Indicators of Effective Followship for Teachers under the Local Administrative Organization in Thailand: The Structural Relationship Model

Abstract

This study aims to examine the consistency of the structural relationship model developed from both related theories and previous studies. Key components, sub-components and related indicators were examined by descriptive method. Sample sizes were controlled by the ratio between sample units and number of parameters as 20:1. A total of 31,026 samples were collected. All sample were teachers who were teaching at schools under the jurisdiction of local administration in Thailand. The questionnaire was used as a 5-level rating scale with 0.979 reliability. Results were based on related hypothesis, WIE model, participatory measurement model (PAR), and critical measurement model (CRT), respectively. The Measurement of Integrity (INT) and FOLL (Good User-Conduct Modeling) models were consistent with those previous studies. The key components, sub-components and indicators were also loaded according to the criteria.

Keywords: Indicators; Fellowship; Effective Followship; Teachers under the Local Administrative Organization

1. Introduction

1.1 Research problem

Leadership is important because leadership is the key factor in the organization's success. In addition, the organization must create a good leader. It also has to create potential followers together. Aruitta (2012) and Kelly (1992) found that 90% of organizational success was due to the performance of followers. The remaining 10% was the work of the leader (Pongsriwat, B.E. 2548; Kelly, 1992; Chaleff, 1995). Key components reflect the characteristics of effective followers. It is the demand of executives and organizations everywhere. However, based on the results of the synthesis of components that demonstrate the effective attribute-based characteristics of 16 previous studies including Ferrell *et al.,* (2013); Rast (2004); Martin (2008); Jaussi *et al.* (2008(; Ferrell *et al.* (2013); Chaleff (1995(; Ricketts (2009(; Yung & Tsai (2013); Hertig (2010); Holdeman (2012); Connolly (2013); Mccallum (2013); Whitlock (2013); Raffo (2013), and Villiers (2014). It was found that the theoretical framework composed of 28 components. These components reflect the diverse attributes of the effective followers. However, when considering the value ≥7, it is found that the key components used as the conceptual framework for this study composed of 4 components including work ethic, participation in the organization, participation in critical thinking, and integrity, respectively. Based on twelve previous studies of ethical work, it was found that there were 27 components of theoretical frameworks. If it the value was ≥6, there were three components that were used as conceptual frameworks, responsibility, teamwork and professional, respectively. Additionally, we reviewed the operational definition to define as an indicator to guide the creation of questionnaire in a number of questionnaires. Based on the study of the components of participation in the organization, participation from 10 previous studies found that there were 24 components of the theoretical framework in which the value was ≥7. There were three components to this conceptual framework including participation in planning, participation in practice, and participation in decision-making, respectively. In addition, we reviewed the operational definition to define as an indicator to guide the creation of questionnaire in a number of questionnaires.

Based on the study of critical thinking components from the 12 sources, it was found that there were 33 components of the theoretical framework based on the frequency of 5 and above. There were four components to this conceptual framework including creative thinking, rational consideration, enthusiasm, and open minded, respectively. We studied the operational definition to define as an indicator to guide the creation of questionnaire in a number of questionnaires. According to the study of components of integrity, we studied from 10 sources. There were 34 components of the theoretical frame based on the frequency of 5 and above. There were four sub-components of this conceptual framework including trustworthy, conscientious, honest, transparent, and transparency, respectively. In addition, we studied the operational definition to define as an indicator to guide the creation of questionnaire in a number of questionnaires. The structural relationship model of the indicator of effective follower status is shown in Figure 1.

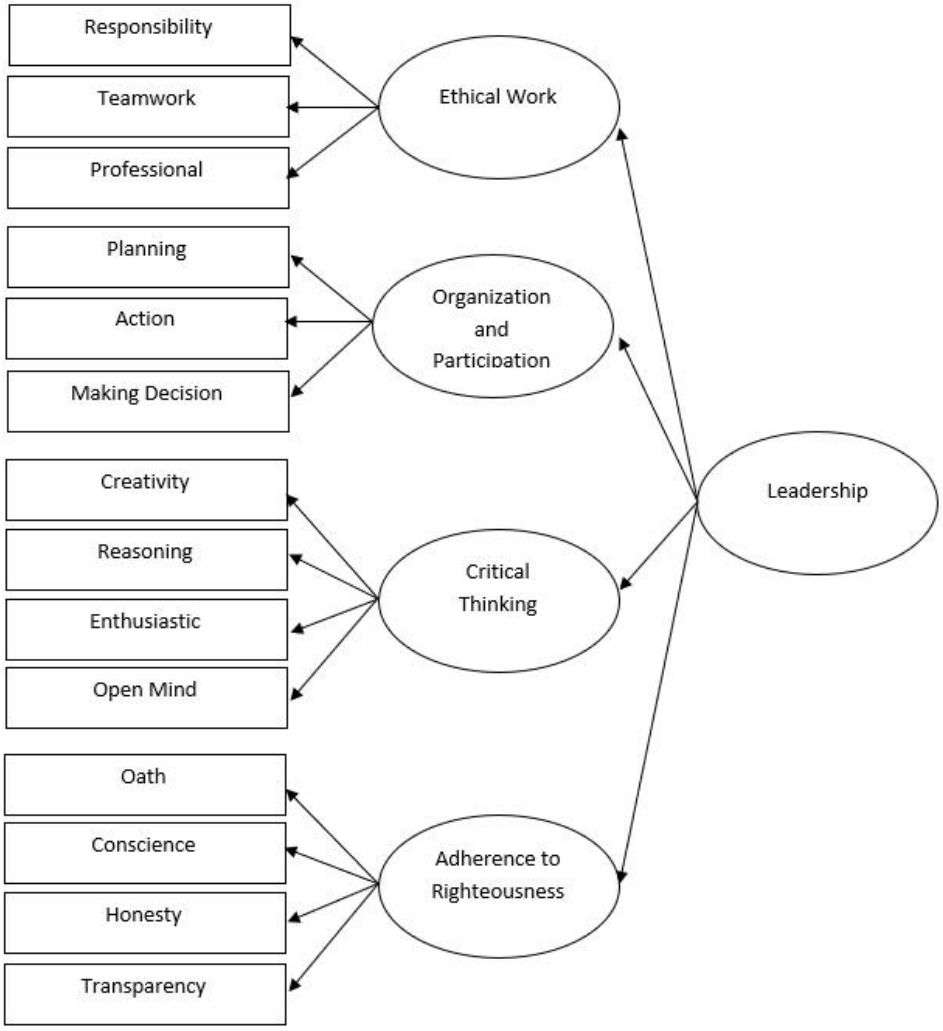

Figure 1 Structural Model of the Effective Follower Indicator

The structural relationships model of the indicators of effective followers shown in Figure 1 were either theoretical models or hypothetical models. It was interesting to note that teachers who teached in schools in the local government organization had behaviors or expressions of effective followers in line with the indicator in the structural relationship model. The educational agency or school could use this study as a guideline for planning for development or even use as a guideline for monitoring and evaluation for their educational system especially for the effective followers in schools under the jurisdiction of the local government. It is expected that our findings would improve the quality of education management.

1.2 Hypothesis

In this study, we studied all related theories and previous studies as well as the views of scholars from various sources at the main components, sub-components and indicators as a guideline to construct a questionnaire to obtain a structured relationship model of the indicator of effective followers. The concept of empirical definition was defined as the definition of the sub-components and the method of combining sub-components with theoretical and fundamental research according to Kerlinger and Lee study (2000). The hypothesis of this study was as follws:

Hypothesis 1: Models developed from both theories and previous studies were based on the following criteria; (a) relative chi-square (CMIN/DF) was between 1 and 3, (b) the root means square error of approximation (RMSEA) was less than 0.05, (c) the harmonized index, (d) the adjusted goodness-of-fit index: AGFI, (e) the comparative fit index (CFI), and (f) the normalized fit index (NFI) was 0.90-1.00 (Hair, Black, Babin and Andersonand et al., 2011).

Hypothesis 2: Model has structural integrity. The loading factor of the key component was 0.70 (Farrell & Rudd, 2009) and the compositional weight and indicator were equal to or greater than 0.30 (Khonkarn, B.E. 2547).

1.3 Purpose of the study

The purpose of this study was to examine the consistency of the structural relationship model of the indicator for teachers in schools under the jurisdiction of the local administration of Thailand as developed from related theories and previous studies. Empirical information was used to check with the weight of the main components, sub-components, and indicators, respectively.

2. Method

This study was a descriptive research to examine the method of constructing and developing the indicator of education according to Viratchai (B.E. 2545). The first method used the pragmatic definition based on the decision and experience in selecting or assigning sub-components, determining how to include sub-components, and weighting of individual components. The second method used two theoretical definitions based on related theories and previous studies in order to determine how to include sub-components, and sub-weight determination. This was used when a model of educational indicator was defined. The related theories and previous studies were based on the selection of sub-components and the method of combining sub-components, and the weight of each component. In addition, we used comments and opinions from experts in educational management to make a final decision. This method was used in the absence of any form of education indicator. The third method used the empirical definition and the method of combining sub-components with theoretical and fundamental research. The weight of sub-components was determined by empirical data analysis. In this study we used the method to create and develop an empirical definition by analyzing the confirmatory component.

2.1 Participants

Participants in this study were 740 samples from 31,026 teachers in schools under the jurisdiction of the local government. (Department of Local Administration. Ministry of Interior, 2015). Sample size were controlled by the ratio of the sample unit to the number as 20:1. According to Gold (1980), the number of parameters was calculated from the combination of 5 latent variables, 14 observed variables and 18 influenced lines with totally 37 parameters.

2.2 Material and instrument

A questionnaire was used as the research instrument in this study. The questionnaire was divided into two parts as follows:

Part I: Demographic questionare: The checklist includes gender, age, school size, education, and work experience.

Part II: Expression questionnaire: Expression questionnaire of effective teacher status in local government organizations. There were five levels of rating scale including highest, high, average, low, and lowest which were classified by its content. There were sixty-nine questions in this part.

2.3 Research development

We developed the tools which were used in this study including (a) studying all related theories and previous studies for synthesing and defining them as the main components, (b) studying all related theories and previous studies for synthesing and defining each sub-component in each of the main components, (c) studying all related theories and previous studies on the operational definition of each sub-components as an indication or primary basis for measuring each of the components, (d) creating relationships between the main components, sub-

components and indicators, (e) re-checking by three experts in educational administration and two experts in the education and evaluation for the appropriateness of the questions, (f) improving all questionnaires and tried-out with teachers in local government schools, but not the sample target used in the study. The data were also analyzed to find the alpha coefficient for the reliability of all questionnaires by using the Cronbach method in which those higher than 0.70 was accepted. As a result of the data analysis, all questionnaires had an alpha coefficient of confidence of .979. When identifying each of the major components, the work ethic was 914, organization participation was 914, critical thinking was 914, and integrity was 958, respectively.

2.4 Data collection

The data were collected data from July to November 2017 using a multi-random sampling technique to obtain 740 samples from 31,026 population. Questionaires were sent by mail from Faculty of Graduate Studies, Mahamakut Buddhist University Isan Campus, Khon Khaen, Thailand. Only 700 questionnaires were received, representing 94% of all questionnaires. After evaluating the adequacy of the sample according to the Kaiser-Meyer-All Kilometer (Kaiser-Mayer-Olki Measurers of Sampling Adequacy) based on four main measurement models, values between .918 - .939 revealed that the number of samples used was sufficient for the confirmatory factor analysis.

2.5 Data analysis

The AMOS program was sued to analyze the following statistics: (a) Frequency and percentage to determine the status of the sample, (b) Mean and distribution coefficients to determine the suitability of the indicator for selection, (c) Pearson's Product Moment Correlation Coefficient to determine the degree and direction of the relationship, (d) Bartlett's statistic for determining of the composition, and (e) confirmatory factor analysis. The confirmatory factor analysis was used to validate the model including (a) Relative chi-square (CMIN / DF) was between 1 and 3, (b) Root means square error of approximation (RMSEA) was less than 0.05, (c) Harmonized index, (d) adjusted goodness-of-fit index: AGFI, (e) comparative fit index (CFI), and (f) the normalized fit index (NFI) was 0.90-1.00 (Hair, Black, Babin and Andersonand *et al.,* 2011).

3. Results

3.1 Conformity test of the structural relationship model

Model conformance testing was done by the first order confirmatory factor analysis for all four measurement models, the WIE model, the measurement model of participation in the organization (PAR), critical thinking measurement models (CRT), and integrity assertion measurement (INT), respectively, with the secondary confirmation analysis of the measurement models. According to the effectiveness (FOLL), which had four main components with the work ethic (WIE) was involved in the organization (PAR) with critical thinking (CRT) and adherence to righteousness (INT).

(a) Average and distribution coefficients of the indicator were considered by the average value of 3.00 and the distribution coefficient equal to or less than 20% according to Virachai (1996). The results showed that 14 indicators were included in the WIE Model, 12 indicators in the participatory measurement model (PAR), 21 indicators in critical thinking (CRT), and 22 indicators in the measurement model of adherence tolerance (INT) ranged from 4.09 to 4.60. The distribution coefficient ranged from 10.85 to 18.36.

(b) Correlational coefficients that reflected the relationship between the indicators in each measurement model were different from zero according to Virachai (1996). The results showed that 69 indicators in 4 measurement models had pearson correlation coefficients between .223 - .803 with statistically significant. The positive correlation was at .01 level.

(c) The baertlett test of sphericity, based on the correlation matrix, was also statistical significantl differences from the identity matrix at the .01 level according to Viratchai (1996). The results showed that there were three measurements including the measurement model of work ethic, measurement model of engagement with organizations, measurement models of critical thinking. The validity of the baertlett test of sphericity equals were 4643.850, 7102.625, 11534.670 and 11385.315, respectively. For all models, the probability was less than .01 level.

Based on the average and distribution coefficients, pearson's product moment correlation coefficient and baertlett test of sphericity, it showed that all indicators in the all four measurement models were suitable for analyzing the first affirmation component, and the consistency test of each model from the assertive components analysis as follows.

(a) The measurement model of work ethic which had three sub-components including responsibility, teamwork and professionalism. These were also consistent with empirical data. The relative chi-square (CMIN / DF) was 2.515. The mean square error of approximation (RMSEA) was 0.047. The good fit index of GFI was 0.975. The adjusted goodness-of-fit index (AGFI) was 0.949. The comparative fit index (CFI) was 0.983. The normalized fit index (NFI) values was 0.972, respectively.

(b) Measurement model of participation in organization which consisted of three sub-components including participation in planning, participation in practice, and participation in decision making, respectively. Participation in decision-making was consistent with empirical data. Relative chi-square (CMIN / DF) was 2.323. The mean square error of approximation (RMSEA) was 0.044. The good fit index of GFI was 0.975. The adjusted goodness-of-fit index (AGFI) was 0.958. The comparative fit index (CFI) was 0.995. The normalized fit index (NFI) values was 0.992, respectively.

(c) Critical thinking models had four components including creative thinking, rational consideration, enthusiasm, and open minded, respectively. Open-Minded was consistent with empirical data. Relative chi-square (CMIN/DF) was 2.750. The mean square error of approximation (RMSEA) was 0.050. The good fit index (GFI) was 0.952. The adjusted goodness-of-fit index (AGFI) was 0.919. The comparative fit index (CFI) was 0.979. The normalized fit index (NFI) values was 0.968, respectively.

(d) A model of measurement of adherence to righteousness consisted of four elements including trustworthy, conscientious, honest, and transparent, respectively. Transparency was consistent with empirical data. Relative chi-square (CMIN/DF) was 2.499. The root means square error of approximation (RMSEA) was 0.046. The good fit index (GFI) was 0.958. The adjusted goodness-of-fit index (AGFI) was 0.923. The comparative fit index (CFI) was 0.982. The normalized fit index (NFI) values was 0.970, respectively.

(e) The results showed that the developed model was consistent with empirical data in all aspect of criteria. This was examined by the defined research hypothesis with a code of conduct. Getting involved in the organization, critical thinking and adherence to righteousness were important components of the model of structural relationship for teachers in local government organizations. There were 14 subsets of equations used in this study as folls.

WIE1	=	)WI1+WI2+WI3+WI4) = (0.09 + 0.11+ 0.15 + 0.16)	=	0.51
WIE2	=	)WI5+ (WI6 + WI7+WI8) = (0.20 + 0.02 + 0.13+ 0.20)	=	0.55
WIE3	=	)WI9+ WI10 + WI11+WI12+WI13+WI14)		
		(0.10+0.08+0.07+0.08+0.03+0.04)	=	0.40
PAR1	=	)PA15+PA16+PA17+PA18) = (0.18+0.17+0.14+0.94)	=	1.43
PAR2	=	)PA19+ PA20+ PA21+PA22) = (0.23+0.01+0.24+0.26)	=	0.74
PAR3	=	)PA23+ PA24 + PA25+PA26) = (0.25+0.17+0.19+0.11)	=	0.72
CRT1	=	)CR27+CR28+CR29+CR30+CR31+CR32)		
	=	(0.02+0.18+0.15+0.22+0.17)	=	0.74
CRT2	=	)CR33+ CR34 + CR35+CR36+CR37)		
	=	(0.07+0.21+0.10+0.09+0.21)	=	0.68
CRT3	=	)CR38+ CR39 + CR40+CR41+CR42+CR43)		
	=	(0.07+0.07+0.18+0.21+-0.01+0.17)	=	0.71
CRT4	=	)CR44+CR45+CR46+CR47) = (0.23+0.16+0.15+0.26)	=	0.80
INT1	=	)IN48+IN49+IN50+IN51+IN52+IN53+IN54)		
	=	(0.13+0.08+0.10+0.09+0.07+0.13+0.08)	=	0.68
INT2	=	)IN55+ IN56 + IN57+IN58) = (0.07+0.20+0.19+0.17)	=	0.63
INT3	=	)IN59+ IN60 + IN61+IN62+IN63+IN64)		
	=	(0.42+0.14+0.08+0.05+0.12+0.02)	=	0.83

INT4 =)IN65+IN66+IN67+IN68+IN69)

= (0.10+0.14+0.05+0.03+0.15) = 0.47

Based on the scale of the sub-components generated in the 4 measurement models, the WIE had three sub-components. The Participatory Measurement Model (PAR) had three sub-components. The Critical Thinking Measurement Model (CRT) has four sub-components. The measurement model of adherence to righteousness (INT) had four sub-components. Therefore, we defined the FOLL model as shown in Figure 2 for second-order assay.

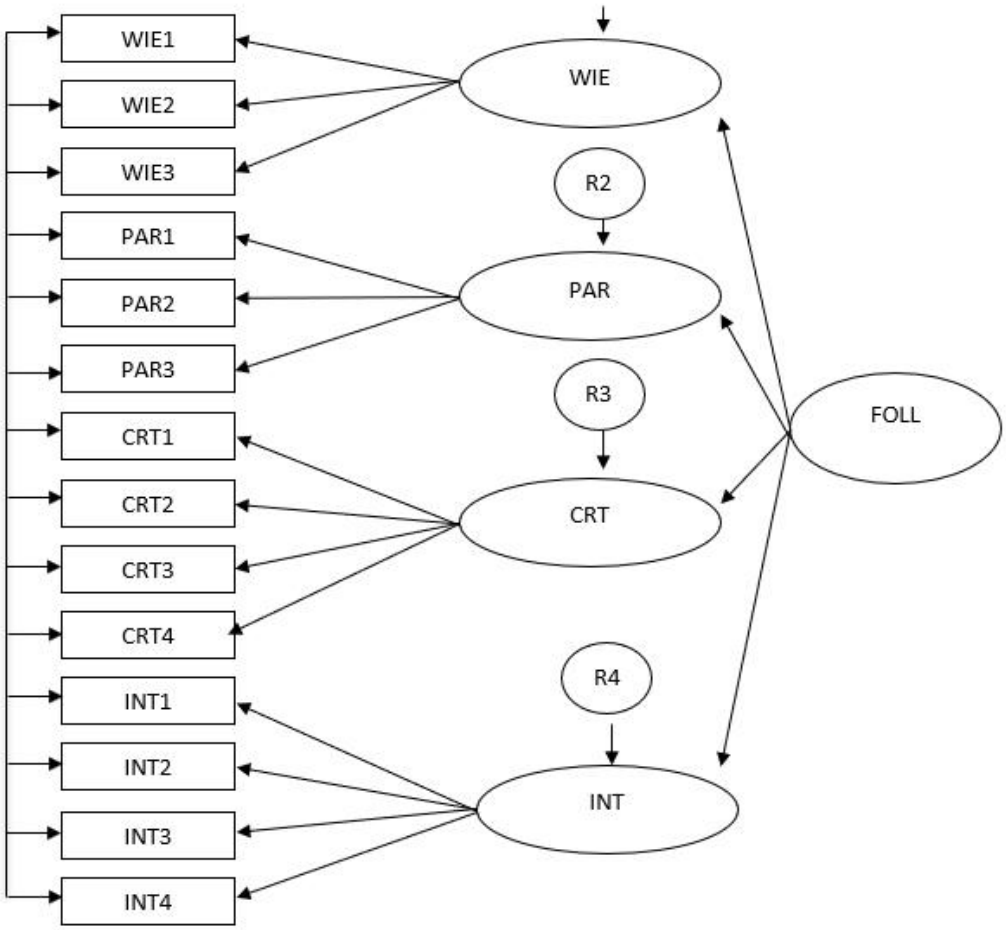

Figure 2 Model for Secondary Confirmation Analysis

Prior to the analysis of the two confirmatory components, the relationship between the 14 sub-components scales was also exmined in order to determine the suitability of the correlation matrix. Bartlett's test of sphericity was then used for this analysis. The results showed that the 14 subsets had a pearson product moment correlation coefficient ranged between 0.314 and 0.787 with statistical significantly correlated at the .01 level. Baertlett test of sphericity was 8593.156 with a probability of less than .01 level. According to the second component analysis, the FOLL had four main components including work ethic, participation in the organization, critical thinking, and integrity. The developed model was consistent with empirical data. Relative chi-square (CMIN/DF) was equal to 1.682. The mean square error of approximation (RMSEA) was 0.031. The good fit index (GFI) was 0.988. The adjusted goodness-of-fit index (AGFI) was 0.964. The comparative fit index (CFI) was 0.997. The normalized fit index (NFI) values was 0.993, respectively. Moreover, the results showed that the 4 components of FOLL was positive ranging from 0.79 to 1.01 with statistically significant at .01 level, indicating FOLL = 0.79 (CRT) + 0.94 (WIE) + 1.00 (INT) + 1.01 (PAR).

3.2 Checking the weight values of the main components, sub-components, and indicators

Determining the structural validity (construct validity) of the key components, all indicators were based on the following hypotheses:

(a) The four main components of FOLL had a positive factor ranged from 0.79 to 1.01 and statistically significant at .01 level. PAR was adherent to INT (WIE) and Critical thinking (CRT). Factor Loading were1.01, 1.00, 0.94, and 0.79, respectively.

(b) All three sub-components of the main components had a code of work load (WIE) with a positive load factor ranged from .85 to 1.08 with statistically significant at .01 level. All WIE1, WIE2, WIE2 and WIE2 were used. The factorial load factor was 1.08, 1.00, and 0.85, respectively.

(c) The three sub-components of the principal component were involved in the organization (PAR). The factor loadings were positive ranged from 1.00 to 1.05 with statistically significant at .01. Participation in PAR2 was also involved in planning (PAR1 and PAR3) with factorial loading of 1.05, 1.04, and 1.00, respectively.

(d) The four sub-components of the main components were critically charged. The factor loadings were positive ranged from 1.00 to 1.87 with statistically significant at .01 level. CRT1, CRT2 and CRT4 was reported with a factor of 1.87, 1.85, 1.81, and 1.00, respectively.

(e) The four sub-elements of the INT elementary component had a positive loading factor ranged from .74 to 1.34 with statistically significant at .01. INT1, INT3, INT2 and INT2 were 1.34, 1.22, 1.00 and 0.74, respectively.

In addition, it was found that the factor loading values of the 69 indicators were also positive ranged from 0.82 to 1.44 with statistically significant at .01. The most important thing was to have a passion for studying, but not stopping to learn new things. The weight of the element was 1.44 where the engagement in choosing the best way to work best to achieve the desired results showed the weight at 0.82.

4. Discussion

The result of the present study was based on the hypothesis indicating the model of structural relationship of the effective followers' indicator for teacher in school under the jurisdiction of the local government. They included the Measurement Model of Work Ethics (PAR), Critical Thinking Measurement Model (CRT), and Measurement Model of Adherence, and the FOLL model developed according to those theories and previous studies which were consistent with the empirical data. According to theories and previous studies used in constructing and developing a model, the structural relationships of these indicators were universally widespread in Thai society causing all teachers in schools could be affiliated to the organization. Local administrators showed their behaviors and expressions correspond to previous studies, namely the globalization. According to Scholte (2005), globalization was a process of diffusion. Exchange of experience and distribution of information from someone to another in the world. The flow of globalization is continuelly moving in terms of ideas, perspectives, and actions, respectively. These would have an impact on politics, economics, education, and culture influenced by the spread of globalization. The development of teachers' skills was stayed in the with the changes in the global society indicating in the Constitution of the Kingdom of Thailand, B.E. 2560, Chapter 16, Section 258, Reform of the Country. This revealed that the reform of the country in the various areas should be effective in general in order to improve the management of government according to the ability and achievement of individual tasks. Taking into account that the benefits were more than personal interests and creativity. In addition, the government has been working to improve the efficiency of public administration and public administration including (1) the unfairness of the bosses, (2) the development of the quality of Thai people, (3) the development of the quality of modern teachers, and (4) the development of the quality of the schools and the schools, (5) knowing the new age, (6) developing new quality management, respectively (Office of the Secretary of the Education Council, 2009).

Based on our findings, there was a relationship between our findings, related theories and the considerable practice (Saraburi, B.E. 2558). Therefore, the structural model of the indicator applied to teachers in schools under local government organizations could be used as self-development guidelines as well as in self-development of schools under local administration and higher-level agencies. In addition, the results of this study could be used as a guideline for planning for teacher development focusing on the main components, sub-components, and indicators, respectively. Finally, apart from our findings, there should be extended to other further studies including (a) our developed model was already examined with empirical data from other populations, (b) the new model should be developed from other theoretical frameworks, (c) studing the development of structural equation modeling, and (d) developing a new model with other related theories to compare with our findings and so on.

5. Conclusion

This study aimed to examine the consistency of the structural relationship model which were developed from both theories and research papers with empirical data. The results were based on hypothesis, WIE model, Participatory Measurement Model (PAR), and Critical Measurement Model (CRT), respectively. Measurement of Integrity (INT) and FOLL (Good User-Conduct Modeling) models were also consistent with the empirical data. The key components, sub-components and indicators were loaded according to the related criteria.

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