

The results of the extraction of the components of the Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region through a workshop were found that the professional learning community model was extracted. Supervision teachers in small secondary schools in the lower northern region (PLCS) consist of 6 areas as follows: Zone 1 The PLCS process consists of 3 components: and defining the PLC operation. Part 2 The joint concept has 2 components: the joint management concept and a shared concept in practice. The third aspect is the goodwill principle, which consists of 3 components: listening to opinions, caring and encouraging. The 4th aspect has 3 components of the management role: participatory management, the PLCS committee, and monitoring/tracking/support. Section 5 Context has 3 components which are Student Context, Teacher Context and School Context and Sector 6 Data Management has 3 Components which are PLC evaluation of PLC group of IT teachers and PLC amplification which are consistent with previous research. It has presented the key elements and procedures of PLC operations that must have a common vision, meaning having the same goals towards the development of teaching and learning to the quality of learners, having cooperation, cooperation and cooperation means must be open-minded to implement and evaluate together, shared leadership means doing PLCs. There must be leaders and followers to exchange knowledge. Friendly means to be professional friends to each person. The need to change the organizational culture means to focus on working opportunities that allow each other to work rather than directing. Have hours to talk [6].

The Draft Community Model of Professional Learning Teachers for Supervision in Small Secondary Schools in the Lower Northern Region (PLCS) was prepared into 3 parts: Principles of Model, Objectives of the Model; and the process of forming As for the principles of the model, there are 3 items: (1) teacher development is the starting point for improving the quality of education in small secondary schools, (2) PLC processes contribute to sustainable professional development, and (3) All teachers must have 50 PLC hours per year , equivalent to 250 hours for a total of 5 years according to the announcement of G.E.T. 0206.3/W 21 and the objectives of the 3 model are as follows: (1) Schools can PLCS can be adapted to replace traditional supervision; (2) the PLCS model does not add more burden to teachers than conventional classroom supervision, and (3) the PLCS model effectively improves teachers' professional careers in schools. The principles and objectives of the model are consistent with Nattaya Latunteeraku confirming that the PLC implementation leads to qualitative changes both professionally and student achievement. It was found that PLC affects teachers by reducing teachers' feelings of loneliness in teaching. Increased sense of commitment to the mission and goals of the school [7].

3. The results of the examination and evaluation of the model were found to consist of the principle of the model.

The purpose of the success conditions which has been modified from the original, the details are as follows. The three principles of the model are: (1) The Professional Teacher Education Community Model for Supervision helps to sustainably develop teachers in small secondary schools and cope well with changing contexts. To respond quickly to student needs, (2) the Professional Learning Community Model for Supervision Teachers facilitates the synergies of small secondary schools, and (3) the Professional Learning Community model. Teachers for supervision help teachers to raise awareness of quality learning management. The principles were modified to be more consistent with the learning community process to change the third principle because the law is not a principle. The three objectives of the model are (1) to improve supervision in small secondary schools more effectively, (2) to improve national test results of small secondary schools, and (3) to improve learning management of sustainable teachers and keep up with the changes.

The process of forming has been adjusted from the original to adjust the process of the model to be in the form of a systematic process (System Approach) i.e. inputs, processes, outputs, results and effects (IPOOI) will help the model to be more universal to show the PLC procedure more clearly. In order to make it easier for small secondary schools to implement, it was found that the process of this model has 5 components (IPOOI), namely input, process, Output, outcome, and Impact. The inputs of the model process consist of 6 components as follows: Management role PLCS Board Role, Teacher Role, PLCS Hours Determination, Contextual Study and PLCS Tools The PLCS part of the process (Process) consists of the following steps: (1) The PLCS committee organizes a meeting of teachers in schools to prepare them and understanding of the annual PLCS (2) Teachers gather in groups of 3-5 people according to their interests submit documents requesting to form a group (3) The PLC process is divided into 6 sub-steps as follows: Analyze problems or things that need to be developed. (Analysis), study methods or approaches to solve problems (Method), prepare a learning management plan (Planning), manage learning (Do), evaluate learning (Evaluation), reflect the results of learning management together (Reflection), which in accordance with Previous research said that in the PLC process, teachers learn together, learn from each other, focuses on implementing new ideas self-reflection teacher and reflect each other causing the development of strengths and weaknesses of teachers to the development of learning management that is closely related to the continuous sustainable development of student-centered learning management [8].

The outputs, outcomes and impacts of the expert-led model are as follows: The output is the teacher's learning management innovation, the outcome is the national test result of the students in higher schools, and the impact is the teacher morale. Teachers have a good relationship with each other. Teachers have professional development when the rotation occurs, teachers move out and re-enter frequently in smaller secondary schools. This is consistent with [9], who found that the relationship between teacher co-efficiency and professional learning communities. As a result, students have better grades, teachers who feel that teachers are equally effective in schools perceive their schools as vocational learning communities. Therefore, it increases the achievements of current teachers to create future expectations for the future. The engagement from working together is linked to the effectiveness of teachers. When teachers have control over their decision-making classroom. There are 5 conditions for success of the model which are management, teachers, PLCS committee, supervising education and network. Model evaluation results It consists of 5 elements, including the principle of form. The purpose of the model has been evaluated by the following experts. The overall consistency assessment results were found to be at a high level. The overall feasibility assessment result was found to be at a

high level [9]. The overall usefulness assessment results were found to be at the highest level.

4. The results of the confirmation of the model with the statistical package program based on corroborative component analysis found that (1) management role (2) PLCS committee role (3) teacher role (4) supervisory role (5) network role (6) Administrative Features (7) Teacher Features (8) PLCS Board Features (9) 2S 4Ms Context Study (10) PLCS Hours Assignment (11) PLCS Process (12) PLCS Agreement and (13) PLCS Tools. These shown that the resulting model was very consistent with the empirical data. This may be due to the fact that all 13 components have been examined and evaluated from expert-based seminars. Moreover, each component is important in driving the operation of the Professional Learning Community (PLC) for supervision in small secondary schools in the lower northern region. It is of great importance in implementing the administration of small secondary schools in the lower northern region to create a good management system To support and promote the PLCS work of teachers in schools Due to the results of the synthesis of problems in developing policy proposals for teacher and educational personnel development by Sasi, it was found that problems in educational development is that the school lacks a management system that is conducive to its operations [6]. Lack of support system for teaching and learning that affects learner quality Lack of professional advancement promotion system Lack of morale at work Lacking a system to promote and support teaching and learning management that is conducive to work, and still lacking systems and mechanisms for good management.

The results of the corroborative component analysis of the 6 components of the Professional Learning Community (PLC) process were: (1) Teachers jointly analyzed problems for students, (2) Teachers study methods of development or approaches to solve problems that meet together, (3) Teachers prepare learning plans to solve problems or develop students, (4) Teachers manage learn according to the learning plan that has been laid out, (5) Teachers evaluate the development, and (6) Teachers reflect the results of learning management (Reflection) used to study the consistency of the components of The Professional Learning Community (PLC) process. The resulting model is consistent with the empirical data very well. This may be because all 6 components, which are sub-steps, are suitable for the implementation of PLC in accordance with [8] PLC uses the classroom as a site, do it and develop, and solve children's problems that are relevant children's problems as a setting the teacher's work. PLC is a combination of teachers to make a lesson plan together observe the teaching and together to criticize and repeat until innovation is born. It is believed that children have been developed potential. The school continues to operate until it becomes an organizational culture.” It can be seen that PLC is a process suitable for application in conjunction with supervision management in schools because there is no need to waste additional supervision from the former and the Behavioral Science Research Institute, has proposed the sustainable management and use of the Professional Learning Community (PLC) starting with simple steps starting from the goal, discussion reflect the results exchange with others Plan Cooperatively analyze teaching and find out how to achieve maximum success [10]. Study and use the data, examine implementation results and reflections in order to determine which plans should be used next / which should be improved. The successful plan will invite others to participate, praise and exchange success.

7. Recommendations

Policy recommendations

For the Educational area in the lower northern area, this research model should be used to extend the results for small secondary schools to develop learning management to hold students as a priority. It should be followed provide help and can give advice small secondary school and the workload of teachers in small secondary schools should be studied in terms of hours of learning management according to the teaching schedule. The hours required for special school work and other tasks can be used to manage time so that teachers can have time to work on the PLC continuously and efficiently.

Recommendations for the development of small secondary schools

Small secondary schools should adopt the Professional Learning Community (PLC) model for supervision in small secondary schools in the lower northern region to improve school supervision. The skills of teachers in teamwork should be developed brainstorming skills understanding the process of psycho education to create a friendly atmosphere in schools and PLC groups. Training workshops were provided to create understanding for administrators of small secondary schools in the lower northern region for expansion. The results are accurate and there is no confusion in the performance.

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