

The Variables Affecting Teacher's Competency of the Secondary Education Service Area Office in Lower Northeast Area

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Abstract:- This research aims to (1) study the level of teacher's competency of the secondary education service area office in lower northeast area; and (2) study the variables affecting teacher's competency in schools of the secondary education service area office in lower northeast area. The sample group in this research is 440 secondary school teachers of the secondary education service area office in lower northeast area in the academic year of 2020.

The result of the research shows that: 1) teacher's competency in schools of the secondary education service area office in lower northeast area is at a good level. This characteristic of each teacher is slightly different; 2) teacher's competency in schools of the secondary education service area office in lower northeast area is affected directly by teacher's self-development, the using of technology in learning management of teacher, and the being of vocational learning community of school. These 3 variables are useable to explain 68% of variance of teacher's competency, with statistical significance at .01, and indirectly influenced by the using of technology in learning management of teacher and the being of vocational learning community of school via teacher's self-development.

Keywords:- Competency, Self-Development, Secondary School.

I. INTRODUCTION

According to [1], Clause 54 determines that the government shall provide quality education to all children for free of charge for 12 years starting from pre-school level to graduation of compulsory education. The whole education shall focus on making learners good; disciplined; proud of the nation; able to be expertise based on their own skills; and realize their responsibility for families, communities, societies, and the nation. People who are disciplined and aware of their responsibility will be able to achieve their career development, unlike those who do not have discipline nor responsibility. The government shall proceed to improve the teaching and learning management of every level for learners to learn based on their skills and shall improve the structure of related department in order to achieve such target concordantly in national and local scales. Moreover, small children shall be fostered and developed before attending

schools in order for their body, mind, discipline, emotion, society, and intelligence to be cultivated. The government also has to enable people to receive education as demanded in different systems and must support lifelong education. The cooperation between government, local administrative organization, and private sector is required for managing all level of education in which the government is in charge of governing, enhancing, and supporting the universal standard quality of education management. The whole education shall focus on making learners good, disciplined, and proud of their nation [1].

The framework of National Education Plan B.E. 2560 – 2579 (2017 – 2036) emphasizes that all Thai people shall receive quality and lifelong education and learning as well as live happily in compliance with the philosophy of sustainable economy and the change of the world in 21st century. The 6 principle strategies of education management are determined. First strategy is to provide education for the stability of society and nation. Second strategy is manpower production and development together with research and innovation to create competitiveness of the country. Third strategy is potential development of people in all ages and creation of learning society. Fourth strategy is to create opportunity of equality and fairness in education. Fifth strategy is to provide education to enhance the eco-friendly quality of life. Sixth strategy is to increase the efficiency of education management system with 5 targets including: 1) access to education; 2) equality; 3) quality; 4) efficiency; and 5) harmonization with the changing context [2].

National Institute of Educational Testing Service (Public Organization) summarizes the Ordinary National Educational Test (O-NET) in the academic year of 2018 for the 3rd year and 6th year of secondary school students (graduates of junior high school and senior high school). It is found that 3rd year of secondary school students who did 4 subjects of test received the average score of 54.42 for Thai language subject; 29.45 for English language subject; 30.04 for mathematic subject; and 36.10 for science subject. The total average score is lower than 50%. The highest average score goes to special large schools, followed by large school, medium school, and small school respectively. For the 6th year of secondary school students who did 5 subjects of test, the average score is 47.31 for Thai language subject; 35.16 for social, religious, and cultural subject; 31.41 for English language subject; 30.72 for mathematic subject; and 30.51

for science subject. The total average score is lower than 50%. The highest average score goes to special large schools, followed by large school, medium school, and small school respectively (National Institute of Educational Testing Service [3]).

The result of education management that cannot achieve the target, together with the result of international education test, urges Ministry of Education to improve the level of educational competitiveness of the country. The key person to make education management successful is teacher because teacher plays the important role in education management process and is closest to students. Therefore, the system of production and potential development of teachers should be developed to comply with the actual necessity for teachers [4]. In the education development, teacher is the important person to create and develop the quality of the youth. Teachers can use their existing potential to make students become student 4.0 as well as to build necessary skills for 21st century for students. As a result, teacher's role is changed from only providing knowledge to be mentor or trainer who helps students develop thinking skill, language skill for global communication, information management skill, and computer or digital technology utilization and learning ability in order to make Thai students the essential force for country's development [5].

From the background above, it shows that the quality of secondary school students of Office of the Basic Education Commission has not met the standard set by Ministry of Education. The factor that influences the education quality is teacher because teachers play an important role in education development of students. To develop the quality of students, it is necessary to develop teacher's competency to high level. Therefore, Thai education needs to acquire knowledge of competency and teacher production that are suitable with education in 4.0 stage. The researcher is a teacher of Vongchavalitkul University in Nakorn Ratchasima province in which most students reside in lower northeast region. Moreover, the university involves with teacher production with many teachers pursue further education for self-development, therefore it is the source of data regarding teacher's competency. As a result, the researcher is interested in studying the variables influencing teacher's competency of the secondary education service area office in lower northeast area. The result of this research will be useful for the development of education management and the improvement of more efficient education quality.

II. OBJECTIVES OF THE RESEARCH

- 1) To study the level of teacher's competency of the secondary education service area office in lower northeast area.
- 2) To study the variables affecting teacher's competency of the secondary education service area office in lower northeast area.

III. RESEARCH METHODOLOGY

Population is teachers of the secondary education service area office in lower northeast area.

Sample group is 440 teachers of the secondary education service area office under Office of the Basic Education Commission in lower northeast area in the academic year of 2020.

Variables used in the Research

Independent Variables include: 1) teacher's self-development; 2) teacher's responsibility; 3) teacher's learning motivation; 4) using technology in learning management of teacher; and 5) the being of vocational learning community of school.

Dependent Variable is teacher's competency.

Research Tools include:

1. Evaluation form of teacher's competency according to 5-point Likert scale. The form has 24 topics with discrimination index between 0.44-0.88 and reliability 0.96.
2. Questionnaire of teacher's self-development according to 5-point Likert scale. The form has 13 topics with discrimination index between 0.35-0.76 and reliability 0.91.
3. Questionnaire of teacher's responsibility according to 5-point Likert scale. The form has 13 topics with discrimination index between 0.28-0.74 and reliability 0.86.
4. Questionnaire on teacher's learning motivation according to 5-point Likert scale. The form has 14 topics with discrimination index between 0.44-0.84 and reliability 0.91.
5. Questionnaire of using technology in learning management of teacher according to 5-point Likert scale. The form has 12 topics with discrimination index between 0.42-0.72 and reliability 0.88.
6. Questionnaire of the being of vocational learning community of school according to 5-point Likert scale. The form has 13 topics with discrimination index between 0.69-0.88 and reliability 0.96.

Data Analysis shall be conducted by calculation of mean (\bar{X}), standard deviation (S.D.), coefficient of variation (C.V.) of independent and dependent variables, Multiple Regression Analysis, and path analysis (PA).

IV. FINDINGS

1. Table 1 shows the level of competency of secondary school teachers under the secondary education service area office in lower northeast area

No.	Level of competency of secondary school teachers under the secondary education service area office in lower northeast area	Quality level		
		\bar{X}	S.D.	Interpretation
1	Creation and development of curriculum	4.32	0.64	High
2	Design of variety of learning	4.38	0.63	High
3	Test and evaluation of actual learning	4.39	0.66	High
4	Effective development of learner	4.26	0.67	High
5	Moral and ethical implantation of learner	4.27	0.66	High
6	Development of learner's life skill	4.29	0.69	High
7	Learner assistance system operation	4.28	0.68	High
8	Arranging learning activity suitable for learner	4.27	0.66	High
9	Arranging learning atmosphere	4.42	0.71	High
10	Information data making of classroom	4.44	0.65	High
11	Encouraging learner to learn happily	4.30	0.69	High
12	Safety creation for learner	4.40	0.69	High
13	Systematic analysis of learner data	4.23	0.69	High
14	Research on learner development	4.32	0.67	High
15	Problem solving for learner	4.40	0.68	High
16	Continuous and systematic development of classroom work	4.46	0.68	High
17	Overall analysis of organization and work	4.35	0.71	High
18	Analysis of current problem, strength, and weakness of school	4.21	0.72	High
19	Knowledge exchange inside and outside of classroom	4.21	0.63	High
20	Enhancing relationship of teacher and community	4.23	0.67	High
21	Coordinating with community to make it part of school activity	4.26	0.70	High
22	Cooperation with community to prevent and solve juvenile problem	4.10	0.69	High
23	Relationship creation with community	4.31	0.68	High
24	Network creation with parents and community	4.21	0.54	High
Total average		4.30	0.34	High

From Table 1, it can be interpreted that the level of teacher's competency of the secondary education service area office in lower northeast area is at high level (\bar{X} =4.30, S.D.= 0.34). The 3 highest competencies include: continuous and systematic development of classroom work (\bar{X} =4.46, S.D.= 0.68); information data making of classroom (\bar{X} =4.44, S.D.= 0.65); and arranging learning atmosphere (\bar{X} =4.42, S.D.= 0.71).

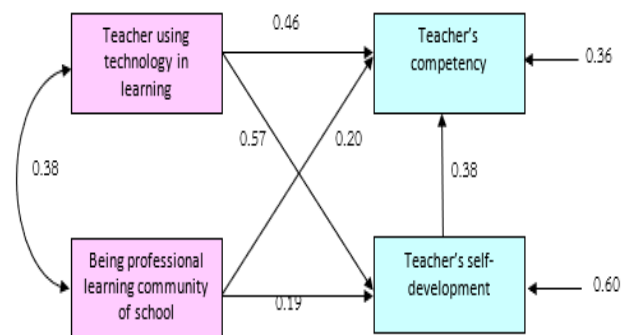
2. Table 2 shows the analysis of multiple correlation analysis and importance weighting value (β) of variables affecting teacher's competency of the secondary education service area office in lower northeast area.

Independent variables	Teacher's competency (β)
Teacher's self-development (DEV)	0.51**
The being of professional learning community of school (PLC)	0.42**
Teacher using technology in learning management (TEC)	0.30**
Teacher's responsibility (RES)	0.09
Teacher using student's central management (TSM)	0.04
R	0.74**
R ²	0.55

**p<.01

From Table 2, it is found that teacher's self-development (DEV) (β = 0.51) affects teacher's competency of the secondary education service area office in lower northeast area with statistical significance at .01. Using technology in learning management of teacher (TEC) (β = 0.30) affects teacher's competency of the secondary education service area office in lower northeast area with statistical significance at .01. The being of professional learning community of school (PLC) (β = 0.42) affects teacher's competency of the secondary education service area office in lower northeast area with statistical significance at .01.

3. Analyzing by Path Analysis with LISREL (PAL), the pattern of teacher's competency of the secondary education service area office in lower northeast area can be shown in the picture and the table below.



Chi - Square = 0.62, df =1, P - Value = 0.34240, RMSEA = 0.000

The picture and the table above can be explained as follows:

The teacher's competency of the secondary educational service area office in lower northeast area is affected directly by the using of technology in learning management of teacher (β = 0.46), teacher's self-development (β = 0.38), and the being of professional learning community of school (β = 0.20). These 3 variables can be used to explain 68% of variance of teacher's competency of the secondary educational service area office in lower northeast area (R^2 = 0.68), with statistical significance at α = 0.01, and indirectly affected by the using of technology in learning management of teacher and the being of professional learning community of school via teacher's self-development.

4. Table 3 Independent variables affecting the competency of schools the secondary educational service area office in lower northeast area analyzed by PAL.

Variables	R ²	β
Teacher's competency in medium secondary school	0.68**	0.38
Teacher's self-development		
The being of professional learning community of school	0.47**	0.20
Teacher's self-development		
Teacher using technology in learning management		
The being of professional learning community of school		0.57
		0.19

**p < .01

The variables that directly affect the teacher's competency include the teacher using technology in learning management ($\beta = 0.57$) and the being of professional learning community of school ($\beta = 0.19$). These 2 variables can be used to explain 47% of variance of teacher's self-development ($R^2 = 0.47$), with statistical significance at $\alpha = .01$.

V. DISSCUSSION

The result shows that teacher's competency of the secondary educational service area office in lower northeast area is in a high level ($\bar{X} = 4.30$). The coefficient of variance which is 8.14% means that each teacher's competency is slightly different. This is probably because every teacher must pass the performance evaluation test which is held every 6 months in order to be considered by the organization's executive for salary increment. The performance evaluation test assesses the teaching management from: creation or development of curriculum; management of learning and learner's quality; creation and development of media, innovation, educational technology, and source of learning; assessment of learning and education, analysis, synthesis, or research aiming to solve the problem or to improve the learning process that affects the quality of learner; class management; self-development; as well as the conduct in discipline, virtue, morality, and professional ethics. This test is the assessment of teacher's competency. Therefore, every teacher conducts him/herself based on the assessed competency in order to pass the criteria of salary increment. This is the reason that teacher's competency of the secondary educational service area office in lower northeast area is in a high level in consistency with the 6 competencies determined by The Office of the Basic Education Commission that teachers in 21st century must have including: management of curriculum and learning; learner's development; class management; analysis, synthesis, and research for learners; teacher leadership; and obtaining good relationship and cooperation with community for learning management. The result corresponds to the research result of [6] which studied the teacher's competency affecting learner's quality in primary schools under The Office of the Basic Education Commission. The result showed that the level of performance based on the determined teacher's competency was at a high. Moreover, the research result of [7] which studied the variables affecting teacher's competency under local government organization found that teacher's competency was at a high.

The teacher's competency of the secondary educational service area office in lower northeast area is affected directly by teacher's self-development, teacher using of technology in learning management, and the being of professional learning community of school. These 3 variables can be used to explain 68% of variance of teacher's competency of the secondary educational service area office in lower northeast area, with statistical significance at .01, and indirectly affected by the using of technology in learning management of teacher and the being of professional learning community of school via teacher's self-development.

Teacher's self-development is referred to self-learning. It is the improvement of working competency. Some characteristic can be adapted to enhance maturity which leads to career achievement. Teachers participate in self-development by attending professional learning community which allows teachers to develop teaching process and learn techniques to assist students better. Furthermore, teachers can apply the knowledge to solve the present problems. It has a good influence in creating vocational culture of schools which lead to cooperation, feeling of possession, innovation development, and leadership among teachers [8]. Similarly, [9] explained that self-development was necessary in terms of work development and professional advancement of each professional. This required specialized expertise and direct training. For people working in this specific professional, it was necessary to have a pathway open for professional advancement in order to show them that they were capable to reach the uppermost position. As a result, self-development affects teacher's competency.

Regarding the teacher using of technology in learning management, information technology and communication for learning refer to the application of technology and different innovation in school management process. This includes computer, internet, television, VCD player, video, radio, and voice tape. The integration of technology, computer, broadcasting, and telephone makes communication easy. Therefore, information technology and communication for learning are important and necessary for educational process because: 1) the fast development of knowledge, technology, and invention in the society has a direct effect to the change and adaptation of curriculum provided in schools causing the need to apply appropriate technology and innovation with the situation; 2) the fast change of society affected by development of science and technology that influences life, adaptation, and development of student urges the need to apply appropriate technology and innovation with the situation; and 3) the society that is full of data as a result of development of electronic, computer, and telecommunication enables all type of data, namely; sound, picture, motion, graphic, and computer data to be transferred and delivered rapidly. The current and future society will be flooded by data and information. Teacher who uses technology in learning management is regarded as increasing knowledge and skill to enhance competency for oneself. It can be concluded that teacher using technology in learning management affects teacher's competency. The research result of [10] also found that

using technology in arranging learning activity was related to self-development and self-enhancement of competency.

The being of professional learning community of school is important for education management. [11] summarized that the being of professional learning community of school benefited teacher by decreasing loneliness in teaching work and strengthening the bond for mission and target of school as it increased the enthusiasm to complete the task in the mission and created the mutual responsibility for overall student's development and the group responsibility for student's achievement. The feeling of "power of learning" is established. This feeling makes the teaching in classroom more efficient; understand the content of teaching better; and realize the appropriate role and teaching behavior that best enhance student's learning to expected criteria. Moreover, teachers will receive information necessary for their professional in a broader and faster way which help improve their professional all the time. Teachers are inspired to convey the learning inspiration to students. It increases satisfaction and motivation in working as well as decreases leave rate. Teachers also show distinctive progress in adapting teaching method with characteristic of students faster than the teachers in old-style schools. The intention to create new change appears outstandingly and sustainably. Teachers desire to make change systematically to basic factors. The benefit of such is the increment of knowledge and skill of teachers. In conclusion, the being of professional learning community of school directly affects teacher's competency in schools of the secondary educational service area office in lower. The result shows that teacher's competency of the secondary educational service area office in lower northeast area is in a high level. The coefficient of variance which is 8.14% means that each teacher's competency is slightly different. This is probably because every teacher must pass the performance evaluation test which is held every 6 months in order to be considered by the organization's executive for salary increment. The performance evaluation test assesses the teaching management from: creation or development of curriculum; management of learning and learner's quality; creation and development of media, innovation, educational technology, and source of learning; assessment of learning and education, analysis, synthesis, or research aiming to solve the problem or to improve the learning process that affects the quality of learner; class management; self-development; as well as the conduct in discipline, virtue, morality, and professional ethics. This test is the assessment of teacher's competency. Therefore, every teacher conducts him/herself based on the assessed competency in order to pass the criteria of salary increment. This is the reason that teacher's competency of the secondary educational service area office in lower northeast area is in a high level in consistency with the 6 competencies determined by The Office of the Basic Education Commission that teachers in 21st century must have including: management of curriculum and learning; learner's development; class management; analysis, synthesis, and research for learners; teacher leadership; and obtaining good relationship and cooperation with community for learning management. The result

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VI. IMPLICATIONS

Policy Recommendations

The research result shows that teacher's self-development, the teacher using of technology in learning management, and the being of professional learning community of school have direct and indirect effect to teacher's competency in schools of the secondary educational service area office in lower northeast area. Therefore, the university should promote self-development of students in teaching program. Director of secondary educational service area office should implement policy that promotes teacher's self-development, the teacher using of technology in learning management, and the being of professional learning community of school in order to make teachers develop themselves and obtain higher competency.

Practice Recommendations

The principals of secondary schools under the secondary educational service area office in lower northeast area should promote self-development in teachers as it improves teacher's competency. The being of professional learning community of school and the teacher using of technology in learning management should also be promoted for quality of teachers and students together with better learning result.

Research Recommendations

1. The research regarding the development of curriculum that promotes teacher's self-development, the teacher using of technology in learning management, and the being of professional learning community of school is recommended since these variables are important to competency level of teachers in the secondary educational service area office in lower northeast area which lead to quality and standard of education.
2. To study the variables that affect self-development of teachers in secondary schools under the secondary educational service area office in lower northeast area.

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