

# The Study of Competencies of Secondary School Principals in 21<sup>st</sup> Century

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## Abstract

This study aims to develop the competency indicators of secondary school principals in the 21<sup>st</sup> century and to examine the consistency of competency indicators structure model of secondary school principals in 21<sup>st</sup> century with empirical data. There are two stages in the process of research. Step 1 is conducting theoretical structure model of secondary school principals in the 21<sup>st</sup> century by documentary synthesis, gathering draft models of the theoretical indicators structure and the in-depth interview with nine experts were used to formulate a theoretical model. The instrument was the interview questionnaire titled, “the competency indicators of secondary school principals in 21<sup>st</sup> century”. Data is analyzed by applying interview results for data organizing, data displaying and interpretation, conclusion, and the summary of theoretical indicator structure model. Step 2 is the checking the consistency of structure model of competency indicators of the secondary school principals in 21<sup>st</sup> century. The population were 933 secondary school principals under the Office of Secondary Educational Service Area 19 –33 in academic year 2017, and 500 of them were the samples selecting by Two-Stage Random Sampling. The instrument were created by using indicators and components obtained from Step 1 to create the 5 –rating scale questionnaire. Reliability value was .996 and data analysis use Computer Software.

The study findings were as follows :The competencies of secondary school principals in 21<sup>st</sup> century consisted of 6 core competencies and 23 sub-components including :1 (Modern management core components consists of 3 sub-components; Strategic change management, Empowerment of assigning decision responsibility, and Using resources efficiency, 2 (Team work core components consists of 5 sub-components; Participative management, Cooperation, Accompany with assigning strategic and goal setting, Creating mutual trust and Communication, 3 ( Individual and personnel development core components consists of 3 sub- components; Emotional management, Self and personnel understanding, and Ethics and virtue, 4 (Administrative Innovation for development core components consists of 4 sub- components; Creating innovation management, Using technology for management, Making organization of learning, and Knowledge management, 5 (Thinking development core components consists of 4 sub-components; Creative thinking, Critical thinking, Analytical thinking and Systems thinking, 6 ( Academic leadership core competency consists of 4 sub-components; School Curriculum development, Learning process development, Supervision in school ,and Student development and then the adjusted model is good consistent with empirical data, considering from the chi-square test which is statistically significant at 176.06, with no statistical significance, df =153 .Chi-Square is 0.15 GFI, 0.97 AGFI is 0.95 CFI = 1.00 SRMR is 0.02, RMSEA is 0.02, and CN is 552.38 .It shows that the Equation of Equation Consistent with empirical data .

**Keywords:** competency, secondary school principal, 21<sup>st</sup> century

## 1. Introduction

Education in the 21st century must prepare people to be knowledge workers and be learning people, regardless of any human life. In the 21<sup>st</sup> century, people must be ready to learn. Also a working person who uses knowledge even a farmer or agricultures must be ready to educate. And being a working person who uses knowledge, therefore, the most important skills of 21<sup>st</sup> century are learning skills with turning and unexpected. New generation people must have high skills in learning and adaptation. However, Thailand has not succeeded in managing education and educational development. The success of quality creation with education management, one important factor is Education Management in improving quality and efficiency. Education management must focus on school administrators as much as possible which is the smallest unit. If it is able to manage education

well, it can be a model for other schools to create quality of learners. It has been noted that many schools that provide educational reform can manage education well. There will be one person, the school administrator which is the most important key to drive the development of the school. At present, there is a problem of lack of good executives with skills, knowledge and understanding of educational management to achieve the goals that affect the quality of Thai education. (Office of the Education Council, 2015)

In bureaucratic reform, the government has imposed measures to develop and manage manpower to support changes and to increase the efficiency of the bureaucracy. Therefore, there has a new human resource management policy based on competency based, performance based and merit based principles. The modern human resource management process therefore emphasizes on the basis of competency principles. In the field of education, one of the human resource groups that plays an important role in the development of educational quality and should focus on high performance to support decentralization and change is the school administrator. (Teacher Development Institute, Faculty and Educational Personnel, 2008)

Clear performance determination leads to the development of quality work. As Thomson's study Thompson (2003) found that the assessment of school administrators is difficult due to each school is different according to the environment and the context of the social community. It is proposed that the assessment of the performance of school administrators should be more continuous process rather than using the performance report for the academic year, reporting events or project activities. Assessments should collect data from multiple sources, and they should have the results to executives to be used as a guideline for professional development. Professional school management therefore requires personnel in educational institutions and related people to help develop quality. The key personnel in the school will lead to the quality of education is the place executives whose study must be competent in management which is the key to the development and driving of the school to be successful (Reeves, 2011; Alexander, 2013). They must keep pace and be ready for professional management that is ready to receive such rapid changes in information technology and learning. Sanrattana (2013).

Therefore, from such problems and importance, the researcher is interested in studying the competencies of secondary school principals in the 21<sup>st</sup> century. The research results will be information for developing secondary school principals to be able to perform effectively in this 21<sup>st</sup> century. Also, they will able to develop education for excellence, promote and support the development of executive career to be accepted and enhance the potential development quality of learners according to educational standards that affect the quality of education development in Thailand at present and in the future to international quality.

### *1.1 Research Problem*

- 1) What are the competency indicators of secondary school principals in 21<sup>st</sup> century?
- 2) Is the competency indicators structure model of secondary school principals in 21<sup>st</sup> century consistent with empirical data?

### *1.2 Research Objectives*

- 1) To develop the competency indicators of secondary school principals in 21<sup>st</sup> century.
- 2) To examine the consistency of competency indicators structure model of secondary school principals in 21<sup>st</sup> century with empirical data.

### *1.3 Research Methodology*

Step 1: Modeling the structure of theoretical indicators of the secondary school principals in the 21<sup>st</sup> century. The researcher constructed the structural model according to the steps that covered these issues, including 1) document synthesis, principles, concepts, theories and related research, and 2) 9 expert interviews by In-depth interview using research tools from the synthesis of core components, sub-components, and competencies indicators of secondary principals in 21<sup>st</sup> century total 1 issue by using an informal interview form Wongwanich (2015), which is a broad question or issue. Then bring the results of the interview to organize the data, describe or display data, interpret the issues and summarize Noppakesorn (2006) in the synthesis and modeling of interviews for confirming the suitability of the theoretical indicator model before continuing to create the questionnaire.

Step 2: Examining the consistency of the competencies indicators structure model of the secondary school principals in 21<sup>st</sup> century with empirical data, which is the indicators of the synthesis of documents and interviews in step 1 in order to collect empirical data. The population used in the research is secondary school principals under the Office of Secondary Educational Service Area 19-33, Academic Year 2017, 933 persons. The researcher determines the sample size of 500 principals according to the concept of Chadcham (2004).

Sample size for using Confirmatory Factor Analysis (CFA) with more than 3 components should use the sample from 500 principals or more. Sample group selection, the researcher conducted a two-stage random sampling. Research tool used in this research is a rating scale questionnaire with 5 levels and 103 questions with has a total reliability value of .996. Analysis of data and elements with a preliminary agreement is the Correlation Coefficiency having a value of not less than 0.30. Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.80 or higher. Bartlett's Test of Sphericity has a significant value. Factor loading has a value ranging from 0.50 and above, and a Confirmatory Factor Analysis with Chi-square Goodness of fit Statistic. There is no statistical significance. Relative chi-square values is less than 2.00, the Goodness of Fit Index: GFI) is greater than .90. The Adjusted Goodness of Fit Index: AGFI is greater than .90. The Comparative Fit Index (CFI) is greater than .95. The Standardized Root Mean Square Residual: SRMR is less than .05. The Root Mean Square Error of Approximation: RMSEA) is less than .05 and the index shows the sample size to accept the index shown the model (CN) is greater than 200.

## 2. Research result

1. Indicator development result is able to determine the 103 indicators under the core component framework of the secondary school principals consists of 6 core components and 23 sub-components, including 1 (Modern management core component consists of 3 sub-components; Strategic change management, Empowerment of assigning decision responsibility and Using resources efficiency, 2 (Team work core components consists of 5 sub-components; Participative management, Cooperation, Accompany with assigning strategic and goal setting, Creating mutual trust and Communication, 3 (Individual and personnel development core components consists of 3 sub-components; Emotional management, Self and personnel understanding and Ethics and virtue, 4 (Administrative Innovation for development core components consists of 4 sub-components; Creating innovation management, Using technology for management, Making organization of learning and Knowledge management, 5 (Thinking development core components consists of 4 sub-components; Creative thinking, Critical thinking, Analytical thinking and Systems thinking, 6 (Academic leadership core components consists of 4 sub-components; School Curriculum development, Learning process development, Supervision in school and Student development.

2. The results of the examination of data before analyzing and scale creating model, found that all indicators of the core components are significantly related at the level of .01, with the Correlation Coefficiency values from 0.329 to 0.840. Bartlett's Test of Sphericity is significant and the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy value ranges from 0.918 to 0.969, indicating the data is very appropriate in good level. It can be used to analyze the components which is in accordance with the preliminary agreement.

3. The results of the consistency test of the indicator structure model and empirical data which has become the model of the competencies of secondary school principals in the 21<sup>st</sup> century as shown in Figure 1.

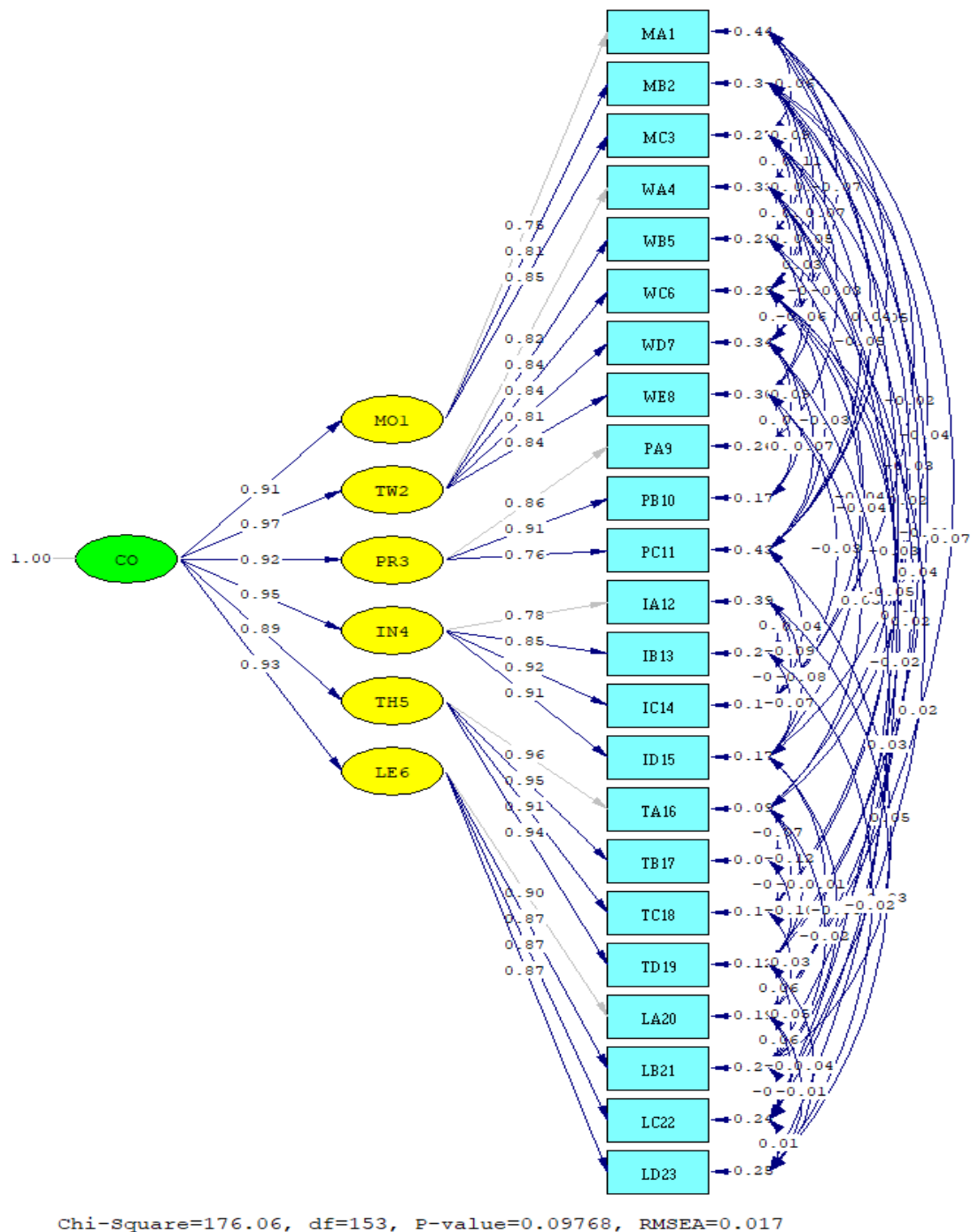


Figure 1. Model of the competency components of secondary school principals in 21<sup>st</sup> century

From Figure 1. It was found that when adjusting the consistency of the model, it is consistent with the empirical data with very good results, based on chi-square is 176.06, not statistically significant. The df value is 153. When considering the relative chi-square value of 1.15, the GFI value is 0.97, the AGFI value of 0.95, SRMR 1.00, the SRMR value is 0.02. RMSEA values are 0.02 and CN values is 552.38. The preliminary agreement shows that the core components structure model of competencies of the secondary school principals in the 21<sup>st</sup> century is consistent with empirical data, when considering the weight components of the core competencies that are appropriate to be the components of secondary school principals in 21st century, sorted in descending as follows: Teamwork (0.97), Administrative innovation development (0.95), Academic leadership (0.93) Individual and personnel development (0.92), Modern management (0.91) and Thinking development (0.89) respectively.

### 3. Discussions

1. Based on the synthesis and development of competencies indicators of secondary school principals in 21<sup>st</sup> Century, it was found that there are 6 core components namely: 1) Modern management 2) Team work 3) Individual and personnel development 4) Administrative innovation for development 5) Thinking development and 6) Academic leadership. And there are 23 sub-components and 103 indicators which the principals of secondary schools need to have a better knowledge and understanding of modern management, teamwork, individual and personnel development, Administrative innovation development, Thinking development, and Academic leadership in order that they will be acceptable to the community and society. All of these are components in the modern management system. In accordance with the research of Phunsungka (2012), which has developed the indicators for the basic school principals' found that the components of modern management consists of 4 components including, 1) Empowerment of assigning decision responsibility 2) Organizing Information technology system 3) Using resources efficiency and 4) Change management which all are consistent with the research of Hat and Jackson (1991), presenting seven management principles: 1) Management by the principals who use professional knowledge to employ the skills and experience of the people independently 2) To set the standard and clear performance indicators 3) To emphasize the results rather than the process 4) To adjust the management model to be decentralized 5) To improve working more competition. 6) The use of private management methods and 7) Efficient use of resources and low cost. In accordance with the research of Singthong (2015) that has developed the competency indicator for teachers in the 21<sup>st</sup> century under the Office of Primary Education Area found that team performance components consists of indicators that describe features about 1) teamwork 2) helping others and 3) having a public mind

2. Before conducting the consistency check of structure model of competency indicators of the secondary school principals in 21<sup>st</sup> century which is developed with the data in accordance with the concept of the good indicator of Kanjanawasi (2009), which suggests that good indicators should have qualities according to the following criteria: 1) Validity must be measured accurately and precisely. 2) There is a representation of the assessment issue. 3) Reliability must be fixed as before, be measured, matched or close. 4) Neutrality must be neutral, not biased or directed in any direction. In assessing, opportunities will be easily biased because collecting information from stakeholders who has sensitivity in measuring anything. If the indicator is sensitive, showing differences, such as measuring multiple levels, makes the measurement results higher. Better than just measuring 2 levels and 5) Easy to use (Practically) can easily bring indicators to measure or store information by various means. And when collecting data, it can be easily interpreted and the results of confirmatory element analysis shows that the equation model, structure, core components, competency indicators of secondary school principals in 21<sup>st</sup> century is consistent with empirical data based on the results of the research. It may be because, as mentioned above, if the theory has been carefully examined and also find information from academic interviews, practitioner or experts as mentioned and bring the information together; therefore, should make the model developed in accordance with empirical data. Besides that considering the statistics can be used to check the consistency of many values for validity. It was found that the structure model, the competencies of secondary school principals in the 21<sup>st</sup> century is consistent with empirical data shows that accepting the main hypothesis of this research. The validity of the competencies indicators of secondary school principals in 21<sup>st</sup> century in the analysis of confirmed components by analyzing the structure model of the indicators created from the theory is consistent with empirical data and consistent with Sutawong's research. Sutawong (2010) has developed the academic administration competencies indicators of secondary school administrators under the local government organization and to check the appropriateness of academic administrative competency indicators of secondary school administrators of the development model and empirical data. The research was found that indicators of academic administration competencies of secondary school administrators under the administrative organization, the local area consists of 14 competencies (sub-components), a total of 97 indicators. When separating the performance, it was found that the index of consistency was 0.80 and higher and was appropriate at all levels. The highest mean is the leadership, followed by vision and the lowest mean is the development of school curriculum confirmatory component analysis, performance indicators. Academic administration of secondary school administrators under the local government organization with empirical data using chi-square values, indexes, degree of harmony and the value of the index Test hypothesis research. The results showed that the model was consistent with empirical data with statistical significance. Examination of suitability, performance indicators the academic administration of the secondary school administrators of the development model schools was found that they were the most suitable in all aspects. With the highest mean value is the promotion of research in classes and research at school level, followed by achievement, and the lowest mean is the leadership shows that the developed indicators are appropriate for the academic administration performance of secondary school administrators. And also correspond to secondary research Phunsungka (2012) has developed basic

school competencies indicators, found that the results of the consistency of the indicator structure model. Both the first round, the second round and the third round, all 17 models that are developed are consistent with empirical data. With statistics as follows: Value  $\chi^2 = 107.32$ ,  $df = 160$ ,  $P\text{-value} = .27$ , value  $\chi^2 / DF = 0.37$ ,  $GFI = 0.98$ ,  $AGFI = 0.91$ ,  $CFI = 1.00$ ,  $CN = 473.02$ ,  $SRMR = 0.12$  and  $RMSEA = 0.13$  and in accordance with the research of Phophet (2013) which has developed the academic leadership indicator of basic school administrators was found that the results of the consistency of the academic leadership structure model of basic school administrators is consistent with empirical data with statistical significance at the level of .05 ( $\chi^2 = 2646.65$ ,  $df = 1405$ ,  $P\text{-value} = 0.081$ ,  $GFI = 0.96$ ,  $AGFI = 0.92$ , and  $RMSEA = 0.064$ ) in line with Nong Khaengraeng's research, Khaengraeng (2560) has developed the competency indicators of school administrators under the Office of the Basic Education Commission in the context of the ASEAN community and checking the consistency between the competency indicator model of school administrators under the Office of the Basic Education Commission in the context of the ASEAN community developed with empirical data, the results of the research revealed that the model of competency indicator of school administrators in the context of the ASEAN community is consistent with empirical data based on the hypothesis set ( $\chi^2 = 318.07$ ,  $df = 218$ ,  $p\text{-value} = 0.00$ ,  $GFI = 0.97$ ,  $AGFI = 0.93$ ,  $RMSEA = 0.02$  and  $CN = 493.67$ ). Core competencies are sorted in descending order as follows: Having knowledge about the ASEAN community (0.71), Activities on ASEAN (0.71), Communication and motivation (0.70), Morality and ethics (0.69), Analysis and synthesis (0.68), Having a vision (0.67) Good service (0.66), Focusing on achievement and professionalism (0.65) Teamwork (0.64), and using information technology (0.63) respectively.

#### 4. Suggestion

##### 4.1 Suggestions for Applying the Study Results

4.1.1 The results of this study were the core competencies and sub-competencies of secondary school principals in 21<sup>st</sup> century can be used to develop school principals' competencies as well as being able to be used as guidelines for conducting school work which will affect the quality of education.

4.1.2 Office of the Basic Education Commission and the Office of Secondary Educational Service Area can bring core competencies and sub-competencies of secondary school principals in 21<sup>st</sup> century as a model for promoting and developing school principals to be able to manage school professionally.

##### 4.2 Suggestions for Further Studies

4.2.1 Research and development should be conducted by using models that have been examined in this research as a guideline to obtain the training set of competency indicators of secondary school principals under the Office of the Basic Education Commission.

4.2.2 There should be a research study to track the stability of the indicator characteristics and the components according to the structure model obtained from this research. Independence of components and changes in the distinctiveness of various components can lead to modeling, explaining the development of the competency indicators of the secondary school principals in 21<sup>st</sup> century.

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