The Structural Relationship Model of Indicators of Outstanding Leadership for Teachers under the Local Administrative Organizations

Komsan Nonthing[*]
Mahamakut Buddhist University, THAILAND

Phramaha Suphachai Supakicco
Mahamakut Buddhist University, THAILAND

Abstract: The objectives of this research were to: 1) Study the suitability of the indicators to be included in the model, 2) Test the consistency of the model developed from the theories and research studies' empirical data, 3) Evaluate reliability value of the main components, the sub-components and other related indicators. The population used in the research was the teachers in the schools under the local administrative organization of Thailand. The multistage random sampling was used for the selection of 660 participants from a total population of 30,359 teachers across the country. The following results were observed: 1) All of the 52 indicators used in the research were appropriate according to the specified criteria, 2) The theoretical model was found to have been consistent with the empirical data. All of the statistical figures including; Relative Chi-Square, Root Mean Square Error of Approximation, Goodness-of-Fit Index, Adjusted Goodness-of-Fit Index, Comparative Fit Index, and Normed Fit Index: NFI, were found to have met with the specified criteria in both the first and the second confirmation factor analyzes, and 3) The primary element's factor loading was between 0.73 to 1.48, which is higher than the criteria of 0.70, the sub-element's factor loading was between 0.67 to 1.72 and the indicators weight was between 0.68 to 1.37, which is higher than the criteria of 0.30. These results indicate that the theoretical model developed in this research can be effectively used with construct validity for the development of the targeted samples in a research study.

Keywords: *Leadership, outstanding leadership, local administrative organization.*

Introduction

The world today is changing rapidly. The need to acknowledge the indicators of outstanding leadership for teachers is of great importance. This is because the teachers in the 21st century must have self-leadership qualities in order to keep up with the change. The teacher' roles as a teaching person have to be changed into the role of a coach. Research studies suggest that there are so many pieces of knowledge nowadays and the teachers need to teach only things that are important. The learners should be prompted to use that learnt skills for further enhancement. The students will learn to find the way to master the untaught knowledge by themselves. The key to teaching and learning in the 21st century is to change the way of learning, changing the instructional goal from "educating" to "giving skills". The classroom activities should focus on children as a center of learning and the conventional teacher-centered should be made obsolete (Phanich, 2018). This idea is in line with Sinlarat's (2018) view on the extent that teachers in the 21st century must transform education with a focus on skills that lead to creativity and new innovations. The learning culture should be made in the way that prepares the students; to be creative, to make a collective plan, to create work, to research into the matter and apply the learnt knowledge to increase performance. Teachers are the important variables in making all these qualities happen.

In addition, the 21st century teachers are expected have the following characteristics: 1) Experience: being experienced on the new learning method management, 2) Extended: having skills on knowledge acquisition, 3) Expended: having ability to effectively transfer or expand their knowledge to students through technology media, 4) Exploration: having ability to explore and select up-to-date knowledge or contents to be used with students by using appropriate technology and media, 5) Evaluation: being a good and fair assessor who can use technology in evaluation, 6) End-User: being able to use different technology appropriately, 7) Enabler: being able to use technology to create lessons, 8) Engagement: having ability to cooperate and exchange knowledge with each other through technology, develop a

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[*] **Corresponding author:**
Komsan Nonthing, Mahamakut Buddhist University, Isan Campus, Thailand. ✉ kom07@hotmail.com

network of cooperation such as a community for teachers on the web, 9) Efficient and Effective: being able to use technology effectively as a knowledge producer, knowledge distributor, and knowledge users (Cobanoglu, 2020; Cox, 2019) While Vibulphol ((2015researched Thai Teacher Education for the Future: Opportunities and Challenges, it was found that teachers play a key role in supporting or suppressing students' learning. Regarding the needs for new kinds of instruction to enhance lifelong learning and skills necessary for the learners' unknown future, educational reform in high performing countries like Finland, Singapore, and South Korea paid close attention to make changes in their teacher education while Thailand has vaguely addressed the issues related to teacher preparation in its recent draft of the educational reform. And considering the current curriculum management system of the Faculty of Education, it was found that the direction of Thai teacher development still needed clarity in terms of management, need a development policy based on research, and fostering partnerships between teacher-producing institutes and schools.

Literature Review

As driven by various perspectives on the importance and role of teachers in the 21st century as mentioned above, the researcher accordingly became interested in studying; the core components of the outstanding leadership among teachers, the sub-elements of each of the main components, and the indicators of each of the sub-elements. The investigation made on these elements was based on a perspective analysis and synthesis of various scholars including; Bachelor (2010), Burns (2015), Dennison (2019), Gini and Green (2013), Haden (2014), Hasan (2019), Hunter (2016), Katz (2012), Llopis (2013), McKinney (2013), McBean (2013), Scott (2011), Simon (2016), Steinbrecher (2016), and Sutcliffe (2013).

The results of the study of the aforementioned scholars, the core components of Outstanding Leadership (OSL) were observed with four elements as follows: (1). Moral Courage (MRC), (2) Good Communication Skills (GCS), (3) Powerful Vision (PVF), and (4) Lead By Example, (LBX). Each main element had sub-elements that were related as presented in 4 measurement models. They were 1) Model for Moral Courage Measurement consisted of Integrity (MRC1), Fairness (MRC2), and Commitment (MRC3). (Hannah et al., 2011; Radzaif, 2014; Sonnenberg, 2014; Steve, 2020; Tardanico, 2013). 2) Model for Good Communication Skills Measurement consisted of Respect the Audience (GCS1), Trust (GCS2), and Motivation (GCS3). (Alexander, 2015; Davenport, 2014; Graham, 2013; Martelli, 2014; Murphy, 2018; Vanderbloemen, 2013). 3) Model for Powerful Vision Measurement consisted of Focus on the Future (PVF1), Identify Aggressively (PVF2), and Easy to Communicate (PVF3). (Gallo, 2008; Greer, 2017; Hawkes, 2013; Kamran, 2017, The Non Profit Times, 2013). 4) Model for Lead by Example Measurement consisted of Learn all the Time (LBX1), and Human Relations (LBX2), and Respect Others (LBX3). (Lauby, 2013; Weaver, 2017; Western, 2014; Yates, 2019; Zwilling, 2010(.

Each of the outstanding leadership components and its sub-components are presented in the structural relationship model of indicators of outstanding leadership for teachers under the local administrative organization, which is a theoretical model for research study as shown in Figure 1
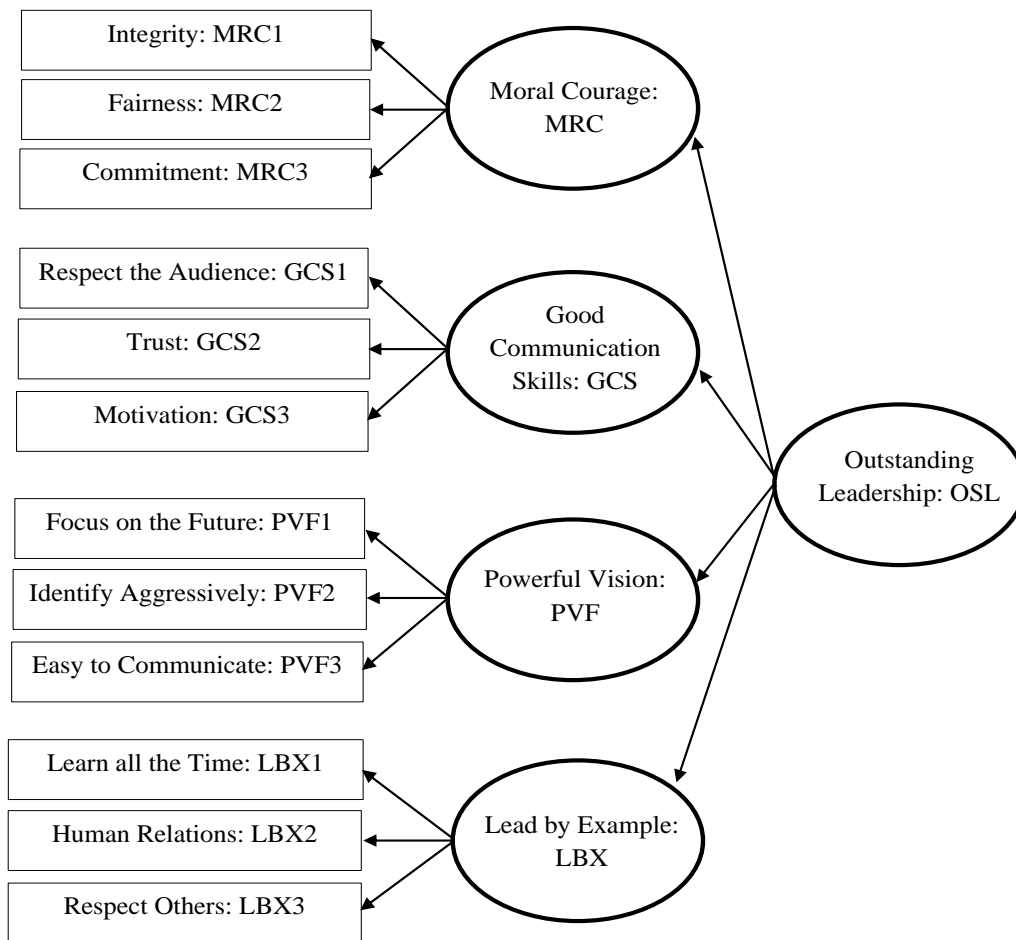
Figure 1: The Structural Relationship Model of Indicators of Outstanding Leadership for Teachers under the Local Administrative Organization: Theoretical Model for Research Study

From the perspective study of Anthony (2017), Ciraldo (2020), Decastro (2018), Gabbey (2019), Geiger (2017), Khan (2020), Mertol and Gundu (2020), Saini (2014), Smith (2020), Webster (2017), Whitney (2005), Xu and Doshi (2019), and Zenger and Folkman (2019), it was found that the indicators of each of the sub-components of the four main areas of leadership are as presented in Table .1

Table 1: Indicators of the sub-components of the four areas of leadership

Main areas of leadership and their sub-components	Indicators
Moral Courage	
Integrity	1) Perform duties with honesty
	2) Perform duties with legality and government officials' discipline
	3) Express honest opinions based on professional principles.
	4) Keep one's speech honest and reliable.
	5) Adhere to principles Professional ethics
	6) Be devoting
Fairness	1) Conduct oneself in accordance with tradition, law and morality
	2) Act with discretion without prejudice.
	3) Considering the facts with fair and impartial mind
Commitment	1) Perform duties attentively
	2) Perform duties with persistence
	3) Devote physical energy and encouragement in performing various activities
	4) Perform duties in accordance with the set goals
	5) Be proud of the outcomes

Table 1: Continued

Main areas of leadership and their sub-components	Indicators
Good Communication Skills	
Respect the Audience	1) Respect and accept one's ability 2) Use polite and humble language 3) Show empathy for others 4) Not selfish 5) Show appropriate respect
Trust	1) Able to gain trust 2) Get the job done 3) Accomplish hard work 4) Be accountable
Motivation	1) Have pushing power 2) Have target-bases behaviors 3) Make effort 4) Work towards the goal without relentlessness
Powerful Vision	
Focus on the Future	1) Have envisioning ability 2) Foresee positive and negative consequences in the future 3) Plan actions to get good results or prevent negative consequences 4) Make appropriate decisions for the future success
Identify Aggressively	1) Perform a planned work 2) Be conscientious 3) Have responsibility 4) Solve problems creatively
Easy to Communicate	1) Have ability to convey meanings between individuals 2) Use one's own abilities to convey meaning to others. 3) Express one's own needs, desires, feelings 4) Induce responses from the message recipient 5) Understand the intended meaning
Lead by Example	
Learn All the Time	1) Understand certain matters 2) Have ability to implement things for a purpose 3) Have the ability to perceive some interesting things about education. 4) Have awareness, thinking and practice 5) Put knowledge and use it or develop it to a higher level
Human Relations	1) Have good interpersonal relationships that will create a better understanding of each other 2) Have good interpersonal relationships, respect and cooperate with others. 3) Cooperate with others to achieve the goals set by the organization
Respect Others	1) Realize, appreciate, know the real goodness of others. 2) Accept good faith with sincerity 3) Show respect to other people's rights 4) Show meekness appropriately both with and without the presence of others

The above theoretical model can be tested against empirical data to verify if the leadership elements included in the model is consistent with the specified criteria. If the test results are found to be consistent, it shows that this model can be used as a guideline for leadership development among a research targeted population with constructive validity. Based on Wiratchai (2002), the model that has been tested to have data reduction properties tends to be easy to utilize and help reduce data redundancy. Moreover, it is a summary of information that can be used for monitoring, reviewing and deciding on the operations of an organization. The tested model has various features that can be applied to all levels, be it a regional or national organization level.

In addition, a study of the writings of Blank (1993), Burstein et al. (1992), and Johnstone (1981) found that the study indicators were important for their application: 1) to accurately describe the state and nature of the educational system that will enable a good understanding of the operation of the educational system. It is like a projection of an education system at a specific time point, 2) used to study the nature of change or the trend of changes in the education system over a specific period of time as accurately as a long-term study, (3 can be used for comparative studies even though it

is compared with the criteria or a comparison between the educational systems of different countries or comparing conditions between regions in a particular country .In addition, the 6key uses of the indicator were also discussed: 1) expand clarity in policy formulation and educational objectives, 2) increase efficiency in governance and evaluation of the educational system, 3) assist in the grading and classification of the education system, (4 help research to develop educational systems more direct, (5help build a system of accountability and a quality assurance system that will achieve the set goals, and (6assist in setting verifiable goals of stakeholders or low-level agencies

Research Objectives

The aim of this research was to create a theoretical model that portrays the structural relationship between the core components of outstanding leadership for teachers and their individual components. Moreover, the indicators of each of the sub-element were analyzed to testify whether the developed indicators were appropriate to be included in the model. After the appropriate element had been tested, the model was used to test against the empirical data in order to check for the appropriateness of the factor loading weights of the main components, the sub-element, and of the individual indicators.

Research Hypothesis

In order to create this theoretical model, the researcher had studied different research studies and theories from various sources to help define the model's main components, sub-components and indicators of the model. Accordingly, the researcher had hypothesized the results of the model development as follows; 1) The research indicators would be consistent with the set criteria and suitable for the theoretical models, 2) The theoretical models would be consistent with the empirical data according to the specified criteria, and 3) The factor loading weights of the main components, the sub-elements and the indicators would match with the values in the specified criteria.

Methodology

According to Wiratchai (2002), there are three methods for developing a structural correlation model of the indicators in education including: 1) Pragmatic definition, a method in which researchers use their own experience in selecting variables to present the model, 2) Theoretical definition, a way for researchers to use the theories and research results to create a model which is appropriate for use after having been verified by experts, and 3) Empirical definition, a method by which the researcher uses theories and research results to create models. The model is then tested against empirical data, which, if the results are found to be consistent with the results of the Confirmatory Factor Analysis, the model can be used for further benefits. Particularly for this research, the empirical definition method was used for the indicator analysis. This method was believed to be a more rational approach (Sanrattana, 2018). This is because empirical data collected from a randomly derived population is used to judge the structural validity. Therefore, there is no bias resulting from the use of personal feelings and experiences of the researchers and the experts. The details of the research methods are as follows.

Population and Sample

The population used in this research was 31,026 teachers in the schools under local administrative organizations nationwide. The sample size was specified by using the ratio of 20:1, which was a dyad between the sample units and the parameter numbers (Gold, 1980). The Free Parameter method was used because the model used in this research was a Confirmatory Factor Analysis Model, there were influence lines between variables. The number of parameters was counted from the combination of 5 latent variables, 12 observed variables and 16 lines of influence. This leads to a total of 33 parameters, defining a total number of 660 participants to be used in this research.

Research Instrument

The research tool was a questionnaire created by the researchers that was divided into 2 parts. Part 1 was set to obtain the respondents' information relating to; genders, ages, school sizes, educational backgrounds and work experiences. Part 2 was a set of questions to gauge information about the indicators of the outstanding leadership for teachers. There were 52 questions in this part and were classified based on the contents of the key elements and the sub-elements. The answers were characterized by a rating scale of 5 levels ranging from; the highest, high, moderate, less, and the least.

The Constructing and Quality Monitoring of Research Instrument

The model developed in this research was based on an empirical definition method. The creation of research tools started by studying related theories, leading to the specification of the main component and their sub-elements, and related indicators. The review of the research also led to the generating of questions relating to the indicators.

The Index of Congruence (IOC) of the 52 questions was examined by five experts, three were from the area of educational administration and two others were from the educational testing and evaluation area. The IOC values in all of the 52 questions were greater than 0.50 (Rovinelli & Hambleton, 1977), meaning that all of the 52 questions were consistent with the indicator and operational definition.

The complete questionnaire was trialed with 30 teachers in the schools under the local administrative organization. However, these teachers were not included on the actual sample list of the research. The data collected were analyzed in order to obtain the alpha coefficient of reliability using Cronbach's method. The whole questionnaire had an alpha coefficient of reliability at the value of 0.919, Moral Courage of .915, communication skills of .928, Powerful Vision of .927, and Lead by Example of .898. These figures indicated that the questionnaire had a high alpha coefficient of reliability than the established criterion of .70 (see the questionnaire in the Appendix section).

Data Collection

A multi –stage random sampling was used to obtain a sample of 660 from a population of 31,026. The data was collected by mailing a questionnaire to the randomized samples, and 540 copies (81.81%) of all of the 660 questionnaires were returned. The number of the returned questionnaire was sufficient for use in the Confirmatory Factor Analysis. That was because the Kaiser-Meyer-Olkin Measure of Sampling Adequacy of each primary component of the model was between 0.898 - 0.928, which was higher than the threshold set at 0.80 by Cerny and Kaiser (1977).

Data Analysis and Interpretation Criteria

The data were managed and analyzed using a computer program to obtain the following statistic figures: 1) mean, standard deviation, and distribution coefficient, were deployed to test the research Hypothesis Items 1, 2) by holding assumptions as follows: there are no outliers in data, adequate sample size, no perfect multicollinearity, homoscedasticity, linearity, and interval data (Kim & Mueller, 1978), Confirmatory Factor Analysis (CFA) was used to test the research hypothesis Item 2 and its relevant statistical values such as; (1) Factor Loading Matrix, Factor Loading, Error Value, Standard Error (SE) and t (t), (2) Regression Coefficient (R2), (3) Factor Score Coefficient (FS), (4) Error of indicator (error: e), (5) Correlation coefficient of variables, (6) Relative Chi-Square: CMIN / DF.), (7) Root Mean Square Error of Approximation (RMSEA), (8) Goodness-of-Fit Index (GFI), (9) Adjusted Goodness of-Fit Index (AGFI), (10) Comparative Fit Index (CFI), and (11) Normed Fit Index (NFI).

Criteria for Consistency Testing of the Theoretical Model with the Empirical Data

The testing of the theoretical model's consistency against the empirical data was based on the recommendations from Holmes-Smith (2006) and Hair et al. (2010). Accordingly, the following statistics values were set: Relative Chi-Square: CMIN / DF value ranging from 1 to 3 or less, 2) Root Mean Square Error of Approximation (RMSEA) of lower than 0.05, 3) Goodness-of-Fit Index (GFI) value ranking from 0.90 to 1.00, 4) Adjusted Goodness- of-Fit Index (AGFI) values ranging from 0.90 to 1.00, 5) Comparative Fit Index (CFI) values ranging from 0.90 to 1.00, 6) Normed Fit Index (NFI) value ranging from 0.90 to 1.00.

Results

Research's Objective Number 1

This objective was set to test the suitability of the 52 indicators to be included in the model. The criteria for the indicator selecting was set as the following; mean of equal to or greater than 3.00, and the distribution coefficient of equal to or less than 20%. The results of these analyses are as follows.

1. *The Moral Courage Measuring Model* was found to have consisted of 3 components: integrity, fairness, and commitment. Across all of the 14 indicators, the average indicator score was between 4.36 to 4.59 and the distribution coefficient was at the range of 11.75 to 16.01.

2. *The Good Communication Skills Measuring Model* was found to have had three components: respect the audience, trust and motivation. The average score of the 13 indicators ranged between 4.07 to 4.47 and the distribution coefficient was between 13.01 to 17.69.

3. *The Powerful Vision Measuring Model* was found to have had three elements: focus on the future, identify aggressively and easy to communicate. There were a total of 13 indicators. The mean rating across all of these indicators was between 4.25 to 4.58 with distribution coefficient value of 13.16 to 14.71.

4. *The Lead by Example Measuring Model* was observed with 3 elements: learn all the time, human relations and respect others. This area of leadership had a total of 13 indicators, which was rated with the mean at a range of 4.26 to 4.55 and the distribution coefficient range of 11.33 to 13.02.

From the information cited above, it was shown that a total of 52 indicators had an average of between 0.51 to 0.74 and the distribution coefficient value between 11.33 to 17.69. These statistics indicate that all of the 52 indicators used in

the research were appropriate to be included in the model because the mean and distribution coefficients matched the established criteria.

Research's Objective Number 2

This objective was intended to test whether the theoretical model was consistent with the empirical data according to the given criteria. The results of the analysis for research's objective number 2 are as follows.

1. It was found from the Pearson correlation coefficient, for determining the degree and direction of the correlation, that the indicators in all the measurement models were positively correlated with a statistical significance at a level of 0.01 level (p <.01). The Ethical Courage Measuring Model was found to have had a correlation coefficient of 0.229. The Good Communication Measuring Model was rated with a correlation coefficient at a value of 0.395. The Strong Vision Measuring Model was observed with a correlation coefficient at a value of 0.398. Finally, The Lead by Example Measuring Model was marked with a correlation coefficient at a value of 0.335.

2. The results relating to the correlation of elements obtained from Bartlett's statistics showed that the inter-variable correlation matrix was different from the identity matrix with statistical significance at a value of .01. The Bartlett's Test of Sphericity values were 5407.876, 4934.445, 3804.352, and 3470.827, respectively. The probabilities were found to be less than .01 (p <.01).

3. The results on the sufficiency of the sample number based on the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) showed that the measurement models of the four main components had the KMO values at the range of 0.928 to 0.898, demonstrating that the number of samples obtained for this research was sufficient for the confirmation element analysis.

4. In the first order confirmatory factor analysis of the four measurement models — Ethical Courage Model. Good Communication Skills Model, Strong Vision Model, and Lead as Example Model—the consistency of the models with the empirical data was tested against specified criteria. The reference statistic figures used in the analysis included; Relative Chi-Square: CMIN / DF, at the range of 1 to 3 or less, 2) Root Mean Square Error of Approximation: RMSEA of lower than 0.05, 3) Goodness-of-Fit Index: GFI value ranging from 0.90 to 1.00, 4) Adjusted Goodness- of-Fit Index: AGFI value ranging from 0.90 to 1.00, 5) Comparative Fit Index: CFI value ranging from 0.90 to 1.00, 6) Normed Fit Index: NFI values ranging from 0.90 to 1.00. The details of these pieces of information are as shown in Table 2.

Table 2: Results of the first order confirmatory factor analysis of the four measuring models

Measuring Models	CMIN of equal to or less than 1-3	RMSA less than 0.05	GFI between 0.90-1.00	AGFI between 0.90-1.00	CFI between 0.90-1.00	NFI between 0.90-1.00
Moral Courage	2.555	0.054	0.966	0.933	0.976	0.961
Good Communication Skills	1.909	0.041	0.984	0.952	0.995	0.990
Strong Visions	2.001	0.043	0.983	0.950	0.994	0.988
Lead by Example	2.802	0.058	0.983	0.936	0.990	0.985

It is shown in Table 2 that the four measurement models developed from the related theories were consistent with the empirical data. This finding verified that the four key components of leadership (ethical courage, good communication skills, strong vision, and lead as an example) were critical components of the structural relation model. They can be used as elements for the testing of outstanding leadership of the teachers from the schools affiliating to the local administration offices. This finding was used to set elemental scale as presented in the 13 equations below.

MCR1 = (MC1+MC2+MC3+MC4+MC5+MC6) =(0.97+1.10+0.98+1.01+0.99+1.00) = 6.05
MCR2 = (MC7+MC8+MC9)=(0.94+0.85+1.00) = 2.79
MCR3 = (MC10+MC11+MC12+MC13+MC14) =(0.92+0.94+0.69+0.73+1.00) =4.28
GCS1 = (GC15+ GC16+ GC17+ GC18+GC19) = (1.38+1.33+1.28+1.03+1.00) = 6.02
GCS2 = (GC20+ GC21+ GC22+ GC23)= (0.82+0.85+0.90+1.00) = 3.57
GCS 3 =(GC24+ GC25 + GC26+ GC27) = (1.28+1.12+1.05+1.00) = 4.45
PVF1 =(PF28+ PF29+ PF30+ PF31) = (0.91+0.93+0.92+1.00)=3.76
PVF2 =(PF32+ PF33+ PF34+ PF35)= (1.11+1.18+1.15+1.00)=4.44
PVF3 =(PF36+ PF37+ PF38+ PF39+ PF40)= (0.75+0.88+0.86+0.92+1.00)=4.41
LBX 1 =(LB41+LB42+LB43+LB44+LB45) = 0.96+0.88+1.06+1.18+1.00 =5.08
LBX 2 =(LB46+LB47+LB48)= 0.88+0.92+1.00 =2.80
LBX 3 =(LB49+ LB50+ LB51+ LB52) =0.89+1.07+0.92+1.00 =3.88

5. The second order confirmatory factor analysis was tested to find statistical values as criterion for the verification of the sub-elements generated in the four measuring models. The following dyads are pairs of each of the four measuring models and their sub-elements: The Moral Courage Measuring Model-3 sub-elements, The Good Communication Skills Measuring Model-3 sub-elements, The Strong Vision Measuring Model-3 sub-elements, and The Lead by Example Measuring Model-3 sub-elements. The results are as presented in the paragraph that follows.

The results obtained from the second-order confirmation analysis showed that the substrates in each of the measurement models had had appropriate statistical values as referred in the following statistics. (1) It was shown in Pearson's correlation coefficient analysis that the element the 12 subgroups had a positive correlation with a statistical significance at a level of 0.01 level (p <.01), the correlation coefficient range of 0.349 to 0.789. (2). The inter-variable correlation matrix was different from the identity matrix with statistical significance at the value of 0.01., with the Bartlett's Test of Sphericity values equal to 5306.525, and the probability value of less than 0.01 (p <.01). (3) The Kaiser-Meyer- Olkin Measure of Sampling Adequacy (KMO) of equal to 0.919.

The model consistency test showed that the measuring model developed in this research was consistent with the empirical data as evidenced by: The Relative chi-square: CMIN / DF) at a value of 2.019, The root mean square error of approximation: RMSEA of equal to 0.043, The goodness-of-fit index: GFI) of 0.993, The adjusted goodness-of-fit index: AGFI of 0.952, The comparative fit index: CFI of 0.998, and The normed fit index: NFI) of 0.996. All of these statistical figures satisfied the specified criterion. Moreover, it was found that the factor loadings of the four main components were positive, ranging from 0.60 to 1.71, and all of them were observed with statistical significance at a level of .01. Accordingly, the component scale was set following this equation: OSL = 1.00 (MCR) + 1.01 (GCS) + 1.48 (PVF) + 0.73 (LBX).

Research's Objective Number 3

This objective was set to determine factor loading of the main components, the sub-components and their related indicators according to the following criterion: 1) The primary component had a factor loading value of greater than or equal to 0.7, and 2) The sub-element and their indicators had a factor loading value of equal to or greater than 0.30. The results of these statistical analyses are as follows.

1. *The Outstanding Leadership's components* had a positive loading factor value ranging from 0.73 to 1.48, and all were found with statistical significance at a level of .01. All of the main components were arranged in descending order of scores as follows; creating inspiration, being determined, having vision, and having good communication skills, each was rated with a factor Loading at the values of; 1.48, 1.01, 1.00, and 0.73, respectively.

2. *The Moral Courage components* were found to have had a positive loading factor ranging from 0.67 to 1.39, all were rated with a statistical significance at a level of 0.01. An arrangement of these moral courage components in an order descending scores is; adhering to righteousness, being determined, and being fair, with the factor loading values of 1.39, 1.00, and 0.36, respectively.

3. *The Good Communication Skills' components* had positive loading factor values from 1.00 to 1.23. All of these elements were found to have had a statistical significance at a level of 0.01. The arrangement of these elements based on the score descending is; honoring the audience, gaining reliability, and generating incentives, with factor Loading values of 1.23, 1.03, and 1.00, respectively.

4. *The Strong Vision's components* had a positive loading factor ranging from 0.71 to 1.00. All of the elements under this category were observed with statistical significance at a level of 0.01. The arrangement of these elements based on the score descending is; being easy to understand, focusing on the future, and identifying proactively, with factor loading values of 1.00, 0.75, and 0.71, respectively.

5. *The Lead by Example's components* had a positive loading factor ranging from 0.76 to 1.72. All were found with statistical significance at a level of 0.01. They can be ordered based on the descending value as; learning all the time, respecting others and having human relations, with factor loading values of 1.72, 1.00, and 0.76, respectively.

It was also found that the factor loading values of all 52 indicators were positive, ranging from 0.06 to 1.71. All of these indicators were tested with statistical significance at a level of 0.01. The elements with the highest and the lowest factor loading score were Learning all the time and Being fair, with the scores of 1.71, and 0.36, respectively.

In summary, the factor loading values of all of the elements of the main components, the sub-elements and the indicators, were found to have matched with the set criteria, all were marked with statistical significance at a level of 0.01. These findings show that the 4 key elements, the 12 sub-elements and the 52 indicators indicated in the model developed in this research can be used to measure the underlying leadership among the teachers from the schools under the local community administration organization, with construct validity. The results from the above data analysis are as portrayed in an adjusted model as presented in Figure 2.
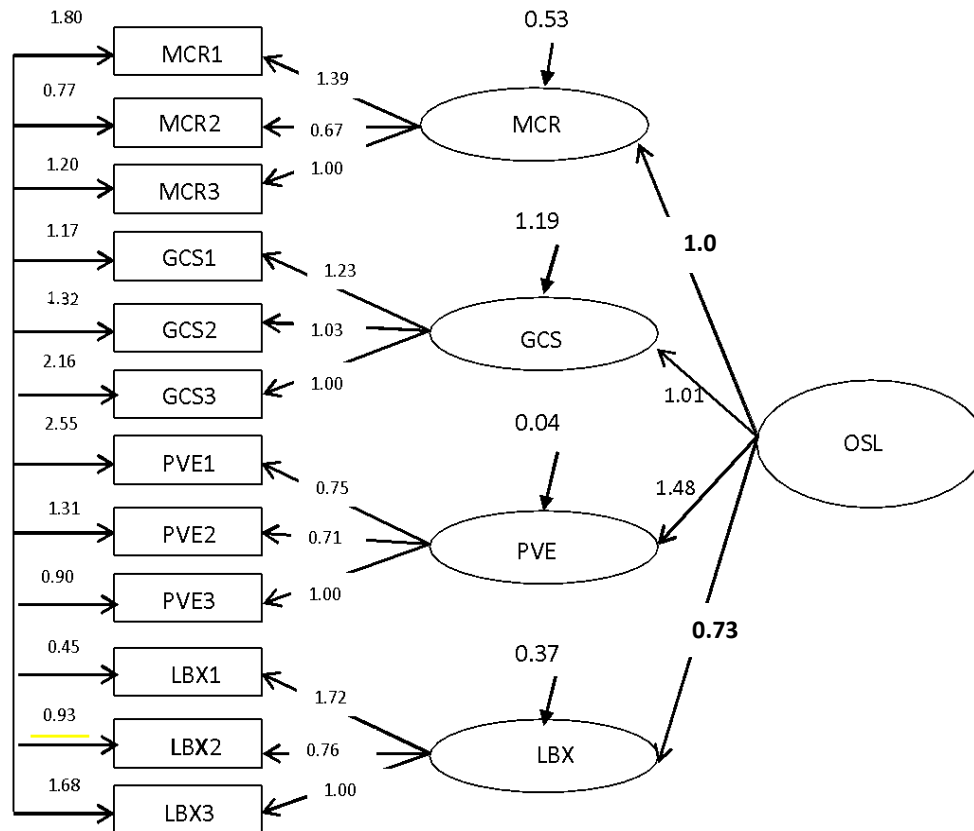
Figure 2: Adjusted structural relationship model of indicators of leadership for teachers under the local administrative organization

For the adjusted structural relationship model in Figure 2, we would like to explain that since R-squared can be misleading at the time of analysis. The goodness-of-fit and R-squared values do not indicate whether the coefficients and predictions are biased. Residual plots were used in the assessment, so adjusted R - squared and predicted R-squared values were used to help solve this R-squared problem.

Discussion

According to the data analysis results, it shows that the model of structural relationship of the indicators of leadership for the teachers in the local administrative organizations, consisting of 4 key components, 12 sub-elements and 52 indicators, is consistent with empirical data, which satisfied all research hypotheses. An explanation for this finding should be made in light with the development of digital technology in the 21st century that has caused a knowledgeable society in every country. The spreading of knowledge from one country to another is simple and quick (Al Abed, 2020; Rawat, 2020). Globalization also plays a crucial role in the exchange of information in a massive scale as Reiche (2016, p. 1) put it that, "We are entering a new era of globalization known as digital globalization, which is an era of information and information influx, such as concept, research, technology, talent or even outstanding activities can be reached globally." The innovation diffusion from one society to another may play a part in making lifelong learning happen as Kammerzelt (2018, p. 1) said, "Innovations and new technologies are changing the world and the daily lives of each and every one of us." That means Innovation and technology are changing the world and our daily lives. (Dedebali, 2020)

In addition, if viewed from the awareness of the development of teachers in schools under the local administrative organization of Thailand, it was found that there was a policy to develop outstanding leadership for teachers based on the main components, sub-elements, and the indicators used in this research are also. For example, In the National Education Act 1999, required the Ministry of Education to promote the development of teachers to be ready and have the strength to prepare new personnel and continuous human resource development (Office of the National Education Commission, 1999). In the -20year National Strategy 2018203-7 established strategies for developing and empowering people, cultivating discipline, morality, ethics and desirable values. (Office of the National Economic and Social Development Board, 2017). And in the National Education Plan 2036 - 2017that the development goals for teachers and educational personnel have been developed in accordance with the standards by establishing development guidelines, system design and model. Teacher development and educational personnel to strengthen the national

development according to the -20year National Strategy and the Thailand 4.0Strategy, where teachers of all levels and types of education were developed in accordance with professional standards for quality assurance and teacher professional competency standards and the educational quality assurance system (Office of the Education Council Secretariat, 2018).

Conclusion

From the research results Both in the case of testing the consistency of the theoretical model with the empirical data and in the case of element weight values found to meet the specified criteria showed that "The Structural Relationship Model of Indicators of Outstanding Leadership for Teachers under the Local Administrative Organizations", consisting of 4 key components, 12 sub-elements and 52 indicators, can be utilized with confidence in its construct validity.

In which it is used as a guideline for teacher development under the local administrative organization in Thailand. Considering the view of digital technology advancement, the view of globalization, and their views on innovation diffusion mentioned above. And also real phenomena are consistent with theory. It shows that the development of outstanding leadership for teachers in Thai society already adhere to the theory as a development guideline. It is the focus of the theory to be put into practice. Then, practice leads to learning and creating new bodies, giving rise to foundational theories. It is a relationship between "Theory and Practice" as a stream that is inextricably conducive to each other. In view of Hoy and Miskel (2001), the relationship between practice and theory is said to be the theory helps to create a conceptual framework for the practitioner, help to develop concepts in the analysis of operating conditions, and help guide decisions. And the viewpoint of Coghlan and Brannick (2007), James et al. (2008) and Simsek (2020) that addresses the importance of fully utilizing the potential of a person's work experience to generate new learning and knowledge in the specific context of the area of development.

Recommendations

For the application of the research findings, the following suggestions should be noted. *Suggestions for the Result Application*

It is recommended that the elements included in this model be used as a guideline for the development of leadership among the teachers under local administrative organizations in Thailand. The application of the research finding the teacher's leadership development should take into account the importance of the main elements, the sub-elements and the indicators based on the following descending element weight values.

- The components of leadership arranged in descending order is; Moral Courage, Good Communication Skills, Strong Vision, and Lead by an Example.

- The sub-elements of the Moral Courage in an descending order is; Adhere to righteousness, Be determined, Be fair.

- The sub-elements of Good Communication Skills in descending order is; Honor the audience, Be credible, and Create motivation.

- The sub-elements of Strong Vision sorted in descending order is; Easy to understand, Focus on the future, and Identify proactively.

- The sub-elements of lead are exemplary arranged in descending order is; Learn all the time, Respect others, and Have human relations.

- All of the 52 indicators should be utilized based on their embedded element values. The indicator with the highest element weight value is Learn all the time, and the one with the lowest factor loading value is Being Fair.

Suggestions for Future Research

The issues that should be studied in the future for academic benefit are; 1) The future study should apply the qualitative methodology for the analysis of the key components, the sub-components and the indicators. Then the results from both qualitative and quantitative methodologies can be compared to portray a clearer picture of indicators of leadership in Thai social context.

Limitation

This research study was framed around the perspectives obtained from various scholars and departments— Bachelor (2010), Burns (2015), Dennison (2019), Gini and Green (2013), Haden (2014), Hasan (2019), Hunter (2016), Katz (2012), Llopis (2013), McKinney (2013), Scott (2011), Simon (2016), Steinbrecher (2016), and Sutcliffe (2013)— However, there are many other key components of leadership that are not included in this research study, due to the leadership element selection process that was made exclusive for the components with high degree of frequency. Therefore, further research should consider using for alternative reasons to high frequency values. This should provide

opportunities for elements with lower frequency values to be investigated, which may lead to a discovery of leadership elements. Included in the list that follows are areas of leadership that should be focused for the future research investigation: good decision, responsibility, creates challenges, encourage others to do, award for work, advises, educate yourself, compassion for others, relationships with others, give people access, help others, have patience, integrity, justice, intelligence, creativity, aesthetic, generously, positive thinking, extra-capacity, be strong, representation, feedback, questions, a good teacher, pleasure, data source, power, tolerant, professional, clear thinking, confidence, humbleness, collective conscious, inspiration, compliance, meaning to life, the work plan, a good listener, the question, assistance, compliments, adaptation, flexibility, the fast, instinct, authorization, and the ability

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Appendix:

Research's questionnaires

Instructions: Please put a *tick* mark on the area that best represents your level of practices. Please refer to the meaning of each number as shown below.

5 = The Highest   4 = High   3 = Moderate   2 = Less   1 = The Least

No.	Practices/behaviors	Levels of practices/behaviors				
		5	4	3	2	1
Component 1: Moral courage						
Sub-component 1: Integrity						
1	You perform your duties honestly.					
2	You perform duties with legality and government officials' discipline.					
3	You express honest opinions based on professional principles.					
4	You keep your speech honest and reliable.					
5	You adhere to principles and professional ethics.					
6	You are devoting to your work.					
Sub-component 2: Fairness						
7	You conduct yourself in accordance with tradition, law and morality.					
8	You act with discretion without prejudice.					
9	You consider the facts with a fair and impartial mind.					
Sub-component 3: Commitment						
10	You perform duties attentively.					
11	You perform duties with persistence.					
12	You devote physical energy and encouragement in performing various activities.					
13	You perform duties in accordance with the set goals.					
14	You are proud of the outcomes.					
Component 2: Good communication skills						
Sub-component 1: Respect the audience						
15	You respect and accept other's abilities.					
16	You use polite and humble language.					
17	You show empathy for others.					
18	You are not selfish.					
19	You show appropriate respect.					
Sub-component 2: Trust						
20	You are able to gain trust.					
21	You can get the job done.					
22	You can accomplish hard work.					
23	You are accountable.					
Sub-component 3: Motivation						
24	You have pushing power.					
25	You have target-bases behaviors.					
26	You always make an effort.					
27	You work towards the goal without relentlessness.					
Component 3: Powerful Vision						
Sub-component 1: Focus on the future						
28	You have envisioning ability.					
29	You can foresee positive and negative consequences in the future.					
30	You like to plan actions to get good results or prevent negative consequences.					
31	You make appropriate decisions for the future success.					
Sub-component 2: Identify aggressively						
32	You like to perform a planned work.					
33	You are conscientious at work.					
34	You have responsibility.					
35	You solve problems creatively.					
Sub-component 3: Easy to communicate						
36	You have the ability to convey meanings to others.					

No.	Practices/behaviors	Levels of practices/behaviors				
		5	4	3	2	1
37	You use your abilities to convey meaning to others.					
38	You express your own needs, desires and feelings.					
39	You like to induce responses from the message recipient.					
40	You understand the intended meanings.					
Component 4: Lead by Example						
Sub-component 1: Learn all the time						
41	You understand certain matters.					
42	You have the ability to implement things for a purpose.					
43	You have the ability to perceive some interesting things about education.					
44	You have awareness, thinking and practice.					
45	You love to search for knowledge and develop yourself to a higher level.					
Sub-component 2: Human relations						
46	You have good interpersonal relationships that will create a better understanding of each other.					
47	You have a good interpersonal relationship, respect and cooperate with others.					
48	You cooperate with others to achieve the goals set by the organization.					
Sub-component 3: Respect others						
49	You realize, appreciate, and know the real goodness of others.					
50	You accept good faith with sincerity.					
51	You show respect to other people's rights.					
52	You show meekness appropriately both with and without the presence of others.					