**SURVEY ARTICLE**

# Developing a Training Curriculum to Enhancing Teachers' Learning Management Skills for Promoting Learners' Creativity and Innovation: A Case Study of Thai Teachers

Marut Patphol

Department of Multidisciplinary / Interdisciplinary, Graduate School, Srinakharinwirot University, Thailand

* Corresponding author email: rutmarut@gmail.com

## ABSTRACT

Thai teachers in primary school need to develop their learning management skills for promoting learners' creativity and innovation ability. This research developed a training curriculum to enhancing teachers' learning management skills. The objective was to developed a training curriculum to enhancing teachers' learning management skills for promoting learners' creativity and innovation ability. The sample groups were primary teachers in Suphanburi province under the Office of Basic Education Commission, Ministry of Education Thailand, total 49 people, and 104 learners. Conducted with the research and development methodology. The results found that the teachers' learning management skills after implementing curriculum was higher than before at the statistical significance level of .01., and the learners' creativity and innovation ability after implementing curriculum was higher than before at the statistical significance level of .01., and a training curriculum of this research composed of 3 units. Training activities based – on action learning approach. The researcher suggests that Professional Learning Community should integrate in training curriculum.

**Keywords:** Training curriculum, Learning management, Creativity and innovation

## 1. Introduction

All students in the 21st century should have many skills for their occupation in the future, such as higher–order thinking skills, learning skills, and life skills. Creativity and innovation also the important skill that the students should have (The Community for Creativity and Innovation. 2020; United Nations. 2020). Creativity and innovation skills is an ability to generate new idea and develop to an innovation (Griffith University. 2011). There are 3 components of creativity and innovation skills. The 1st component is creative thinking. This component composed of 5 abilities such as initiate thinking, use a variety of thinking, generate ideas from information, share idea with others effectively and evaluate and improve their ideas. The 2nd component is creative work with others. This component composed of 6 abilities such as communicate with others effectively, accept the opinions of others, respect others' ideas, initiatives in operation and adapt to the context, work with others through collaborative working, sharing ideas and experiences with others. The 3rd component is successful developing an innovation. This component composed of 4 abilities such as plan to develop an innovation from creative thinking, develop innovation, evaluate the quality of developed innovations, improve the defect of innovation for better (Partnership for 21st century skills, 2009; InnovationTraining.org. 2019; BW Bussinessworld. 2020; Coorpacademy. 2020; Rowlands. 2020; TED Learning. 2020).

Enhancing learners' creativity and innovation skills should integrate with the daily learning management of teacher through creative pedagogy consists of creative teaching, creative learning, and teaching for creativity (Lin. 2011; Rowlands. 2020; TED Learning. 2020). Learning management should apply "learning by doing" concept through active learning style, and design learning activities appropriate to the nature of learners. (Rowlands. 2020; TED Learning. 2020). For the effective learning design, teachers should promote the learners to generate their own knowledge. In addition, should conduct learning activities according to the

learner–centered approach (Rowlands. 2020; TED Learning. 2020). Furthermore, create the learning atmosphere for stimulating learners' thinking and provide sufficient support resources. Finally, should apply the approach of authentic assessment in their classroom for developing the learners (Rowlands. 2020; TED Learning. 2020).

Thai teachers in Thailand educational context, especially primary and secondary school teachers need to develop learning management skills for promoting learners' creativity and innovation ability (Office of the Basic Education Commission, Ministry of Education of Thailand, 2019). According to this problem, teacher development in learning management that enhancing learners' creativity and innovation skills is an important to be done urgently. The approaches for promoting the effectiveness of learning management are various. Some approaches are following, academic training, self-development, operate PLC in school, morale building, formal learning courses. In addition, the effectiveness of teacher development methods should promote teachers' knowledge and learning management skills together. For this research, the researcher developed a training curriculum to enhancing teachers' learning management skills for promoting learners' creativity and innovation ability. The researcher integrated the concept of Professional Learning Community (PLC) to designing a training curriculum. Moreover, the training activities focus on authentic practice and sharing experiences through learning together.

## 2. Research objectives

To developed a training curriculum to enhancing teachers' learning management skills for promoting learners' creativity and innovation ability.

**Population:** Primary teachers in Suphanburi province under the Office of Basic Education Commission, Ministry of Education Thailand, total 3,840 people.

**Sample:** Primary teachers in Suphanburi province under the Office of Basic Education Commission, Ministry of Education Thailand, total 49 people, and 104 learners

**Variable:** The manipulate variable was implementing a training curriculum. The dependent variables were teachers' learning management skills for promoting learners' creativity and innovation ability, and learners' creativity and innovation ability.

## 3. Conceptual framework

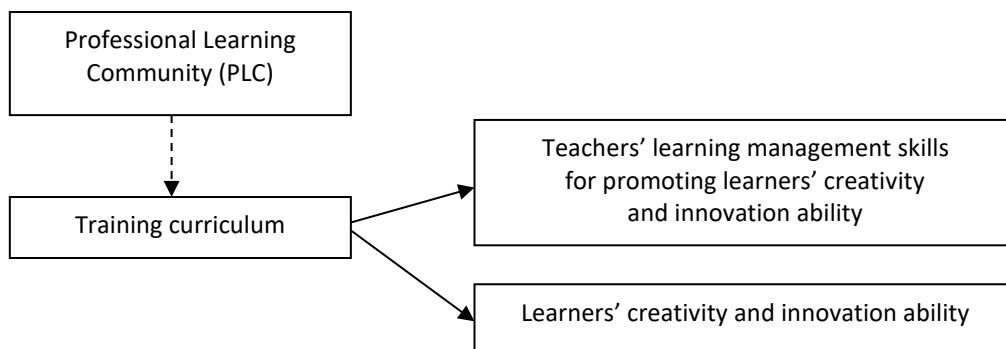The conceptual framework has been shown in figure 1 below-



**Figure 1:** *Conceptual framework*

## 4. Research methodology and results

### Step 1: Studied of information for training curriculum design

The researcher studied information about teachers' opinion towards the learning management skills for promoting learners' creativity and innovative ability, and training styles that they want to participate, the detail was following.

1. Studied of teachers' opinion towards the learning management skills for promoting learners' creativity and innovative ability. Conducted by using a 5 level of the rating scale questionnaire and

interviewing the teachers through structured interviews. The results found that, the teachers need to take training about learning management that enhances learners' creativity and innovation ability at high level (mean = 4.23 S.D. = 0.89). In addition, the teacher expected to have knowledge and ability to design learning activities for enhances learners' creativity and innovation ability through authentic training activities.

2. Studied of training styles for learning management for enhancing learners' creativity and innovation ability. Conducted by interviewing the educational experts about training methods that appropriate the teachers. The results found that, training curriculum should integrate the concept of Professional Learning Community (PLC) and action learning together. Furthermore, should provide supporting academic resources for teachers effectively.

**Step 2: Designed a training curriculum**

The researcher conducted by 4 steps and the detail was following.

1. Designed a training curriculum (the 1st draft). A training curriculum that the researcher designed, it's composed of 6 components such as principles of training curriculum, purpose of training, content of training, training activities, training media, measurement and evaluation. A training curriculum composed of 3 units following. The 1st unit focused on providing the concept of learning management for enhancing learners' creativity and innovation skills. Training activities composed of informal lecture, workshop seminar, and sharing experiences between the researchers and teachers. The 2nd unit focused on integrated the concept of learning management for enhancing learners' creativity and innovation skills followed the working principles of His Majesty King Bhumibol Aduladeja "understanding, accessing, and developing", and applied to the classroom followed the concept of work integrated training. Training activities composed of workshop seminar, work integrated practice, and sharing experiences between the researchers and teachers. The 3rd unit focused on reflective thinking, lesson learned and sharing experiences. Training activities composed of reflective practice, lesson learned, and knowledge conclusion relevant to learning management for promoting learners' creativity and innovation ability.

2. Validated a training curriculum. The researcher validated a training curriculum (the 1st draft) through experts' evaluation about consistency, suitability and possibility in implementation by using a rating scale questionnaire. A rating scale questionnaire compost of 5 level of evaluation, strongly agree, mostly agree, neither, mostly disagree, strongly disagree. The results found that, the consistency of training curriculum was high level (mean = 4.39, S.D. = 0.49, full score = 5). Suitability of training curriculum was high level (mean = 4.49, S.D. = 0.50, full score = 5). Possibility in implementation of training curriculum was high level (mean = 4.48, S.D. = 0.51, full score = 5). After that, the researcher revised a training curriculum from the 1st draft to the 2nd draft.

3. Developed research instruments. The instruments consist of evaluation form of teachers' learning management skill for enhancing learners' creativity and innovation ability. It was 5 levels of holistic rubrics with 0.80 reliability, and evaluation form of learners' creativity and innovation ability. It was 5 levels of holistic rubric with 0.87 reliability.

4. Pilot studied of a training curriculum. The researcher conducted a pilot study of training curriculum with 12 teachers. The results found that, teachers' learning management skills for promoting learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01. In addition, learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01. After that, the researcher revised a training curriculum from the 2nd draft to the 3rd draft.

**Step 3: Implemented a training curriculum**

The researcher implemented a training curriculum with 49 teachers and 104 primary students. The inclusion criteria of teachers were having at least 1 year of teaching experience and voluntarily join a research project. The exclusion criteria were less than 80% time to attend the training. Conducting the curriculum

implementation with professional learning community and school-based development approach following 4 steps of developing cycle. There was workshop seminar, applying into classroom, sharing experiences, and reflecting the results to improvement.

Data gathering conducted by observing teachers' learning management skills for enhancing students' creativity and innovation before and after curriculum implementation, observing students' creativity and innovation skills before and after curriculum implementation. After that the researcher analyzing the data by comparing mean score of teachers' knowledges before and after implementation the curriculum and comparing mean score of teachers' skills before and after implementation the curriculum. The results were following.

1. Teachers' learning management skills for enhancing learners' creativity and innovation ability before and after implementing a training curriculum showed in the following table 1.

**Table 1:** *Teachers' learning management skills for enhancing learners' creativity and innovation ability before and after implementing a training curriculum*

| Data collection | n | Full score | mean | S.D. | t | df | Sig. |
|---|---|---|---|---|---|---|---|
| Before training | 49 | 50 | 33.78 | 1.97 | 25.69 | 48 | .01 |
| After training | 49 | 50 | 43.57 | 1.74 | | | |

From table 1 above found that, teachers' learning management skills for promoting learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01.

2. Learners' creativity and innovation ability before and after implementing a training curriculum showed in the following table 2.

**Table 2:** *Learners' creativity and innovation ability before and after implementing a training curriculum*

| Data collection | n | Full score | mean | S.D. | t | df | Sig. |
|---|---|---|---|---|---|---|---|
| Before training | 104 | 75 | 46.12 | 2.32 | 37.23 | 104 | .01 |
| After training | 104 | 75 | 59.50 | 2.68 | | | |

From table 2 above, learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01.

**Step 4: Evaluation the effectiveness of training curriculum**

After analyzing the data as mentioned in step 3, the researcher evaluated the effectiveness of training curriculum according 2 criteria. The results showed in the following table 3.

**Table 3:** *The effectiveness of a training curriculum*

| No. | Effectiveness criteria | Results | Conclusion |
|---|---|---|---|
| 1 | Teachers' learning management skills for promoting learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing a training curriculum. | Teachers' learning management skills for promoting learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01 | Meet the criteria |
| 2 | Students' creativity and innovation ability after implementing a training curriculum was higher than before implementing a training curriculum. | Students' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01. | Meet the criteria |

From Table 3, found that the training curriculum have the effectiveness following the criteria by the teachers' learning management skills for promoting learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01 and students' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01.

## 5. Discussions

The research results found that teachers' learning management skills for promoting learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01 because the researcher integrated the concept of Professional Learning Community (PLC) into training curriculum. Professional Learning Community was a supporting system of a training curriculum. Teachers shared their ideas and experiences about learning management techniques that able to develop the learners' creativity and innovation ability according to Admiraal (2019); Victoria State Government (2019); Kennan Foundation Asia (2020) identified that the Professional Learning Community helps the teachers develop their teaching performance through sharing experiences and lead to continuous improvement. Educational staff who want to develop teachers' learning management skills for promoting learners' creativity and innovation ability should integrate all factors of creativity and innovation such as creative thinking, creative work with others, and successful developing an innovation in the development program.

Furthermore, the researcher applied 5 principles of Professional Learning Community into training activities such as sharing values and vision of learning management, constructing collaborative working culture with teachers, focusing on learners' creativity and innovation skills during learning management, supporting academic leadership to teachers, and sharing learning management experiences with teachers according to practical guidelines of Prenger, Poortman & Handelzalts (2019); Thompson, Hageneh, McDonald & Barchenger (2019); Garcia & Weiss (2019). Effective implementation of training curriculum should integrate training activities into learning management tasks of teachers. Teachers learn the concept of learning management with daily working in school. Training supervision should apply the concept of mentoring and coaching for developing the teachers. Effective mentoring and coaching should appropriate with working cultural of teachers. Mentoring and coaching is a supporting system of training activities.

According to the research results found that learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing a training curriculum at the statistical significance level of .01 because the teachers applied the concept of constructivist theory in to the classroom for promoting learners' creativity and innovation according to Othman, Jamian, Sabil, Said & Omar (2020); Miller (2020); Victoria State Government (2019); Chua, Thein, Lim, Tan & Guan (2020); Division of Elementary & Secondary Education of Arkansas (2020) identified that the teacher should conduct their learning management for engaging learners' potential through to the learning principle such as all learners can learn by themselves through interaction with others and appropriate environment, learning is generated from the existing knowledge that assimilation and accommodation, interaction with society will be a factor of promoting learning, practice in real life will lead to meaningful learning. In addition, teachers applied their knowledge that they received from training activities into learning management. They designed learning activities relevant to the nature of learners and promoted to succeed in learning objectives and encouraged the learners to create project also provided positive learning atmosphere according to Beger (2020); Nordengren (2020); Evans, Dadey & Gong (2020) indicated that formative assessment is an effective approach for developing the learner capacities.

## 6. Conclusion

The results of this research provided a training curriculum for enhancing teachers' learning management skills for promoting learners' creativity and innovation ability. The training curriculum focused on workshop seminar and professional learning community. The results of curriculum implementing found that the teachers' learning management skills for promoting learners' creativity and innovation ability after implementing a training curriculum was higher than before implementing at the statistical significance level of .01 and students' creativity and innovation ability after implementing a training curriculum was higher

than before implementing at the statistical significance level of .01. The limitation of this research was small sample size that who will apply the knowledge from this research should apply appropriately.

## 7. Declarations

### 7.1 Acknowledgements

### 7.2 Funding Sources

### 7.3 Informed Consent

Informed written consent was obtained from the respondents before administering the questionnaire by explaining the objectives and the relevance of the study, ensuring privacy and confidentiality. Data collected anonymously and located safely with access limited only to the research team. Confidentiality of all records were safeguarded.

### 7.4 Competing Interests

The authors declared that no conflict of interest exist.

### How to Cite this Article:

## References

Admiraal, W. (2019). Schools as professional learning communities: what can schools do to support professional development of their teachers? *Professional Development in Education,* https://doi.org/10.1080/19415257.2019.1665573

Beger, R. (2020). Formative Assessment Is Reshaping Education During Covid-19. Retrieved 23 December 2020, from https://www.forbes.com/sites/rodberger/2020/10/15/formative-assessment-is-reshaping-education-during-covid-19/?sh=60f50e3a1f25

BW Bussinessworld. (2020). Creativity and Innovation In A VUCA World. Retrieved 22 December 2020 from http://www.businessworld.in/article/Creativity-And-Innovation-In-A-VUCA-World/03-09-2020-316251/

Chua, W., Thein, L., Lim, S., Tan, C. & Guan, T. (2020). Unveiling the Practices and Challenges of Professional Learning Community in a Malaysian Chinese Secondary School. Retrieved 24 December 2020, from https://doi.org/10.1177/2158244020925516

Coorpacademy. (2020). World Economic Forum: the top 10 skills you'll need for the future of work. Retrieved 23 December 2020 from https://www.coorpacademy.com/en/blog/learning-innovation-en/world-economic-forum-the-soft-skills-to-prepare-employees-for-the-future-of-work/

Division of Elementary & Secondary Education of Arkansas. (2020). Professional Learning Communities in Arkansas. Retrieved 24 December 2020, from http://dese.ade.arkansas.gov/divisions/special-projects/professional-learning-communities-in-arkansas

Evans, C. Dadey, N. & Gong, B. (2020). A Deep Dive into Formative Assessment in a Remote or Hybrid Learning Environment. Retrieved 24 December 2020, from https://www.nciea.org/blog/educational-assessment/part-1-deep-dive-formative-assessment-remote-or-hybrid-learning

Garcia, E & Weiss, E. (2019). *The Role of Early Career Supports, Continuous Professional Development, and Learning Communities in the Teacher Shortage.* Washington D.C.: Economic Policy Institute.

Kennan Foundation Asia. (2020). How Professional Learning Communities are Transforming Education in Thailand. Retrieved 23 December 2020, from https://www.kenan-asia.org/professional-learning-communities-thailand/

Miller, A. (2020). Creating Effective Professional Learning Communities. Retrieved 24 December 2020, from https://www.edutopia.org/article/creating-effective-professional-learning-communities

Nordengren, C. (2020). The Power of Formative Assessment when the only Constant is Change. Retrieved 23 December 2020, from https://www.nwea.org/blog/2020/power-of-formative-assessment-when-only-constant-is-change/

Office of the Basic Education Commission, Ministry of Education of Thailand. (2019). Educational Statistics. retrieved 21 November 2016, from http://bet.obec.go.th/index/?cat=23&paged=3

Othman, S., Jamian, A., Sabil, A., Said, R. & Omar, R. (2020). Professional Learning Community (PLC): Approach to Enhance Students' Achievement in Language Learning at Public University, Malaysia. *Universal Journal of Educational Research 8*(1A): 8-15.

Prenger, R., Poortman, C & Handelzalts, A. (2019). The Effect of Networked Professional Learning Communities. *Journal of Teacher Education, 70*(5), 441-452.

Rowlands, D. (2020). Creativity is most in-demand soft skill for 2020. Retrieved 23 December 2020 from https://www.thehrdirector.com/features/cultural-change/latest-research-finds-creativity-as-the-most-in-demand-soft-skill-for-2020/

TED Learning. (2020). Creativity & Innovation Skills. Retrieved 23 December 2020 from https://www.ted.com.my/soft-skills-training/creativity-and-innovation-skills/

The Community for Creativity and Innovation. (2020). Survey shows the most important skills for 2025 will be creativity and innovation. Retrieved 24 December 2020 from https://www.ideatovalue.com/inno/nickskillicorn/2020/11/survey-shows-the-most-important-skills-for-2025-will-be-creativity-and-innovation/

Thompson, J., Hageneh, S., McDonald, S & Barchenger, C. (2019). Toward a practice-based theory for how professional learning communities engage in the improvement of tools and practices for scientific modeling. Retrieved from https://doi.org/10.1002/sce.21547

InnovationTraining.org. (2019). Innovation Skills for the Future: Insights from Research Reports. Retrieved 22 December 2020 from https://www.innovationtraining.org/innovation-skills-for-the-future/

United Nations. (2020). Creativity and innovation in problem-solving. Retrieved 24 December 2020 from https://www.un.org/en/observances/creativity-and-innovation-day

Victoria State Government. (2019). Professional Learning Communities. Retrieved 24 December 2020, from https://www.education.vic.gov.au/Documents/about/educationstate/plcedstatefactsheet.pdf