

Full Length Research Paper

Developing competency of teachers in basic education schools

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This study aims to develop competency of teachers in basic education schools. The research instruments included the semi-structured in-depth interview form, questionnaire, program developing competency, and evaluation competency form. The statistics used for data analysis were percentage, mean, and standard deviation. The research found that factors of competency were: 1) the persistence in learning management and work practice, 2) competency in planning, goal setting, learning management and work practice, 3) competency in ICT use in learning management and work practice, 4) creativity of learning management, 5) competency in following up and evaluation in knowledge management and work practice, and 6) competency in improving and developing the learning management and work practice. Program for developing competency included 9 factors and 7 learning units, total of 200 h. Program could develop and enhance the teachers by posttest score higher than those pretest score.

Key words: Achievement competency, factor of achievement competency, program for developing the teacher's achievement competency, basic education.

INTRODUCTION

The organizational staffs were the most important persons of organization in every age or period whether in the public or private sector. The staffs could cause their organization to be successful or failure. If the organization included the high quality staffs, that organization would be successful. Therefore, it was necessary for every organization to provide instrument for recruiting the quality staffs as well as developing them to be higher efficient work practitioners (Chanchai, 2009). The competency was group of knowledge, skill, competence, attitude, belief, habit, motivation, and personality being hidden in the persons, which would be reflected to be

visible from their working behavior, as measurable and observable. Consequently, the persons would be able to create the excellent performance as well as cause the goal accomplishment in the organization (Ozcelik and Ferman, 2006). The competency evaluation was an important instrument for developing and following-up the work performance of staffs in the organization (Tillema, 2003). The persons with high achievement competency would have 3 aspects of high working attribute including: quality of work, patience in working, and appropriate expectation in work success with their own ability. As a result, it would accomplish the organizational goal

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(Atkinson, 1966). The teachers were major factors in school which would influence the students' learning achievement most (McKinsey, 2007; Samkosed, 2010; Ponsima, 2011).

The country with high learning achievement would be more likely to have higher economic growth. In the meanwhile, the country with good quality educated population, the level of democracy and political and social stability would be higher (Hanushek and Rivkin, 2010). The important characteristic of persons in teaching profession were to know their role and duty as well as work task, promotion in potentiality and competency of teachers, learning persons, and academic leaders (The Secretariat of the Teacher Council of Thailand, 2006). The achievement competency was a staple standard as well as device for helping the efficient work management. Since it would be an indicator for informing that if we need knowledge management, management, or Educational Supervision to be successful as the goal, what kind of persons who had knowledge, skill, and characteristic do we need in order to practice their duty efficiently. Specifically, the learning process management of teachers and students for affecting the students' quality directly and indirectly (The Office of Educational Council, 2006). In the present, quality of Educational Management from PISA (Programme for International Student Assessment) was ranked in the 50th out of the member countries. According to the O-NET (Ordinary National Educational Test) in 2013, found that the Sixth Grade Students had Mean value in Lower level than 50%.

So, the Office of Basic Education Commission had to enhance the Educational Institute so that the teachers would prepare readiness for their students, enhance the students to be persistent in learning (student engagement) by organizing their instructional activity to be interesting and challenging for their students' ability (The Office of Basic Education Commission, 2014). Therefore, it was indispensable for the teachers to develop their competency to be able to provide Knowledge Management with higher quality. To accomplish the organizational goal, it was necessary to adjust the teacher development system to be able to change the teachers' competency as required by focusing on teachers' achievement competency as well as characteristic related to work success, and working to achieve goal based on Educational Standard (Ngoksin, 2007; Nuangchalerm, 2011). According to the above significance and necessity, the researcher developed the program for developing the achievement competency of teachers in basic education schools in order to be used in developing the teachers' achievement competency further.

Conceptual framework

The conceptual framework of Factor in teachers' achievement competency, was determined by studying the document, textbook, and related research literature as follows: Spence and Spencer (1993); Parson (1996); California Standard for the teaching Professional, California (1997); The Department of Education and Training of Western Australia (2004); The Teachers Council of Thailand (2006); Office of the Teacher Civil Service Commission and Educational Staff (2006); Tanyalak (2007); Office of the Higher Education Commission (2008); Cover (2008); SEAMEO (2009); Cultura (2010); The Office of the Basic Education Commission (2010); The Office of The Civil Service Commission (2010); Hogan (2013); Marden (2013).

The conceptual framework of Technique for developing the teachers' achievement competency, the researcher studied the approach from work unit, organization, academic as follows: Seldin (1988); Spark and Loucks (1989); Robert (1990); Boonyachitardoon (1991); Drago-Severson (1994); The Office of Primary Education Commission (1998); Hughes (1999); Guskey (2000); Office of General Education (2000); Department of Curriculum and Instruction Development (2002); The Office of Basic Education Commission (2006); Kijyanyong and Na Takua-toong (2007).

Also, the conceptual framework for factor of the program, researcher studied rationale and approach from these academic as follows : Manee-ngam (2004); Thai Kamlan (2008); Chomhongpipat (2010); Sook-kan (2010); The conceptual framework of Program Evaluation, the researcher studied rationale and approach from these academic as follows: Songtieng (2005); Kamlan (2008); and Chomhingpipat (2010). The details are shown in Figure 1.

METHODOLOGY

This research was Research and Development : R & D. The methodology could be classified into 4 Phases as follows:

Phase 1: The study of factor and indicator of teachers' achievement competency, included 2 steps as:

- 1 The study of theoretical approach and rationale related to factor and Indicator of teachers' achievement competency from document, textbook, and related research literature by synthesizing data from content analysis from the obtained data, and concluding into Factor and Indicator of teachers' achievement competency.
- 2 The implementation of in-depth interview from 12 experts by organizing the data from synthesized data I Phase 1.1 as semi-structured interview in order to implement the In-depth Interview experts' opinion on factor and indicator for developing the

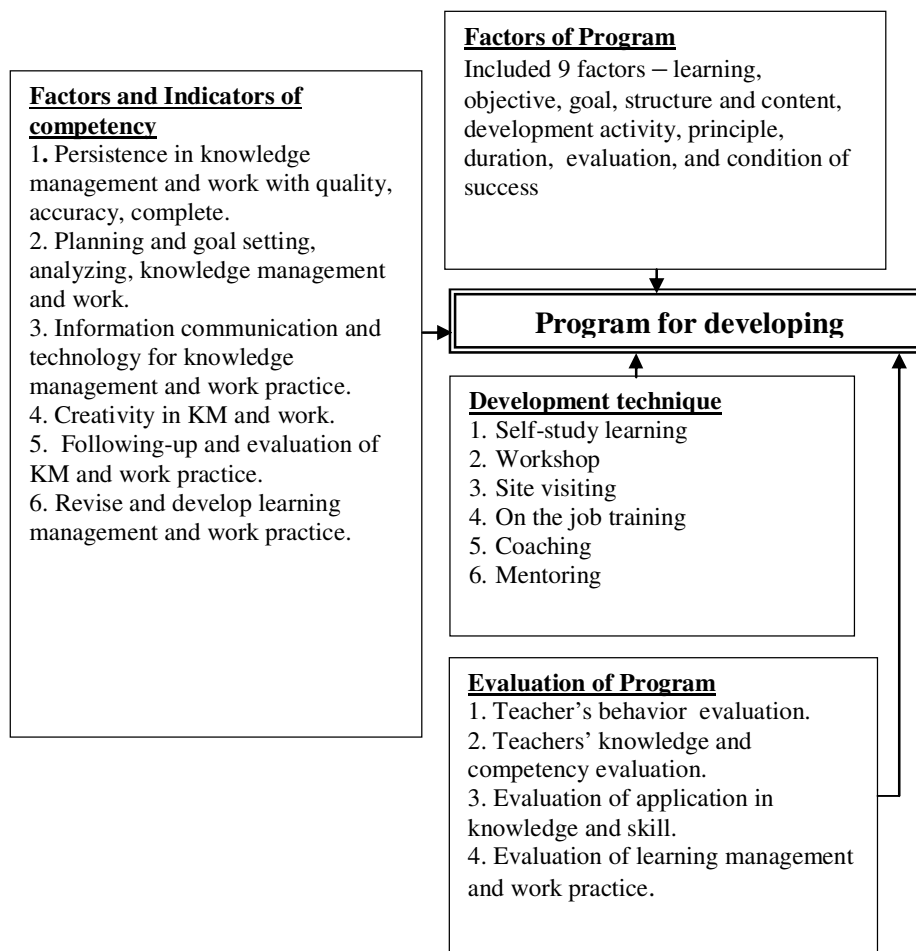


Figure 1. Conceptual framework.

achievement competency of teachers under jurisdiction of The Office of Basic Education Commission.

Phase 2: The study of problem, need, and technique for developing the teachers' achievement competency from Phase 1, the 65 items of the questionnaire was constructed for asking the problem, need, and technique for developing teachers' achievement competency. The questionnaire pilot studied with 160 samples who *were not* the target group including 80 school directors, and 80 heads of academic work.

Phase 3: The establishment of tentative program for developing the teachers' achievement competency, Handbook of Program Use, and Supplementary Document of Program was developed by presenting the data from Phase 1 and Phase 2 to 8 experts for evaluating its propriety and utilization of program, and revising based on their recommendations.

Phase 4: Program for developing achievement competency of teachers in basic education schools, was tried out with 21 Primary School Teachers by using the Development Program, Handbook for Program Use, and Supplementary Document of Program which were evaluated and improved, for teacher development. The

Program Usage was evaluated by the following measurement instruments as follows: The multiple choice test pilot studied with 30 teacher who *were not* the target group. The multiple choice test with 5 alternatives, 7 units, 10 items each unit, total of 70 items. The questionnaire of students' satisfaction on knowledge management and work practice of teachers was made. The behavioral observation in knowledge management and work practice of teachers was employed.

FINDINGS

1. The factor and indicator for achievement competency of teachers in basic education schools were studied by studying the document, textbook, and related research literature from both of inside and outside the country, and interviewing the experts. Six major factors were synthesized: 1) the persistence in Knowledge Management

Table 1. Problem and need for developing the achievement competency.

Major factor	Problem			Need for development		
	\bar{X}	S.D.	Level of pro	\bar{X}	S.D.	Level of need
1. Persistence in knowledge management and work with quality, accuracy, complete.	3.94	0.37	High	4.42	0.47	High
2. Competency in planning, goal setting, analyzing, synthesizing their work task.	3.93	0.32	High	4.26	0.41	High
3. Competency in using Information Communication and Technology for learning and work.	3.97	0.35	High	4.33	0.43	High
4. Creativity in using innovation for increasing the efficiency in knowledge management and work practice.	4.02	0.31	High	4.31	0.43	High
5. Competency in following up and evaluation in knowledge management and work practice.	4.01	0.29	High	4.38	0.42	High
6. Competency in improving and developing the findings of knowledge management and work practice.	3.95	0.34	High	4.36	0.45	High
Total	3.97	0.33	High	4.34	0.44	High

and work practice with quality, complete, and perfect. 2) the competency in planning, goal setting, analyzing and synthesizing the knowledge management task. 3) the competency in using the Information communication and technology for knowledge management and work practice. 4) the creative thinking In using new innovation for improving the knowledge management. 5) the competency in following-up and evaluation of knowledge management and work practice. and 6) the competency in improving and developing the findings of knowledge management and work practice to be efficient continuously. Moreover, according to 12 experts' interview, found that they paid their attention to Major Factor 1, the persistence in knowledge management and work practice with quality, accuracy, complete, and perfect for the first priority. Since when the teachers were persistent in their work, they would have motivation in self-development in other factors by developing themselves to be able to work more efficiently.

2. Problem and need for developing the teachers' achievement competency, found that the teachers had problem, in overall, in "High" level. The need for developing their achievement competency was "High" level. The details are shown in Table 1.

According to Table 1, 6 aspects of major factors had problem in "High" level. The mean value was 3.97. The need for development was in "High" level in all of 6 aspects. The Mean value was 4.34. For technique for developing the teachers' achievement competency, it consisted of 6 techniques including: on the job training,

workshop, site visiting, self-study learning, coaching, and mentoring system. The number of hours in development based on development program of achievement competency of teachers in basic education schools, included total of 200 hours. Factor of program including: the rationale, objective, goal, duration, structure and content, development activity, instructional media, and evaluation and condition of success. The structure and content area included 7 learning units, total of 200 hours. Program evaluation by 8 experts, found that all of 3 aspects: Propriety, Feasibility, and Utility, were "Highest" level.

Program could develop teachers to be persistent in knowledge management and work practice to be accurate, complete, and perfect. They were able to make plan, set goal, analyze and synthesize the work task, and design the knowledge management. They could apply the Information Communication and Technology in knowledge management (Figures 2 and 3). They had creative thinking, used different innovations for promoting the students' learning. They could measure and evaluate the knowledge management, and use the findings from evaluation for improving the students' quality. The pretest score of teachers' achievement competency, in overall, was in "Low" level. For the posttest, found that in overall, the teachers' achievement competency was in "The Highest" level. The findings of knowledge and comprehension in teachers' achievement competency, found that the pretest Mean Score of teachers' knowledge and comprehension in achievement competency, was 3.27 points. For the posttest, the teachers' knowledge and

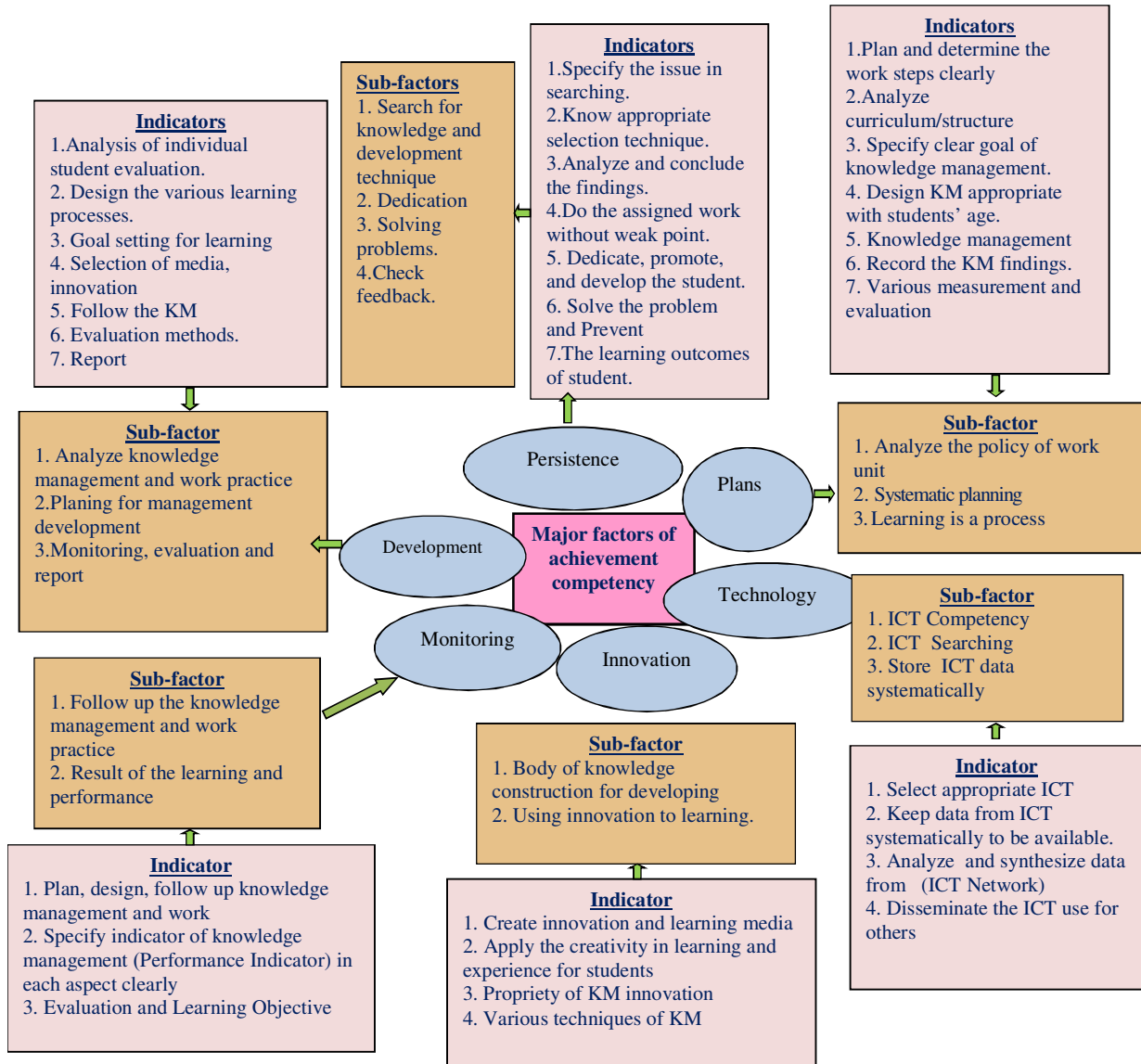


Figure 2. Factors and indicator of achievement competency.

comprehension were increased as 8.30 points out of 10 points. Teachers' knowledge management behavior and work practice in overall was "Highest" level. The students' satisfaction on learning management in overall was "Highest" level. The details can be shown in Table 2.

According to Table 2, it is concluded that the teachers had achievement competency, in overall the pretest was "Low" level. The posttest was "Highest" level. In sum, program for developing the achievement competency of teachers in basic education schools, appropriate to be

applied for teacher development.

DISCUSSION AND CONCLUSION

The findings of problem, need, and technique for developing the achievement competency of teachers in basic education schools, found that the teachers had problem in achievement competency in "High" level. The need for achievement competency was in "High" level as

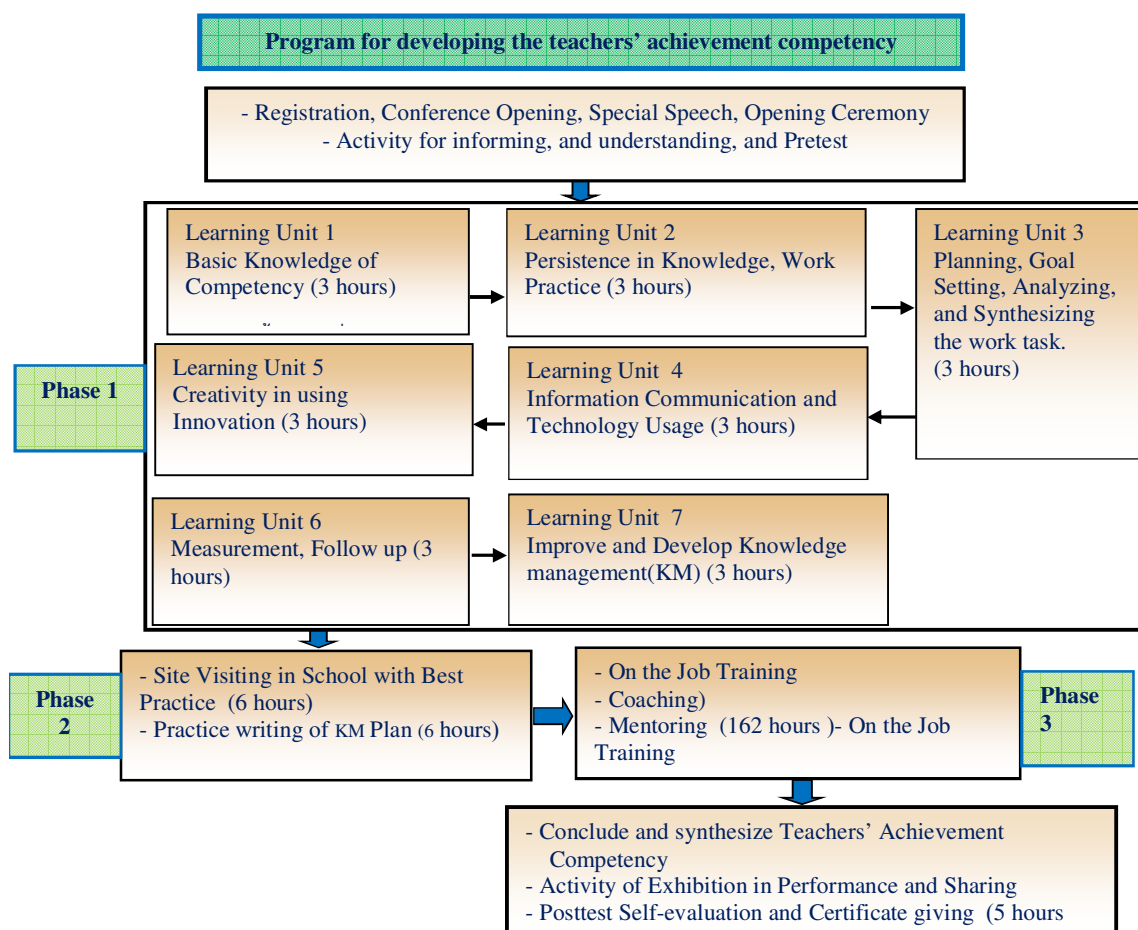


Figure 3. Program for developing the achievement competency.

Table 2. Pretest and posttest scores of competency of teachers.

Major factor	Before development			After development		
	\bar{X}	S.D.	Level of achievement	\bar{X}	S.D.	Level of achievement
1. Persistence in knowledge management and work with quality, accuracy, complete	2.49	0.13	Low	4.80	0.12	Highest
2. Competency in planning, goal setting, analyzing, synthesizing their work task	2.43	0.12	Low	4.87	0.11	Highest
3. Competency in using Information Communication and Technology for learning and work	2.38	0.06	Low	4.92	0.11	Highest
4. Creativity in using innovation for increasing the efficiency in knowledge management and work practice	2.36	0.19	Low	4.91	0.11	Highest
5. Competency in following up and evaluation in knowledge management and work practice	2.36	0.16	Low	4.93	0.09	Highest
6. Competency in improving and developing the findings of knowledge management and work practice	2.33	0.13	Low	4.87	0.12	Highest
Total	2.39	0.07	Low	4.88	0.05	Highest

well. It might be due to the government policy in education focusing on product system development as well as quality teacher development, and teachers' spirit emphasizing on the teachers to use the Information Communication and Technology as well as appropriate instrument in learning and teaching as the teacher aid or for learning by themselves. In addition, the competency evaluation system was adjusted for reflecting the instructional efficiency and students' quality development in order to improve the students' learning achievement quality. The Secretariat of the Education Council of Thailand (2013) conducted research found that the problems in teacher development were the teacher development program wasn't relevant to the teachers' need, the development technique was traditional one without new innovation, there was no connection between content of training and classroom instructional activity, the lack of continuous following-up system, the teachers lacked of competency and skill in using the Information Communication and Technology. The guidelines for teacher development were to provide the following-up and evaluation system of teacher development continuously. The technique of teacher development should focus on school-based training. The activities for development included the seminar training, site visiting, self-studying, and work practice continuously. After teacher development, the teachers had to use for real practice in classroom. The Mentoring System had to be provided. The measurement and evaluation had to be performed. Moreover, it was supported by research findings of Chansiri (2008) in "Core Competency Development of The Administrators in Supportive Line of Public Universities," by presenting various techniques for developing core competency development of the administrators in supportive line, for instance, training, workshop, site visiting, and so on.

The effect of development in program for developing the achievement competency of teachers in basic education schools, found that the teachers' achievement competency before participating in development, was in "low" level. After the development by program for developing the achievement competency of teachers, in overall, it was in "highest" level. Specifically, the factor in using the Information Communication and Technology could cause the teachers to be active in using the computer and internet as the media and innovation for instructional management. They organized the blogs and presentation which were body of knowledge as well as keyword for children to search and learn based on their potentiality. It might be because the evaluative findings assured the Program by experts in the propriety, feasibility, and utility of program in highest level in all of 3

aspects. Besides, the factor of developed program consisted of appropriate content, activity for development, learning media and source. As a result, the participant teachers obtained achievement competency in highest level. Since the program included the learning unit enhancing the teachers to be persistent in work practice especially in using the Information communication and technology for knowledge management which the teachers and students were interested in very much. It was supported by Chomhongpipat (2010). Research findings showed that the development program for teachers who used knowledge management based on guidelines for basic educational reform, consisted of 7 major factors including: vision, rationale, objective, content, structural process, and measurement and evaluation. The findings in using the program for developing the teachers' achievement competent, found that program was effective. Since the posttest score in percent of teachers obtaining the program development, was higher than the specified criterion.

In addition, it was supported by Poonput (2009) that the instructional media, instructional method in both of major media and minor one, played an important role in promoting and supporting every level of knowledge management/ It depended on context and readiness of teachers, students, and school. The major findings, it was found that the Information Communication and Technology could enhance the efficiency of students' Education very well. It was also supported by Goedde (2006) on research titled "Factor for Predicting the Teachers' Technology Competency," found that as the Educational Institute would step ahead by preparing the program. The needs for technology in the technological background were used as indicators by serving the relationship, accessing the computer at home, computer teaching in school, and appropriate number of hour/week of time being spent in school. The test of best factor for predicting students' technological competency for future teachers, leaders in university, Faculty of College, and the students' Faculty of College. Sometimes, the tendency in constructing the knowledge for technology attribute being integrated in the Training for teachers' technology competency, the challenge in preparing the future teachers, technology needed to be integrated little by little until the technological attribute could be specified.

Students' satisfaction on learning management after development according to the Program for developing the teacher's achievement competency, in overall, was "Highest" level. It might be because the teachers were interested in equipment of computer and internet before. Teachers should have argumentation in learning management that help students to reach the goals of

education, especially promote them to live with others in daily life and the world of change as well (Pharanat et al., 2015). When students perceived challenging learning situation and learning materials, students were energetic and willing to participate in activities. In addition, the teachers also provided opportunity for the students to participate in activity more.

Conflict of Interests

The author(s) have not declared any conflict of interests.

REFERENCES

- Chansiri W (2008). *Core Competency Development of Administrator in Supportive Line of Public Universities*. Doctor of Education Thesis, Mahasarakam: Mahasarakam University.
- Chomhongpipat Y (2010). *Program Development for Developing Leader Teacher based on Basic Educational Reform*. Doctor of Education Thesis. Sakonnakon: Sakonnakon Rajabhat University.
- Goedde AM (2006). *Factors Predicting Pre-service Teacher Technology Competency*. <https://etd.ohiolink.edu/ap/10?0::NO:10:P10_ACCESSION_NUM:bgsu1151090686> 2014.
- Hanushek EA, Rivkin SG (2010). *The Distribution of Teacher Quality and Implications for Policy*. (2014, March 1). Retrieved from <http://www.jstor.org/discover/10.2307/27805002?uid=2&uid=4&sid=21103699433723>
- McKinsey (2007). *McKinsey Report on Education*. (2014, March 1). Retrieved from <http://www.mckinsey.com>.
- Nuangchalerm P (2011). In-service Science Teachers' Pedagogical Content Knowledge. *Studies in Sociol. Sci.* 2(2):33-37.
- OECD (2012). *PISA 2012 Results in Focus*. (2014, March 1). Retrieved from <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>
- Ozcelik G, Ferman M (2006). "Competency Approach to Human Resource Management Outcome and Contributions in a Turkish Cultural Context", *Human Resourc. Devel. Rev.* 5: 72-91.
- Pharanat W, Nuangchalerm P, Sonsupap K (2015). Promoting Reasoned Argumentation in Science for Lower Secondary Students. *Educ. Res. Rev.* 10(3):357.
- SEAMEO INNOTECH. (2010). *Integrating Education for Sustainable Development into Secondary Education Social Studies Curriculum in Southeast Asia: A toolkit for Educators, Curriculum Developers and ESD Advocates*. <<http://www.seameoinnotech.org>>
- Spencer LM, Spencer SM (1993). *Competence at work*. New York : John Wiley & sons.
- State of California Sacramento.(1997). *California Standards for the Teaching Profession*. California Commission on Teacher Credentialing Adopted, July.
- The Office of Educational Council. (2013). *The Analysis of Situation in the Whole System of Teacher Development and Recommendation for Teacher Developmental Guidelines for Students' Quality*. Bangkok: OEC.
- The Office of Teacher Council. (2006). "The Announcement of Teacher Council Commission titled Knowledge Material and Competency of Teaching Professional, School Board, and School Administrator based on Standard of Knowledge and Professional Experience," *The Government Gazette*. Issue 123, pp. 289-295, 8th June 2006.
- The Secretariat of Educational Council of Thailand (2013). *The Analysis of Situation in The Whole System of Teacher Development and Recommendation for Teacher Developmental Guidelines for Students' Quality*. Bangkok: OEC.
- Tillema H (2003). "Auditing Assessment Practice in Organization : Establishing Quality Criteria for Appraising Competencies," *Int. J. Human Resourc. Devel. Manage.* 3: 359-370.