

**THE MODEL OF TEACHER'S PROFESSIONAL LEARNING
COMMUNITY FOR THE NON-FORMAL AND INFORMAL
EDUCATIONAL CENTER IN THAILAND'S
UPPER NORTHERN REGION**

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Abstract

The study aimed to 1) investigate the states, problems, needs, and factors that enhance the success of the PLC model 2) develop the teachers' professional learning community model (TPLC model) for the non-formal education in Thailand's districts of the upper northern region and 3) study the results of the model implementation. This mixed method research performed in two stages: the development of TPLC model and the user's guideline and the implementation of TPLC model. Participants were 15 teachers and administrators in the non-formal and informal educational centers in Thailand's upper northern region. Data were collected using opinion questionnaires, pretest and posttest, record of brainstorming; focus group discussion; and model evaluation, and field notes. The questionnaire was developed with the IOC at 1.0 and the reliability at .8237. Frequency value, percentage, mean, and standard deviation, and content analyses were performed to analyze the data. The findings of this study were 1) the state of PLC in the centers was at a low level, 2) the problem of PLC state in the centers was severe especially with regard to "continuous learning and professional development", 3) the need for a state of TPLC in the centers was at a very high level, 4) the enhancement of 3 factors: the structure and conditions; technology; and human resources, toward the success of PLC model was paramount, 5) the TPLC model for the non-formal and informal educational centers in Thailand's upper northern region consisted of 4 important components: shared values and vision; collaboration teamwork; continuous learning and professional development; and common good practice, and 6) the higher results in all 3 parts: the state of TPLC in the

non-formal and informal educational center; TPLC comprehensive test; and participants' satisfaction, showed after the implementing of TPLC model (significance level = .05).

Keywords: Professional learning community; teachers' professional learning community; non-formal and informal education

Introduction

The National Education Act BE 2542 (1999) states in Section 15 (2) that "Non-formal education is a flexible education regarding the determination of its objectives, patterns, management, duration, and measurement and evaluation. (Ministry of Education, 2003) The graduation conditions, in terms of the content and course, must be appropriate with the state of problems and needs of individual groups." And in the Act on the Promotion and Support of Non-Formal and Informal Education, BE 2551 (2008), Section 4 states that "Non-formal education is an educational activity that has an obvious target of clients and learning objectives. (Ministry of Education, 2008) Besides, its pattern, curriculum, learning or training management and duration are flexible and vary according to the needs and learning potential of each target group. The learning measurement and evaluation methods are standardized in order to qualify the grading of all educational outcomes. "In addition, the National Education Act 1999, Section 22 states that "All learners can learn and develop themselves. Accordingly, educational sectors must provide the environment that fully enhances learners' nature and potential." (Ministry of Education, 2003)

In the past, the sectors that operated non-formal or informal education still could not provide its service for every group of Thai people, both individual and public, to access. They also found operational problems on budget allocation and staff readiness. Its mission was broad and diverse. Most of the problems found in its operation were 1) the administrator lack of management skills and 2) the teachers' lack of knowledge and teaching skill. Some teachers had no educational background in education or professional teaching, especially in basic subjects like math, science, and English (Daungkaew, Chongcharoen and Phuangsomjit, 2017). In addition, interviews showed that 1) there was a shortage of teachers in all regions and 2) teachers had less professional stability and advancement. Besides, teachers had a lack of knowledge and teaching skill in the subjects they taught because they were required to teach many different subjects. This non-formal or informal education system provided the opportunity for the students to choose any subjects they need which caused the problem of selecting teachers to meet all

those needs. Interviews also showed the problems on the system and continuity of the administrators and teachers development.

Education reform (The Secretariat of the House of Representatives, 2014) reported that the Thai education system was not able to enhance the successive goals of students' quality development. This led to the educational reform, which has been implemented for some time, in the second decade of 2009-2018. The problem of the overall quality of Thai education was found, especially the problem of the quality of learners, teachers, lecturers and educational personnel. All teachers were required to seek ways to help all learners to improve their learning, according to the intention of the Act. Thus, the innovation that teachers need to know is the Professional Learning Community (PLC). The PLC stands for Professional Learning Community, which means the synergies of teachers, administrators and educators in schools that mainly aims to improve learners' learning. This is the concept of creating an educational institution to be a professional learning community. PLC was a place for "Interaction" which was able to reduce the "loneliness" of the mass members of the school's professional teachers. They accordingly worked for the achievement of their students as well as the improvement of their schools and academic tasks via the process of PLC. This was an important strategy for the classroom level, school level, school group level up to the national level to emphasis on driving the development of their communities or educational management reform. (Chookamnerd, 2014)

The problems mentioned above leads to the concept of learning pathway and professional teacher development. It focused on the participatory learning based upon in-school authentic work rather than non authentic work. This concept was agreeable with the PLC principle that aimed to create an educational institution to be a professional learning community. This was to enhance the professional teacher development for learners' learning development. Accordingly, the researcher, an officer in a non-formal educational center, aimed to design a professional learning community model for teachers in the non-formal and informal educational centers in Thailand's upper Northern region. The PLC's concept and principle based model was aimed to change the learning culture and develop the learning management

which will lead to the improvement of learners' quality. The participatory method was used to design the model. All the administrators and teachers in the informal and non-formal educational centers participated by giving ideas, planning, and defining the development methods. They also co-operated in reflecting on the changes and the learning outcomes as well as developing the model. The researcher believed that this TPLC model could finally create the non-formal and informal educational centers' environment to be a true professional learning community for teachers.

Therefore the research aimed to 1) investigate the states, problems, needs, and factors that enhance the success of the TPLC model 2) develop the model of the teachers' professional learning community for the non-formal education in Thailand's districts of the upper Northern region, and 3) study the results of the model implementation.

Materials and Methods

The mixed method consisting of qualitative and quantitative approaches was used in this study. The Participatory Action Research method (PAR) was used throughout the study. The research area comprised of the non-formal and informal educational centers in 8 upper Northern provinces: Chiang Mai, Chiang Rai, Lamphun, Lampang, Phrae, Mae Hong Son, Nan and Phayao. The study was performed in two sessions as follows.

The 1st session: the development of TPLC model and the user's guideline

Survey step: The principles, concepts, theories and related studies were studied along with the structure of the tools in order to define the tools' framework. Results of the study were used to construct the questionnaire. It contained four parts: the states, problems, needs, and factors that enhance the success of the PLC model. The questionnaires were presented to the administrators and the teachers in 8 upper Northern provinces. Two hundred and eighty-five completed copies of the questionnaires were collected and used as samplers at this stage. Data collected from the questionnaires were analyzed. It came up with these results: four TPLC components and three factors that enhance the success of the PLC model. The four TPLC components consisted

of 1) shared values and vision 2) collaborative teamwork 3) continuous learning and professional development and 4) common good practice. Three factors that enhance the success of the PLC model consisted of 1) an atmosphere that enhances learning 2) teamwork and 3) the reciprocity and reflection in learning. These results were presented and investigated in the brainstorming conference.

Brainstorming (PAR) step: Brainstorming conference was set up with twenty-four participants: administrators and teachers in eight provinces within the research area. Four steps of the conference included 1) planning 2) implementing 3) observing and 4) reflecting. The brainstorming covered four main topics: 1) the composition 2) the indicators 3) the development process and 4) activities used in TPLC development. Within this process, the results from the survey were discussed and combined with the theories and related studies to develop the TPLC model and its users' guideline. With this PAR method, the TPLC model was designed. Focus group discussion was set up to investigate the TPLC model. The panel consisted of nine experts in three fields: measurement and evaluation or corporate management; educational administration; and teaching and learning management. The researcher adjusted the model according to the experts' advice. The complete design of TPLC model was developed prior to the implementation step by the researcher. It consisted of four parts: TPLC components, learning to practice step, implementation guidelines, and model outcomes.

The 2nd session: the implementation of TPLC model

Implementing step: Fifteen teachers were purposely selected to be involved in the implement session. The implementation of the TPLC model aimed to find out its effectiveness on the staff's TPLC building. The participants, fifteen teachers from the non-formal and informal educational center in Doi Saket District in Chiang Mai province, were involved. They were assigned to participate in the TPLC plan. They were supplied with its user's guideline. The TPLC model's plan consisted of 4 parts: TPLC components, learning to practice, implementation guidelines, and model outcomes. The main part, TPLC components, was divided into four parts: 1) shared values and vision 2) collaboration teamwork 3) continuous learning and professional development 4) common good practice. The step of learning to

practice consisted of 3 steps: create knowledge (individual level); get into practice (group level); and evaluate outcomes (community level). PAR method and Deming PDCA cycle (plan, do, check, and act) were applied to each part throughout the active session including observation and reflection tasks. The observation task was performed by 3 co-researchers: the administrator, the teacher, and the informal educational teacher. The reflection task was performed by two groups: the group of 3 co-researchers and the group of fifteen teachers. The interview was performed after the reflection stage.

Participants

Participants 1 The population was one thousand and a hundred administrators and teachers in the non-formal and informal educational centers in Thailand's upper Northern region. Simple random sampling method was used to select the samplers. Krejcie & Morgan's table was used to estimate the sample size. Two hundred and eighty-five completed copies of the questionnaires were collected and used as samplers in this stage. (Survey step)

Participants 2 Twenty-four administrators and teachers were purposively selected. The selection criteria were as follows: they must work in 8 provinces within the research areas; they must hold at least master degree; and they must have at least 10 years working experience in non-formal and informal educational area. (Brainstorming (PAR) step)

Participants 3 Purposive sampling method was used to select 3 groups of participants involved in the implementing step as follows:

1. Fifteen non-formal and informal educational teachers who worked outside and inside the non-formal and informal educational center in Doi Saket District, Chiang Mai province;
2. All staff in the non-formal and informal educational center in Doi Saket District, Chiang Mai Province; and
3. Three co-researchers: 1 administrator; 1 teacher working outside the center; and 1 teacher working in the center.

The researcher involved as a facilitator. (Implementing step)

Data collection

Survey step: Simple random sampling was performed to select the samplers from all 1,100 administrators and teachers in the non-formal and

informal educational centers. Survey questionnaires were distributed to the samplers. The questionnaire consisted of four parts: demographical information; problems; needs and factors that enhance the success of the PLC model. They were investigated by experts in three fields: measurement and evaluation or corporate management; educational administration; and teaching and learning management. Its content validity items were rated by experts with the IOC valued at 1.00 in every item. The reliability was performed with 30 administrators and teachers. Its valued was at .8237. Two hundred and eighty-five completed copies of the questionnaire were collected.

Brainstorming (PAR) step: The data collecting tools were the record of brainstorming, focus group discussion, and model evaluation.

Implementation step: Data collecting tools were as follows.

1. Field notes (performed by the co-researchers)
2. Questionnaire on the implementing results consisting of 1) opinion questionnaire 2) pretest and posttest 3) model evaluation form 4) satisfaction questionnaire 5) interview on participation in TPLC. (performed by the non-formal and informal educational teachers who worked outside and inside the informal and non-formal educational centers)
3. Brainstorming and reflection notes (performed by the staff in Doi Saket district's non-formal and informal educational center)

Data analysis

Frequency value, percentage, mean, and standard deviation were performed to analyze the data collected from the survey questionnaires, the questionnaires on the implementing results, and the pretest and posttest. Content analysis was performed to analyze the collected data from the open-ended questions, focus group discussion, model evaluation, interview, field notes, and brainstorming and reflection notes.

Results

The findings of the study were in three parts: (a) the results on the states, problems, needs, and factors that enhance the success of the PLC model, namely, continuous learning and professional development; shared

values and vision; common good practice; and collaboration teamwork (b) the results of the study on TPLC model development revealed that TPLC model could be designed in various forms with various methods. These methods and forms are able to enhance participants' knowledge building, understanding, and learning skills as well as facilitate their continuous self-improvement. The 3 main methods used in this TPLC model development were training, self-study, and practice. A variety of forms and methods were used to enhance participants' construction of knowledge, understanding, and learning skills within 12-week development period. This process also enhanced the participants' continuous self-development and (c) the results on the implementing of the model.

States, problems, needs, and factors that enhance the success of the PLC model

The statistics showed the results of the states, problems, needs, and factors that enhance the success of the PLC model as follows.

1. The states of TPLC in the non-formal and informal educational centers were at low level. When considering each component, the results showed that the operation of the shared values and vision component were at the "very low" level. Whereas the operation of the other 3 components: collaboration teamwork; continuous learning and professional development; and common good practice, were at the "low" level.

2. The problem on the state of TPLC in the non-formal and informal educational centers showed at a high level. When considering each component, the problems respectively showed from high to low on each component as follows: continuous learning and professional development; shared values and vision; common good practice; and collaboration teamwork.

3. The need for a state of TPLC in the non-formal and informal educational centers was at a very high level. When considering each component, the needs respectively showed from high to low as follows: continuous learning and professional development; shared values and vision; common good practice; and collaboration teamwork.

4. The overall rating on all 3 factors that enhanced the success of the PLC model was at a very high level. When considering each factor, the

enhancement rating respectively showed from high to low as follows: the structure and conditions; technology; and human resources.

TPLC model development and its users' guideline

The results of the study on TPLC model development revealed that TPLC model could be designed in various forms with various methods. These methods and forms should enhance participants' knowledge building, understanding, and learning skills as well as facilitate their continuous self-improvement. The 3 main methods used in this TPLC model development were training, self study, and practice. A variety of forms and methods were used to enhance participants' construction of knowledge, understanding, and learning skills within 12-week development period. This process also enhanced the participants' continuous self-development. The followings are the 4 parts of TPLC model.

1. The first part was the 4 components consisting of 1) shared values and vision 2) collaboration teamwork 3) continuous learning and professional development 4) common good practice. It comprised of 3 steps: preparation step; development step; and evaluation step. The development step divided into 4 small steps: planning; practicing; observation; and reflection. The planning was for community preparation. The practicing consisted of 5 community development activities. The observation was to observe the development results. And the reflection was to reflect the pace of TPLC success.

2. The second part was learning to practice step. It consisted of 3 steps: create knowledge (individual level); get into practice (group level); and evaluate outcomes (community level).

3. The third part was the implementation guidelines. It consisted of 11 activities: 1) assess the level of TPLC learning 2) set up a meeting for the understanding of TPLC 3) motivate the value of TPLC building 4) prepare documents and manuals for implementation 5) design TPLC plans 6) bring plans to practice 7) learn together 8) share, learn, exchange, and give advise 9) summarize lessons learned and reflect on TPLC implementation 10) discuss the results and conclusions and 11) evaluate the results.

4. The fourth part was model outcomes. Eleven TPLC model implementation outcomes were 1) the acknowledgement of the non-formal

and informal educational centers' TPLC level 2) the staff's clear knowledge and understanding on the TPLC objectives 3) the staff's awareness of the importance on TPLC building in the non-formal and informal educational centers 4) TPLC users' guideline 5) TPLC building plan 6) the staff's operation skills and knowledge 7) the staff's cooperative learning 8) the staff's positive interaction and cooperative learning 9) the state of TPLC in the non-formal and informal educational center 10) the staff's satisfaction and 11) TPLC model for the non-formal and informal educational centers in Thailand's upper northern region.

The TPLC users' guideline for the non-formal and informal educational centers in Thailand's upper Northern region comprised of 4 parts.

Part 1: the introduction consisting of rationales, objectives, goals and definitions of the key words.

Part 2: the background, concepts, and composition of TPLC for the non-formal and informal educational centers.

Part 3: the TPLC model for the non-formal and informal educational centers in Thailand's upper northern region consisting its elements and concepts, composition and methods, structure and activity details, operation guideline, learning resources and worksheets, and evaluation.

Part 4: the model implementation consisting preparation to TPLC; development to TPLC; and the pace to TPLC success.

Part 5: the evaluation of performance including the state of TPLC in the non-formal and informal educational centers assessment form, teacher professional assessment form, post- test and evaluation form.

The implementing of the model

The results of implementing the TPLC model in the non-formal and informal educational centers were revealed in 3 parts.

1. The results showed a moderate degree on the overall state of TPLC in the non-formal and informal educational centers before the implementation session. The average score was at 3.25. Whereas, the score was at the highest level after the implementation session: at 4.53. The results of the assessment of its success showed in different levels as follows.

1.1 Individual level

The results showed the highest degree of success after TPLC implementation session in individual level. The participants could develop their own state of learning, create new knowledge, provide a variety of learning experiences for learners, and motivate and inspire their learners. In addition, they successfully acted as change-agent leaders. Moreover, TPLC could enhance their responsibility building and their ability to apply media and technology to their job development and learning management.

1.2 Group level

The results also showed the highest degree of achievement after TPLC implementation session in group level. The participants achieved in continuous cooperative learning and professional development and values and vision sharing. In addition, they succeeded in knowledge sharing, new knowledge creating, and teamwork skills building.

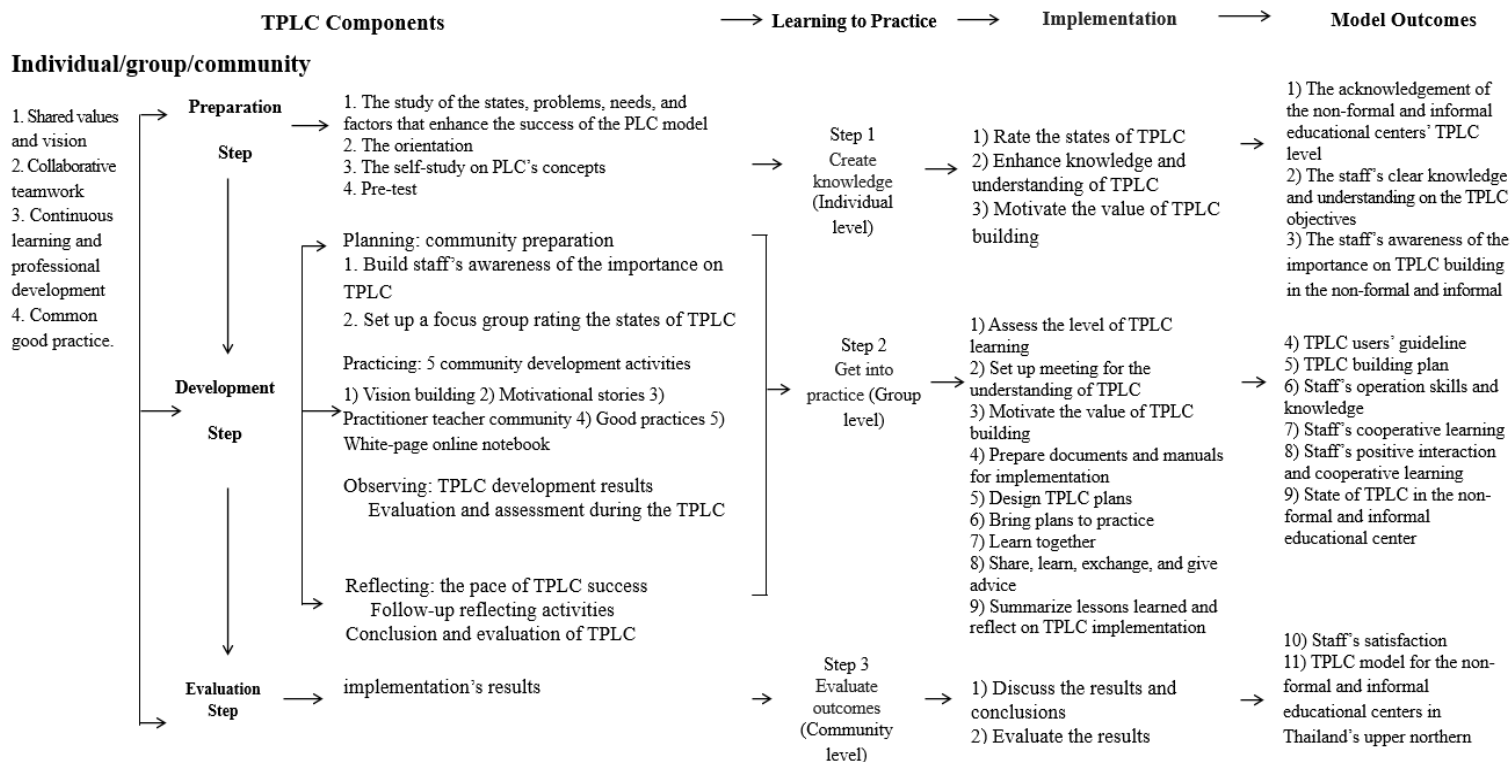
1.3 Community level

The results showed the highest degree of achievement after TPLC implementation session in community level. There were achievement outcomes in 4 parts: cooperative learning in the institutes; common good practice in learning; shared values and vision; and collaboration teamwork.

2. The results of TPLC comprehensive pre- and post-test, with the non-formal and informal educational center's staff in Thailand's upper northern region, showed the higher scores after TPLC implementation session. The pre-test scores were at 12.57 out of 30 or 51.90 percent. The post-test scores were at 24.85 or 82.83 percent. After-development scores were higher than before-development scores. All staff passed 80 percent of all criteria. It indicated that they apprehended better comprehensive knowledge of TPLC after TPLC implementation session.

3. The results showed the highest degree on all overall aspects of participants' satisfaction regarding the implementation of TPLC.

Model of teachers' professional learning community for the non-formal and informal educational center in Thailand's upper northern region (TPLC)



Discussion/Conclusion

The findings of this study, the model of teachers' professional learning community for the non-formal and informal educational centers in Thailand's upper northern region, were discussed in 3 parts.

1. The discussion of the results on the states, problems, needs, and factors that enhance the success of the PLC model
2. The discussion of the results on the development of TPLC model in the non-formal and informal educational centers
3. The discussion of the results on the implementing of TPLC model in the non-formal and informal educational center

The discussion of the results on the states, problems, needs, and factors that enhances the success of the PLC model

The finding showed that the overall state of PLC in the non-formal and informal educational centers was at low level. The operation of the shared values and vision was at a "very low" level. In agreement with this finding, Dufour, Dufour, Eaker, & Many (2006) stated that the key element of PLC was shared vision and values. The success of the PLC operation depended on the change that the administrators allowed all staff to participate in the development process.

The problem on the state of TPLC in the non-formal and informal educational centers showed at a high level especially on the "continuous learning and professional development" component. Kenoyer (2012) found that allowing the teachers to perform their jobs will help deepen their understanding of teaching and learning. Teachers are able to discover and set their own best practices which effectively improve their performances.

In agreement with Panich's (2012) statement, the finding stated that learning and professional development were the results of the teachers' gathering. They created their works, practiced, and reviewed the results that occurred together. This upgraded their creativity, teaching knowledge, and internal and external changes to become true teachers.

The need for a state of TPLC in the non-formal and informal educational centers was at a very high level especially on the continuous learning and professional development. The findings of Suesat (2012) study

also showed a very high level of the need for a state of TPLC of the non-formal and informal educational teachers in Thai sub-districts of western region. According to Knowles (1980), adults could learn well when they needed to develop themselves and what they had learned could solve their problems.

The overall rating on all 3 factors that enhanced the success of the PLC model was at a very high level. The enhancement rating respectively showed from high to low as follows: the structure and conditions; technology; and human resources. Intanam (2010) found the factors that support PLC included structural condition and social and human resources.

This is in accordance with the policy of the Ministry of Education (2017) which requires the application of modern information technology in order to encourage all people to easily access to knowledge. In addition, they can adapt or apply the acquired knowledge to their lives continuously. This is to also promote the quality of equal education.

The discussion of the results on the development of TPLC model in the non-formal and informal educational centers

The development of TPLC model with PAR technique was found to be the process that enabled the researcher and co-researchers involvement. They involved in the setting of TPLC activities, TPLC development plan, and TPLC guideline regarding the needs of the participants. Their TPLC development, thus, received participants' interests and satisfaction. Their satisfaction with the practical activities contributed to the continuity and sustainability of TPLC development.

The findings revealed 4 important components and 3 main steps in the development process of TPLC model for the non-formal and informal educational centers in Thailand's upper Northern region. The 4 important components were 1) shared values and vision 2) collaborative teamwork 3) continuous learning and professional development 4) common good practice. The 3 main steps comprised of preparation step, development step, and evaluation step. Besides, its PAR activity consisted of 4 participatory steps: planning; practicing; observation; and reflection. The TPLC users' guideline contains the important parts such as rationales, objectives, concepts, operation

guideline, and evaluation. These results were consistent with several research findings as follows.

Phisutsinthop (2010) studied the development of a community professional learning model in the Catholic higher educational institute. It revealed 6 important components of PLC: supportive and participatory leadership, cooperative learning, shared values and vision, practical guidelines in human resource structure, best practices sharing and reflection, and social and individual dimension development.

Intanam (2010) also stated 5 components of PLC in his study. They were shared norms and values, participatory goals setting, cooperative teamwork, practice guiding, and reflection. In addition, his integration of PLC approach concept with the Blue Ocean strategy revealed 4 phases of PLC building: planning; analyzing, integrating, and practicing. The implementation manual consisting of the concept, purpose, method of operation, and reporting was used.

Chookamnerd (2014) studied the PLC model for 21st century in Thai schools. It found that PLC model is an open-system aiming to create learning culture that led to the 21st century learners' change based on authentic participatory tasks. This model comprised of 6 important components interrelating with continuous two-way learning. Each component consecutively affected each other. Those 6 components consisted of 1) the community of true friends in Thai style 2) potential leadership 3) shared faith vision 4) learners-based cooperative open system 5) professional learning teamwork and 6) authentic task-based learning platform.

Theparee (2014) studied the PLC model for primary school teachers. It revealed 4 PLC components: learning culture; thinking; good practice; and continuing professional development.

Phuangsomjit (2017) studied the PLC and guidelines for application in educational institutions. The results of this study revealed 4 PLC essential characteristics, namely, a community where its members have good relationship and live happily; a community where its members have faith in their work and work willingly; a community where its members hold academic generosity, virtue, and friendship; and a community that is able to move forward to professional changes.

PAR technique that was used in TPLC model development effectively responded to teachers learning community. They shared their common needs to find the ways to improve all students learning. Students' improvement process started with the vision, values, and goals sharing and collaborations in learning and teamwork creating. This process also created a community that all members have good relationship and live happily due to specific self-study training methods. Teachers created their own opportunity to exchange knowledge and values with each other. PAR also provided the opportunity for them to develop their ability of learning management, make good practice in their work, and lead them to continuous their professional development. Thus, this lead to create a community that is able to move forward to professional changes. Successful professional changes are the result of successful PLC with PAR operation that made chances for schools administrators to allow their staff to participate in learning development process.

The discussion of the results on the implementing of TPLC model in the non-formal and informal educational centers

The findings showed better results in all 3 parts: the state of TPLC in the non-formal and informal educational center; TPLC comprehensive test; and participants' satisfaction, after the implementing of TPLC model. This finding was similar to that of Nimagon (2017) which found the better level of assessment results on the state of professional learning community in the school for children with physical and health impairments under special education bureau .

Phisutsinthop (2010) also found great effectiveness of TPLC model feasibility in the Catholic's higher educational institutes. In addition, Meesuk (2009) found greater success of participants who participated in PLC design stage. In conclusion, the value of TPLC model was in its usefulness, appropriateness, feasibility, accuracy, and practicality.

Recommendations

The design of TPLC model and its approach will benefit the non-formal and informal educational centers in Thailand's upper Northern region and other educational organizations. They can use it as an alternative to

determine the teachers' development strategies and to develop the non-formal and informal educational teachers' within their organizations. This will also benefit individual learners or teachers of other fields who want to improve themselves through this method. It can also be applied for self-learning and lifelong learning education. Moreover, this can be used to foster networking in order to strengthen both within and outside the educational organization. Further studies are required to validate the TPLC model with different organizations, with different groups of teachers or with learners and to develop a model that is suitable in other contexts.

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