

A Creation of Digital Professional Learning Community for Effectiveness Communication

Thanyawich Vicheanpant

School of Communication Arts, Sripatum University

e-mail: thanyawich@gmail.com

ABSTRACT

This research had as its objective a study of “A Creation of Digital Professional Learning Community for Effectiveness Communication”. The monitoring survey sample consists of 30 teachers from region 9 provinces and the developing survey sample consisted of 30 teachers (from schools in Eastern part of Thailand) and 20 specialists in the improvement of communication system for professional learning community. The instruments used were communication system for professional learning community, a system quality assessment, a system effectiveness assessment, a communication effectiveness assessment, a satisfaction assessment, and a tool quality assessment designed to increase the efficiency of communication by experts from the PLC which consists of 3 important parts; a personal knowledge base, a show room, and a reflection room. The results of these system quality and system effectiveness assessments according to the suitability viewed by experts found that they were in a good level

respectively. It was found that after the method being used, the team's effectiveness in communication internally affects in quality of work was in a great level and the users' satisfaction level was also in a great level. The results of regression analysis revealed that each variable had a factorial loading effect. The results were consistent with the research framework, viz. the satisfaction of system usage had more factorial loading effect on encouraging the users on communication. It gave opportunity for users in participating, studying the previous lesson, linking the old and new knowledge with variety and suitability, stimulate the users for usage, and interest and motivation of the system were at .69, .65, .60, .59, .50, and .49 respectively. The efficient communicative variable had a similarity on factorial loading effect and sub-variables on changes in team communication behavior. It had the factorial loading effect on more communication with colleagues, having more jobs related conversations with colleagues, smaller team meetings are friendlier, teammates “ opinions had being heard and they are more cooperative, and when

problem arises, there will be more consultation in the team were at .86, .78, .75, .65, and .54 respectively. The efficient communication on changes of communication to quality of work had the factorial loading effect on reducing loneliness in work, better work process and work result, better team and related personal relationship, setting targets and collaborating together more were at .80, .79, .67, and .64 respectively

Keywords: Professional Learning Community, Communication, Online community

Background and Significant of the Problem

In the present era - the 21st century where knowledge can be changed, transferred, and quickly connected by information and communication technology at your fingertips. It contributes the development of rapid technological innovation in all professions. Therefore, in order to keep up with the flow and taking this as a warning sign that each and every professional field can no longer work as an individual (separated by divisions) nor under the traditional frameworks. The appropriate way is to share knowledge with people from the same profession, depend and rely on each other, and help each other solve problems by exchanging suggestions for multiple dimensions in finding solutions. This one tool enables the communication mechanism being mentioned is the Professional Learning Community system. Richard Dufour said "The Communication System for Professional Learning Community happened for a while in many countries especially in the

21st century" (Richard Dufour,2013) where each country has paved more about developing professional learning communities e.g. a Lesson Study in Japan, Problem-Solving Groups in Finland, Lesson Group and Research Group in Shanghai, and Teach Less, Learn More in Singapore. These Professional Learning Communities are various but practical and the management focuses on unity which builds up the professional learning community in the team for the better communication which makes the team members unite and affects the work efficiency and success. This improvement of communication system for professional learning community acts as channels for knowledge exchanging, knowledge building, and sharing among the same profession. Where people from the same profession use as a community to exchange and share their knowledge anywhere, any time for doing a quick self-improvement and increase the enthusiasm for learning that could become a

habit or a new culture for them.

Purpose of Research

- 1) Create Digital Professional Learning Community for Effectiveness Communication
- 2) Developmental Testing of Digital Professional Learning Community

Scope of the Study

This was a research in R & D (Research and Development) to develop a community of learning, professional communication for those interested to apply the benefits of working in a job or profession itself with electronic platform. It is divided into two phases;

Phase 1: The survey examined the needs of the user by using the structured interviews. The target group of 30 individuals and collected data obtained from the interviews to analyze for common requirement. The target groups were 30 teachers from schools in Eastern part of Thailand.

Phase 2: Developing of the data obtained from the survey to create the communication system for professional learning community were conducted by using these processes;

- 1) Analyze the Common Requirement diagrams and write a functional diagram.
- 2) Create a database design and User Interface Design.

3) Create of the professional community of learning by using the focus group.

4) Invite 20 specialists via purposive sampling in different fields for evaluation in 5 levels likert scale;

- 5 System Analysis specialists
- 10 Professional Learning Community specialists
- 5 system quality and the suitability for the task specialists

5) 120 Users from schools to evaluate the quality of the system.

6) 120 Users from schools to evaluate the suitability for the task.

Research Instrument

1. The instrument used was;
 - Communication System for Professional Learning Community
2. Data were collected via;
 - A structured interview about the needs of the User.
 - A system quality assessment
 - A system effectiveness assessment
 - A communication effectiveness assessment
 - A system satisfaction assessment

Research methodology

Create and developing research tools to perform the following processes;

The research was being conducted by using the Participatory Integrated Design Process: PIDP 4 stages (S.Chaisanit, 2011) as follow;

1st Stage: Needs Analysis At this stage, preliminary and study of researches and various reports and documents from both domestic and abroad were studied to know the problem status and needs of user by interviewing them individually. These users were 30 teachers from various schools using structured interviews then analyzed the data according to Common Requirement to be used in the further design process.

2nd Stage: Conceptual Design At this stage, designing the conceptual of the research was analyzed to determine the details associated for designing the Communication System for Professional Learning Community.

3rd Stage: Development At this stage, designing the User Interface has to be done beautifully, neat, and user - friendly. After that, invited the experts to assess the quality and usability of the system.

4th Stage: Evaluation It's a stage of applying the Communication System for Professional Learning Community to the sample group and evaluated the system effectiveness by experts.

5th Stage: evaluate the quality of the system and the suitability for the task.

6th Stage: Analyzing the influence on the efficient communication and verifying the consistency of the efficient communication performance model in developed with empirical data and compare the model influenced path between the satisfaction of system usage and the efficient communication. Both the change in communication behavior and the changes in communication that affect the quality of work to facilitate the presentation of the same data analysis results via regression analysis;

$$y = a + bx$$

$$a = \bar{y} - b\bar{x}$$

$$b = \frac{(\sum xy - n\bar{x}\bar{y})}{\sum x^2 - n\bar{x}^2}$$

Major Findings:

Result on User Interface and Design

System Design consists of the system administrators, system for members, system for general users, database design, java script design for operating the whole system, display design for the system administrator, for members, and for general users.

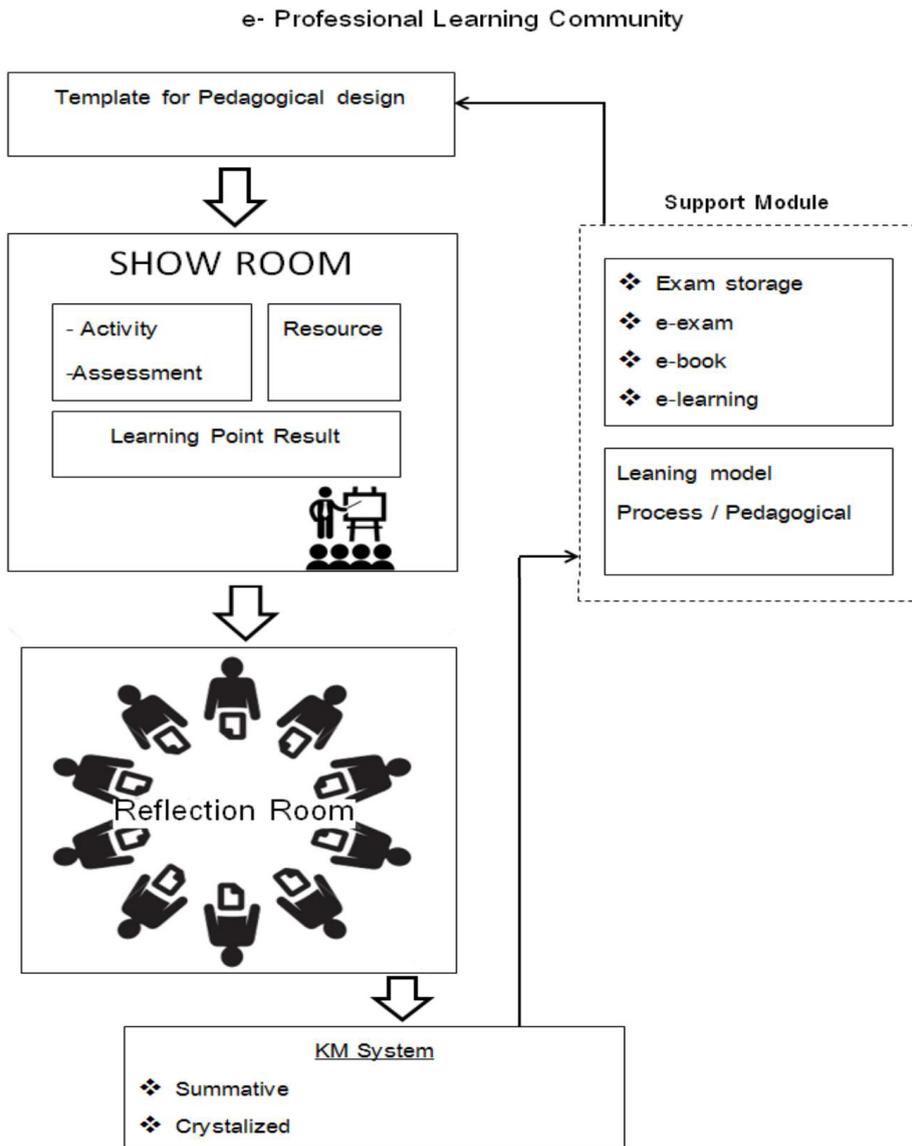


Diagram 1 System Flowchart from Needs Analysis

User Interface Design

System administrators designed the system according to the plan and the other part is to design the user interface by making

the necessary menu for *member register*, the knowledge collection, the *Show Room*, and the *Reflection Room*.



Figure 1 The Communication System for Professional Learning Community homepage

Member Register Menu

. Click the Member Menu and choose „Member Register “

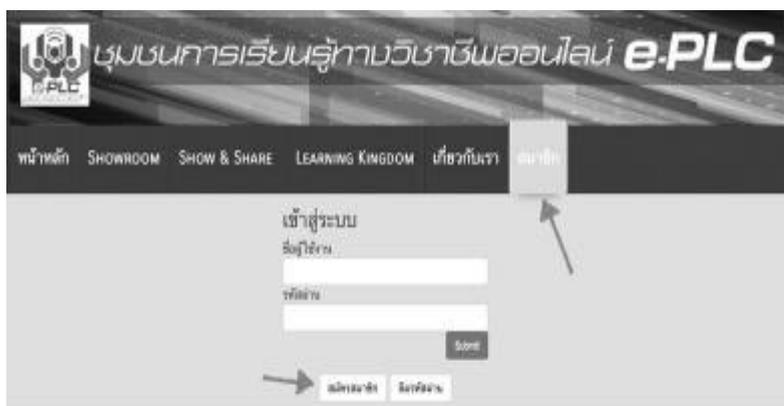


Figure 2 The Communication System for Professional Learning Community registration page

□ Knowledge Collection

- Any knowledge collecting activities can be done after being a member. After you logged in, there is an „Article“ item where members can upload their work into the system

- Documents types available for uploading are pictures, lesson contents, teaching materials, lesson plans, Webcasts, video clips, links from website, schedule on when to log into the Reflection Room or setting an online meeting etc.,



Figure 3 List of topic for sharing page

- Attaching the webcasts, browse the desired webcasts and click “Share” then click

“Embed” and copy and paste the link to e-plc website in webcasts (YouTube)

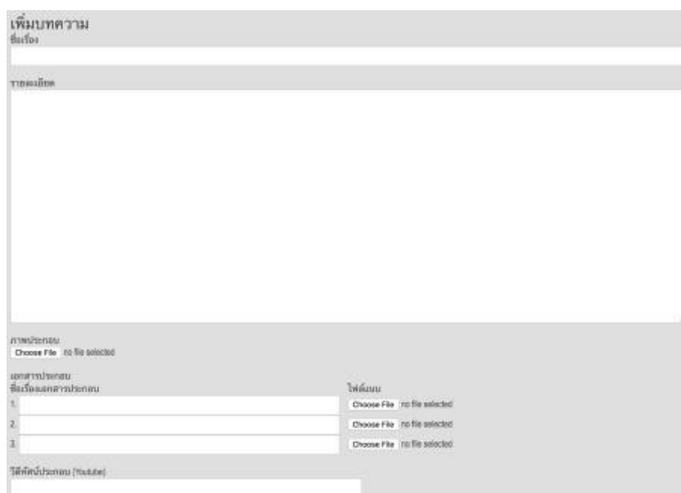


Figure 4 Page for Articles/Media Upload

□ *Show Room*

- Click “Show & Share” menu, choose the interested article and click “continue

reading” . Click “Show Room” to view the previous articles and click “continue reading”



Figure 5 Articles/Media sharing page in Showroom Section

□ *Reflection Room*

- Reflection Room is an online meeting where teacher can attend this Communication System for Professional Learning Community to exchange knowledge, help finding solutions,

share, and give comments for teacher from the same profession.

- To attend click “join” and while the meeting is being broadcasting, teacher can Like and Share to Facebook instantly or give Comment for Q&A.



Figure 6 Reflection Section

Result of the System Quality Assessment**Table 1** Result of System Quality Assessment on Communication System for Professional Learning Community

Category	Mean	S.D.
- Concepts	4.60	0.47
- Suitability for the task	4.49	0.40
- Suitability for learning	4.40	0.37

Table 1 Result of System Quality Assessment on Communication System for Professional Learning Community

Category	Mean	S.D.
- Suitability for individualization	4.35	0.39
- Conformity with user expectations	4.59	0.30
- Self-descriptiveness	4.29	0.38
- Controllability	4.50	0.32
- Error tolerance	4.60	0.28
Total	4.48	0.36

Result of the System Effectiveness Analysis

According to the Table 1, experts commented on the overall systems total average rating in a great level (Average = 4.48 and S.D. = 0.36) Once considering each aspect, found that experts commented on the system in great level on all aspects from Concepts (Average = 4.60 and S.D. = 0.47) ,

Error tolerance (Average = 4.60 and S.D. = 0.28) , Conformity with user expectations (Average= 4.59 and S.D.= 0.30), Controllability (Average = 4.50 and S.D. = 0.32) , Suitability for the task (Average= 4.49 and S.D. =0.40) , Suitability for learning (Average = 4.40 and S.D.= 0.37) , Suitability for individualization (Average =4.35 and S.D. = 0.39) , and Self-

descriptiveness (Average = 4.29 and S.D. = 0.38) respectively

5 suitability for the task specialists conducted the analysis of the system in 5 aspects; 1) the system suitability operation, 2) system accuracy operation, 3) system suitable

and user - friendly operation, 4) system speed of the operating, and 5) system safety operation. Experts concluded that the Communication System for Professional Learning Community had the suitability for the task in a great level ($X = 3.93$ and $S.D. = 0.66$)

Table 2 Analysis Table on Suitability of the Communication System for Professional Learning Community

Description	Comment Rate		
	Mean	S.D.	Meaning
The System Suitability Operation			
System ability in linking with users	3.98	0.74	High
System ability in sorting types of data	3.91	0.78	High
System ability in adding data	3.88	0.73	High
System ability in editing data	3.74	0.85	High
System ability in presenting data	3.86	0.89	High
System ability in attracting users	3.81	0.79	High
System ability in collecting data	3.86	0.71	High
System ability in linking data	3.93	0.77	High
Total Average	3.91	0.78	High
The System Accuracy Operation			
System accuracy in the overall operating	3.98	0.74	High
System accuracy in sorting types data	3.91	0.78	High
System accuracy in adding data	3.88	0.73	High

Table 2 Analysis Table on Suitability of the Communication System for Professional Learning Community

Description	Comment Rate		
	Mean	S.D.	Meaning
System accuracy in editing data	3.74	0.85	High
System accuracy in presenting data	3.86	0.89	High
System accuracy in displaying data	3.81	0.79	High
System accuracy in inputting data	3.86	0.71	High
Total Average	3.90	0.64	High
The System Suitable and user - friendly			
Operation			
System user - friendly	3.98	0.74	High
The suitability of the graphic used in presenting	3.91	0.78	High
The suitability of the screen design in general	3.88	0.73	High
The clarity of the text on screen	3.74	0.85	High
The suitability of the color in general	3.86	0.89	High
The suitability of the font being used	3.81	0.79	High
The suitability of the slides in the presentation	3.86	0.71	High
The attractiveness of the system in general	3.93	0.77	High
Total Average	3.91	0.31	High
The System Speed of the Operating			
The system speed of the operating in general	3.98	0.74	High
The speed of displaying the linkage on each page	3.91	0.78	High
The speed of connecting with the database system	3.88	0.73	High
The speed of saving, editing, and changing data	3.74	0.85	High
The speed of presenting data	3.86	0.89	High
Total Average	3.98	0.40	High

Table 2 Analysis Table on Suitability of the Communication System for Professional Learning Community

Description	Comment Rate		
	Mean	S.D.	Meaning
The System Safety Operation			
The suitability in defining users"and administrators" passwords	3.98	0.74	High
The suitability in safety while putting user data and password incorrectly	3.91	0.78	High
The suitability of safety operation in general	3.88	0.73	High
Total Average	3.80	0.29	High
Total Average of all Aspects	3.93	0.66	High

Communication Effectiveness Assessment

Based on the survey of communication effectiveness for users in the system which were assessed in two aspects: communication behaviors in the team and communication

which affects the work quality. The research found that the system had a significant impact on the users of the system in a great level ($X=3.46$ and $S.D. = 0.52$).

Table 3 Communication Effectiveness Assessment Table

Description	Level Comment		
	Mean	S.D.	Meaning
Behaviors changing rate in the team communication			
1. The increased in communication between you and your colleagues in the team.	3.38	0.97	High

Table 3 Communication Effectiveness Assessment Table

Description	Level Comment		
	Mean	S.D.	Meaning
2. You team has a close and warm group discussing about work.	3.90	0.80	High
3. Your team listens and cooperates with you more.	3.58	0.63	High
4. When facing a problem, you and your team will discuss to find the solution together.	3.44	0.81	High
5. You and your team often discuss about the assigned task.	3.57	0.62	High
Total Average	3.58	0.96	High
Communication changing rate which affects the work			
1. Communication that creates norms and values for greater collaboration.	3.98	0.67	High
2. Communication that reduces the feeling of loneliness while working.	3.33	0.79	High
3. Communication that creates the sense of commitment to the mission and goals of the team.	3.88	0.73	High
4. Common goals are being set together plus the increasing of collaboration in the team.	3.74	0.85	High
5. Communication that has a positive effect to the work quality in the whole production process.	3.86	0.89	High
6. The relationship between members, experts, and related persons are getting better.	3.35	0.81	High
Total Average	3.34	0.80	High
Total Average of the Overall	3.46	0.52	High

User Satisfaction Assessment

Based on the user satisfaction assessment to Communication System for Professional Learning Community using 5

levels of Likert scale found that the user has the level of satisfaction to Communication System for Professional Learning Community in a great level (N = 120 Average = 3.91 and S.D. = 0.78)

Table 4 Satisfaction level of user for the Communication System for PLC

Description	Level Comment		
	Mean	S.D.	Meaning
- The attractiveness of the system	3.93	0.80	High
- The page design	3.98	0.74	High
- The font design	3.91	0.78	High
- The suitability of the graphic	3.88	0.73	High
-The suitability of sound and effect	3.74	0.85	High
- The presentation duration	3.86	0.89	High
- The opportunity for user to view the previous lessons	3.81	0.79	High
- The opportunity for user to control the speed in using the system	3.86	0.71	High
- The linkage between the previous and new knowledge	3.93	0.77	High
- The opportunity for user for collaboration	3.98	0.83	High
- The interaction system is diverse and appropriate	4.00	0.85	High
- The stimulation of the user to the system	3.91	0.75	High
- The stimulation of the user to communication more	3.98	0.71	High
Total Average	3.91	0.78	High

Analysis to determine the accuracy of the efficient communication model.

Analyzing the influence on the efficient communication and verifying the consistency of the efficient communication performance model in developed with empirical data and compare the model influenced path between the satisfaction of system usage and the

efficient communication. Both the change in communication behavior and the changes in communication that affect the quality of work to facilitate the presentation of the same data analysis results. The researcher has defined symbols and abbreviations instead of all the variables as follows;

SATS	=	Satisfaction of System Usage
SATS1	=	Interest and Motivation
SATS7	=	The Opportunity to Study the Previous Lesson
SATS9	=	Linkage of New and Old Knowledge
SATS10	=	The Opportunity to Participate Throughout the Usage
SATS11	=	Diversity and Suitability
SATS12	=	Stimulation of the Usage
SATS13	=	Encouragement for More Communication
COME	=	Efficient Communication
BEHC	=	Changes in Communication Behavior
BEHC1	=	More Communication with Colleagues
BEHC2	=	Smaller Team Meetings are Friendlier
BEHC3	=	Teammates be More Cooperative
BEHC4	=	When Problem Arises, More Consultation in the Team
BEHC5	=	Having More Jobs Related Conversations with Colleagues
QUAC	=	Changes of Communication to Quality of Work
QUAC2	=	Reducing Loneliness in Work
QUAC4	=	Setting Targets and Collaborating Together More
QUAC5	=	Better Work Process and Work Result
QUAC6	=	Better Team and Related Personal Relationship
AGE	=	Age
EXP	=	Year Service/Work Experience
SUBJ	=	Subject

Based on the research framework, the researcher desired to evaluate both the efficient communication and user's satisfaction towards professional learning community system for communication. This topic is the

accurate analysis of the efficient communication model to see whether the level of satisfaction or other variables would affect the efficient communication. The results of the analysis are detailed in the table.

Table 5 Total effect (TE), a direct effect (DE) and an indirect effect (IE) of the condition variables affecting the efficient communication.

variables	BEH			QUA			SATS		
	C			C					
condition affecting	TE	IE	DE	TE	IE	DE	TE	IE	DE
SATS	.38*	.04	.34*	.23*	.02	.21*	-	-	-
BEHC	-	-	-	.13*	-	.13*	-	-	-
AGE	-	-	-	-	-	-	.08	-	.08
BEH	-	-	-	-	-	-	.04	-	.04
SUBJ	-	-	-	-	-	-	.14	-	.14

*p < .05

The conditions that affect on communicative performance were statistically significant. * p < .05 From the table, considering a total effect (TE), a direct effect (DE) and an indirect effect (IE) of the condition variables affecting the efficient communication. It was found that the conditional variables significantly

influenced the efficient communication. From the table, it can be concluded that the satisfaction of system usage (SATS) has the total effect on the efficient communication on Changes in Communication Behavior (BEHC) at .38 which could be separated for the direct effect .34, low indirect effect at .04, and had

the total effect on Changes of communication to quality of work (QUAC) at .23, which could be separated for the direct effect at .21, and low indirect effect at .02. The total effect and the direct effect had a statistically significant level at .05 besides, it was also found that the efficient communication on both sides affect each other i.e., the efficient communication on changes in team communication behavior had the total effect on changes to quality of work at .13 with a significant effect at .05 and without the indirect effect. Considering the conditional variable effect lines towards the efficient communication to see the variable effects, 3 of conditional effect were found which were; Age (AGE), Year Service and Experience (EXP), and Subject (SUBJ) had the effect on the Satisfaction of System Usage at .08, .04, and .14 respectively. These conditional variable effect had the direct effect on the Satisfaction of System Usage without any statistically significant nor indirect effect.

The results of LISREL analysis revealed that each variable had a factorial loading effect. The results were consistent with the research framework, viz. the Satisfaction of system usage had more factorial loading effect on

encouraging the users on communication. It gave opportunity for users in participating, studying the previous lesson, linking the old and new knowledge with variety and suitability, stimulate the users for usage, and interest and motivation of the system were at .69, .65, .60, .59, .50, and .49 respectively. The efficient communicative variable had a similarity on factorial loading effect and sub-variables on changes in team communication behavior. It had the factorial loading effect on more communication with colleagues, having more jobs related conversations with colleagues, smaller team meetings are friendlier, teammates' opinions are being heard and they are more cooperative, and when problem arises, there will be more consultation in the team were at .86, .78, .75, .65, and .54 respectively. The efficient communication on changes of communication to quality of work had the factorial loading effect on reducing loneliness in work, better work process and work result, better team and related personal relationship, setting targets and collaborating together more were at .80, .79, .67, and .64 respectively as shown in the picture.

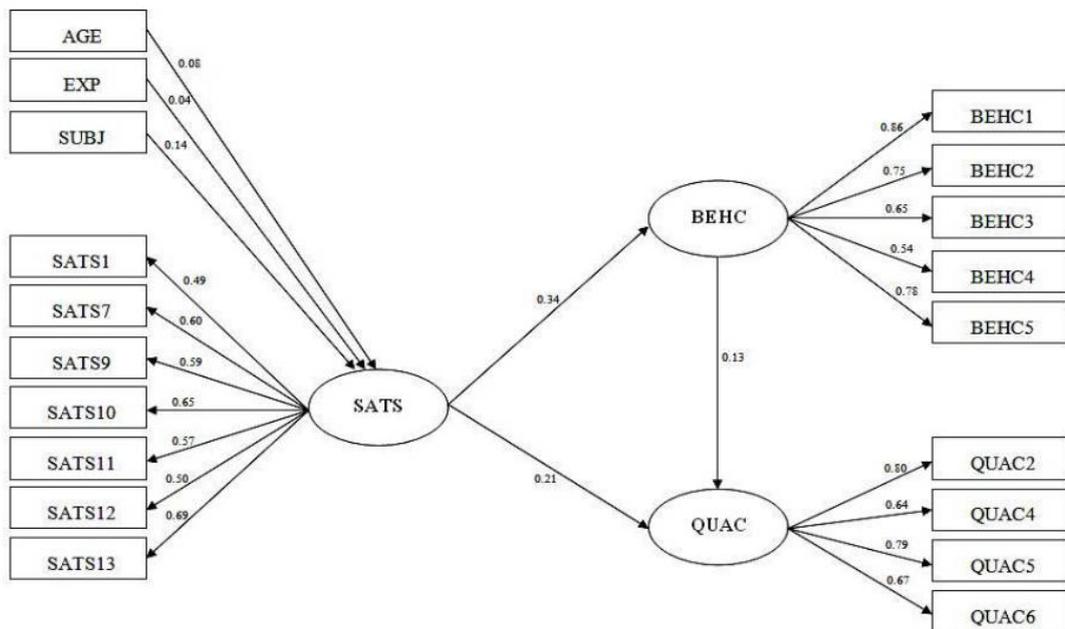


Figure 7 Condition variables affecting the efficient communication Model Research Result

1. Development the professional learning community system for communication begins with investigating the problem condition and the needs of users using the individually structured interview. The problem and need were the factor of other problems i.e. communication the teacher often talked about solving problems alone and wanted to have colleagues who might have been through the same problem and could find a better solution. Therefore, they could give valuable suggestions promptly. Still, they dealt with various constrains. They commented that if there is a

professional learning community system for communication, these problems that they were facing would be taken care with better solutions and helped increasing the team communication. Therefore, this professional learning community system for communication was designed to meet the needs of users and help them solving the problems in the team and the actual work problems. It increased a better communication between team members. The system was designed to emphasize on enabling users to be enthusiastic, have the urge to communicate with each other, want to

exchange knowledge and ideas among them for the best team communication. The professional learning community system for communication consists of three main components of communication;

1.1 Personal Knowledge base stores knowledge in various way where users can store useful information for their own professional or work in various forms e.g. images, contents, video clips, links from websites which could be useful for work or other team members, etc. This personal knowledgebase can be shared or sent to other team members those access to the system. It is a channel for communication in the form of exchange of information, knowledge, content, and news among themselves.

1.2 Show Room is a place where team members bring learning activities or what has come across from work, one's experience of self-discovery or problem solving to share to the colleagues from the same professional or team to see it as a guideline or as a case study for adaptation and application in their work and acts as a consultant for those who have the similar problems or situation in order to help team members or others who experiences the same problem to find the solutions.

1.3 The Reflection Room is an area where users can hold an online meeting or group discussion, exchange of learning,

collaborate to solve urgent problems, etc. This system is designed to be a real-time interface where users could talk through the system in a video call. Messages could be sent and share to other social media or even had a "Like" button showing in real time. This area was being created to solve the problem of interval communicative restrictions viz. distances, having limited of time to travel to each other, having an urgent problem to solve, etc. The professional learning community system for communication is an online base. Therefore, it could help in reducing these restrictions and help find the solution to the problems.

1. System Quality Evaluation the evaluation of the professional learning community system for communication was done by 5 system quality experts. The experts commented on the overview of the professional learning community system for communication that it was in a very good level (Average = 4.48 and *S.D.* = 0.36)

2. System Performance Analysis The analyzing of the professional learning community system for communication were being by 5 experts from different fields i.e. system suitability, system accuracy, suitability and ease of system operation, system promptness, and security aspect. The experts commented that the professional learning community system for communication had a

consistent level of system suitability at (Average = 3.93 and S.D. = 0.66)

3. The Efficient Communicative Evaluation according to the survey of the efficient communication of users towards the professional learning community system for communication being developed by using the Likert scale which evaluated the efficient communication in two aspects i.e. team communicative behavior and the communication that effects on quality of work. The research result shown that the overall professional learning community system for communication was in a very good level (Average = 3.46 and S.D. = 0.52)

4. User Satisfaction Evaluation from the user satisfaction survey towards the professional learning community system for communication using the Likert scale questionnaire, the result shown that users were satisfied the professional learning community system for communication at a very high level (Average = 3.91 and S.D. = 0.78).

Based on the interviewing the users of the professional learning community system for communication, found that the users are satisfied with the professional learning community system for communication. The developed of this professional learning community system for communication has a quality that encourages teammates to communicate and exchange of learning

together even more. They can also hold meetings, talk online to exchange on specific or particular topics. It could be small or large groups meetings without having to wait for only a face to face meeting. The professional learning community system for communication can always be analyzed, synthesized, and reflected on one's thoughts while using the system. It can store important documents or information that you want to exchange among members of the same team, between organizations, and in other ways. The nature of the learning with the same profession is the network or Professional Learning Community for Communication. This community should be able to help with the better team communication, helping each other in the team, and exchanging knowledge and ideas. It develops knowledge, ideas, communication, collaboration with others for the better. It will also help them develop their way of working efficiently and solve problems to be achieved as desired.

5. Analysis to determine the accuracy of the efficient communication model by analyzing the influence on the efficient communication and compare model with the influenced path between the satisfaction of system usage and efficient communication. Both the changes in communication behavior and changes of communication to quality of work found that the satisfaction of system usage had a total effect on the efficient of

communication and changes in communication behavior at .38 and had a total effect on changes of communication to quality of work at .23. The efficient effect of both sides had an internal effect at .13 with statistically significant level at .05. Considering the variable conditions to the efficient communication found that age, work experience, and subject had the effect on the satisfaction of system usage at .08, .04, and .14 respectively. The effect of variable conditions of this group had a direct effect on satisfaction of system usage without any statistically significant way nor an indirect effect.

Research Result Discussion

The study of the Development of Professional Learning Community System for Communication aims to focuses on testing to show the significant change in "Communication" with a goal to have a greater communication among the same team members and between same job entitle, etc. This system acts as space for those people to communicate, share, and help each other in their jobs.

Communication is one significant element to work. There are many researches support that communication is very important for the organization as Epstein (2000) study, the sharing and exchanging of knowledge among people in the organization by studying how people in the organization communicate with

each other. The research found that communication devices are more important for the diffusion of sophisticated knowledge. Meeting is a way to communicate better than using a communication device and people who are closer to each other have better exchanges of experience or knowledge than those with whom the relationship is distant or lack of friendship. This is consistent with Mackler's (2001) research that explores the efficient communication processes in organizations of companies with constant communication problems. The research found that the type of communication that people in the organization like and see as the most effective is face-to-face communication, etc. In addition, the frequency of communication between people in the organization depends on the satisfaction of people, if people in the organization are satisfied there will communicate more but if they are dissatisfied with the communication then it is difficult to make communication happen as researched by Supa Nanapoolsin (2003), which was a study of employee satisfaction on communication within the organization. The research found that formal communication has no relationship with corporate communicative satisfaction but the informal communication is positively correlated with organizational communication satisfaction. It is clear that the informal communication gives a positive sense

of satisfaction. Be it personal satisfaction or satisfaction with the tools or channels used for other communications.

Making the professional learning community for communication it is a space or tool for communication between people in a collaborative organization. The more you do online community learning, the more professional you are. It's like adding more channels or alternatives to communicate based on the concept and research, the professional learning community has resulted in greater communication. Which is based on the assumption that the professional learning community for communication has resulted in a change in the level of communication between users. The research found that using technology to create an online community learning professionals is a fast communication tool between users. There is a learning exchange to communicate through both audio and video between people as well as chatting, interactive talk online that makes people in the organization to communicate more. When an online learning community makes people in a team or in a collaborative organization communicate more, this will result in the *efficiency and effectiveness of the job* as well Hord's research (2009) confirms that Community-based learning activities lead to qualitative changes in the workplace and it

also corresponds to Martin M (2011), says that the professional learning community focuses on driving or the communicating and teamwork, felicity coalition, supporting each other will make the better work atmosphere, happy communication helps reducing the feeling of loneliness at work, and helps reflecting knowledge from one another. The results of this research are consistent with McLaughlin, M. W., & Talbert, J. E. (2006) which found the professional learning community is a collaborative learning space that utilizes a variety of approaches such as reflection, aesthetics, systematic thinking, and knowledge building. In addition, the professional learning community is also an area where people in the professional learning community have the freedom to express themselves fully. It is free from pressure which also corresponds to Johnson, Roger T, & Johnson, David W. (1986), It had been previously said that the professional learning community has an atmosphere of an "Open culture", which is the main factor for the target audience or the people in the system to have the *urge* to communicate with each other more. When there is more communication between teams, it helps improving and the quality of work which means that the professional learning community for communication has developed teamwork skills for people in the organization

because when people work in the same team, same profession, they will communication with each other more. The quality of work is improved by the fact that people in the organization have better teamwork skills. The research conducted by Nitha Putthanaradeekul (2007) supported the theory that pattern used in this professional learning community for communication developed by the researcher i.e. chatting room, exchanging learning, commenting on solving similar or the same problems, can improve teamwork skills.

Research Suggestions

1. Quantitative research should be conducted to compare the differences in communication between users professional learning community system for communication with groups that are not in the system.

2. Study the follow-up effects on other variables should be done. There have been studies in other countries that shown how does the professional learning community for communication can affect team performance in the context of Thailand, when the user groups are continuously deployed in the system. Communication is ongoing every day for a period of time. Has teamwork changed? What are the variables that are considered interesting to be studied i.e. teamwork,

pleasure in work, loneliness in the workplace, problem solving skills, knowledge exchanging skills, supporting each other, and team attitude towards other team members.

3. Study the follow-up results on the performance variables of the team by conducting experimental research to compare work performance and team product by comparing between groups in the professional learning community system for communication with groups that are not in the system to study how the professional learning community system for communication affecting on work performance and team performance.

4. Study the comparison of work performance and team product result should be done by comparing between groups in the professional learning community system for communication with groups that are not in the system. It is a comparative study in different contexts i.e. different work entitles, professions, work area or provinces, size of the team, or total of team members, etc., to study how the professional learning community system for communication affecting on other things, if so how do they effect on them to use as a support reason on enhancing for the bigger and wider professional learning community system for communication.

Reference

- Richard DuFour and Mike Mattos, (2013). "How Do Principals Really Improve Schools?: **Educational Leadership 70**, (Vol. 7). Shirley Hord
- S. Chaisanit, S. Suksakulchai. (2011) "The Online Participatory DAISY talking book production system (OPDAISYS)", **Journal of Engineering and Applied Sciences Students**, 6, pp.242-249
- Epstein Stephen R. (2000) "The origins of protoindustry, c.1300-c.1550", In **idem Freedom and Growth**. The rise of states and markets in Europe, 1300-1750, New York/London: Routledge/LSE, p.106-146.
- Mackler Mark. (2001). **Influence on the performance of organizational knowledge transfer**. A dissertation submitted to the Faculty of the College of Business in Partial Fulfillment of the requirements for the degree of Doctor of Philosophy Florida Atlantic University.
- Supa Nanapoolsin (2003), A study of employee satisfaction on communication within the organization: A case study of HiFi Company Ltd. (Master degree Thesis in MBA Department). Srinakharinwirot University, Bangkok.
- Hord, S. M., Roussin, J. L., & Sommers, W. A. (2009). Guiding professional learning communities: **Inspiration, challenge, surprise, and meaning**. Corwin Press.
- Martin M. (2011). Professional Learning Communities. In **Contemporary Issues in Learning and Teaching**, pp.142-152. London: SAGE Publications Ltd.
- Johnson, Roger T, & Johnson, David W. (1986). Action research: Cooperative learning in the science classroom. **Science and Children**, 24, pp. 31-32
- McLaughlin, M. W., & Talbert, J. E. (2006). Building school-based teacher learning communities: **Professional strategies to improve student achievement** (Vol. 45). Teachers College Press.
- Nitha Putthanaradeekul. (2007). **Web based Training for Develop Team Learning in Educator**. (Master degree Thesis in Education Technology Department). Chulalongkorn University, Bangkok.