

Indicators of Inspirational Leadership for Primary School Principals: Developing and Testing the Structural Relationship Model

Wanlop Poojomjit¹, Phrakru Sutheejariyawat¹ & Prayuth Chusorn²

¹ Faculty of Education, Mahamakut Buddhist University Isan Campus, Khon Khaen, Thailand

² Faculty of Educational Administration, Rangsit University, Bangkok, Thailand

Correspondence: Phrakru Sutheejariyawat, Faculty of Education, Mahamakut Buddhist University Isan Campus, Khon Khaen, Thailand. Tel: 668-3149-3809, E-mail: sakorn2514@gmail.com

Received: July 15, 2018

Accepted: September 1, 2018

Online Published: November 27, 2018

doi:10.5539/ies.v11n12p149

URL: <https://doi.org/10.5539/ies.v11n12p149>

Abstract

This study aimed to examine the consistency of the structural relationship model in which developed from related theories, previous studies, and empirical data, respectively. The study also investigated factor loading of main components, subcomponents, and indicators. The population in this study was primary school principals under Office of the Basic Education Commission in Thailand. Collected data were used by multi-stage random sampling to get 660 samples. The data were analyzed by using statistical application and AMOS program. The results were consistent with hypothesis. The model of which developed from related theories and previous studies were consistent with empirical data based on the following values, e.g. relative Chi-square (CMIN/DF), Root Mean Square Error of Approximation (RMSEA), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Comparative Fit Index (CFI), and Normed Fit Index (NFI). Both first and second order confirmatory factors were also analyzed. Factor loading of main components was 0.90-1.47 which was higher than 0.70. Factor loading of sub-components was 0.73-2.13. Loading of indicators was 0.74-2.77 which was higher than 0.30, respectively.

Keywords: indicators, leadership, inspirational leadership, primary school principals

1. Introduction

1.1 Research Problem

“Education is not preparation for life; education is life itself” – John Dewey, “The roots of education are bitter, but the fruit is sweet” – Aristotle, “Education is what remains after one has forgotten what one has learned in school” – Albert Einstein, and “Education is the most powerful weapon which you can use to change the world” – Nelson Mandela

Education quotes that “The better your inspiration, the more success and happiness you will experience in your life. Inspiration is a main key in life” (Sole, 2017). In the past, Thailand has faced the changes in various sectors and variety of forms. It affects the development of Thai people and Thai society in many perspectives (Office of the Permanent Secretary, Ministry of Education, 2016), as well as affects to the current management of education in Thailand. It does not give students the potential to compete with the global community as they should (Office of the Permanent Secretary, Ministry of Education, 2012).

Leadership as a leader also needs to be self-reliant, and encourages organizational change to achieve the desired goals. In particularly, school administrators must have the leadership (Office of the National Economic and Social Development Board, 2015). Generally, the leadership is a science and is an art or process by which the leader influences the follower. In order to convince willing and willing followers to work together to achieve the objectives of the organization, leaders must rely on leadership to inspire them to motivate their co-workers under the command to cooperate in the effective operation. In the 21st century, leaders need to be able to inspire and to provide motivation inside. Having positive thinking, we believe that we can achieve our goals (Jedaman, 2017).

Leadership in education composed of many styles such as global leadership, leadership education, spiritual leadership, innovation leadership, and so on. The style of leadership that we were interested in was the inspirational leadership. In 2017, Worth stated that inspirational leadership was not about inspiration, but it was about inspiring people to be better and to realize their full potential. Inspiration leadership went beyond coercion or

even motivation. It was no longer about carrots and sticks, but rather it was about giving your employees something to really believe in and find inspiring. However, based on the study of the components that were characterized the inspirational leadership qualities, there were many components. We synthesized components that reflected to the leadership-inspired features of 17 sources including Garrett et al. (2005), Baldoni (2010), Maxwell (2011), Forman (2013), Weber (2013), Lattimer (2013), Krishnan (2014), Strang (2014), Newlands (2015), Cousin (2015), Kloefkorn (2015), and Roberts (2016), respectively. The main components of the theoretical framework were 46 componets. However, based on the frequency of the 7, the inspirational leadership had the main components proposed as the measurement model for present study. The components included visionary, trustworthy, enthusiasm, and optimistic, respectively. We were also interested in each of these key components. Based on 10-sources studies, we found that there were 39 components of a theoretical framework. There were three components that were proposed as research-based measurement models including risk-taker, imaginative, and accepting change, respectively. Moreover, the results of the 11-sources studies found that there were 22 components of the theoretical framework. Based on the frequency of 7 and above, the sub-componets were also presented. It was a model for measuring in the present study for three components including the ability to be reliable, the reliability and integrity, respectively.

From 10 sources studies, it was found that there were 38 components of the theoretical framework. Based on the frequency of 5 and above, the sub-components were presented as models. Measurements in the present study included four components including love, passionate, curiosity, and self-empowerment or self-development, respectively. It also indicated that there were 31 components of the theoretical framework. However, based on the frequency of 6 and above, the sub-component was also presented. The research model had three components including self-confidence, motivation, and positive thinking, respectively. The structural relationship model of the inspirational leadership indicated that it consisted of the core component model and sub-components of each key component. The hypothetical research model in the present study is shown in Figure 1.

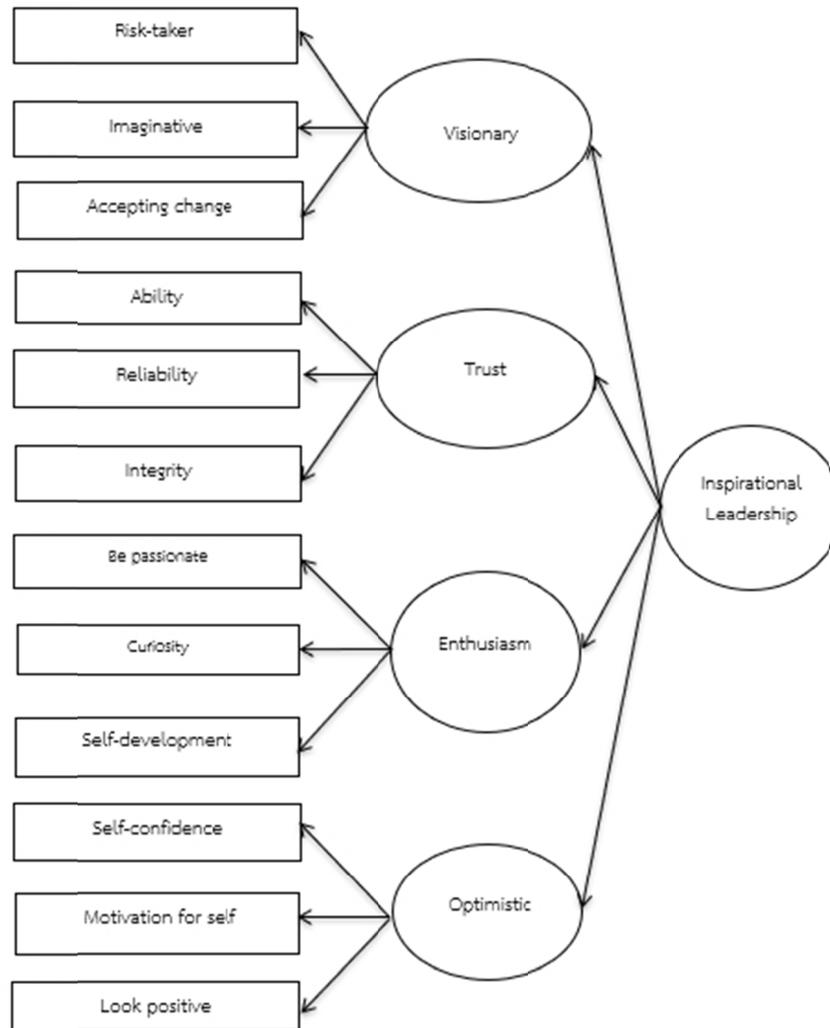


Figure 1. Hypothetical research model

According to the hypothetical research model, we studied the operational definitions of each sub-component to link with the indicator. An indicator that reflected the leadership behavior of each of the 55 indicators was an indicator of a structured relationship at key components, sub-components, and indicators. The hypothesis for the research from Figure 1, as well as the set of 55 indicators, was the theoretical research model. As being the primary school administrator under the Office of the Basic Education Commission, we were interested in the models that were consistent with the behavior or expression of primary school administrators. This study could be used as a guideline for planning development or as a guideline for monitoring and evaluating inspirational leadership of primary school administrators under the jurisdiction of the Office of the Basic Education Commission. It was also expected that the findings would continue to improve the quality of education management.

1.2 Hypothesis

In this study, we reviewed related theories and views of scholars from various sources. The key components, sub-components, and an indicator were used as a guideline to construct the questionnaires. In order to obtain a structured relationship model, the inspirational leadership indicators were both structural and content-oriented. The concept of empirical definition was defined as the definition of the sub-variables and the method of combining sub-variables with theoretical and fundamental background. The empirical data were analyzed by the empirical analysis according to Wiratchai (2002) and a rigorous research process towards the Max-Min-Con Approach according to Kerlinger and Lee (2000). Collected data were analyzed by using the appropriate statistics.

In this study, we synthesized all related theories, previous studies, and scholars' attitudes in key components, sub-components, operational definition of each sub-factors from numbers of sources in order to make

questionnaire's questions and to create structural relationship model of inspirational leadership in which accurate with both structure and content following principle of indicator development in empirical data. This is the definition by which we defined sub-variables and how to combine sub-variables with related theories and previous studies as a basis. The weight of sub-variables was determined by empirical data analysis (Wiratchai, 2002). Moreover, there was a strict research process for the Max-Min-Con principle according to Kerlinger and Lee (2000) in case of sample size determination, random sampling, creation and development of research instruments, data collection, and using appropriate statistics. Model developed from related theories and previous studies were consistent with empirical data based on the criteria of Hair et al. (2010) as follows: (a) relative chi-square (CMIN/DF), a value between 1-3 or less, (b) Root mean square error of approximation (RMSEA), a value less than 0.05, (c) Goodness-of-fit index (GFI), (d) Adjusted goodness-of-fit index (AGFI), (d) Comparative fit index (CFI), and (e) Normed fit index (NFI), a value from 0.90 – 1.00. There were constructed validity model in which the factor loading of main-components was equal or higher than 0.70 (Farrell & Rudd, 2009) and factor loading of sub-components as well as indicators were equal or higher than 0.30 (Tacq, 1997), respectively.

1.3 Purpose of the Study

The purpose of this study was to (1) examine the consistency of model of structural relationship of Inspirational Leadership's indicators for primary school principals under Office of the Basic Education Commission in Thailand, and (2) empirical data and factor loading of 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 the view of Wiratchai (2002). The first method used a pragmatic definition based on the decision and experience of the researcher in selecting or assigning sub-variables and determining how to include sub variables. The second method used theoretical definitions including theories that used related theories and previous studies as fundamental concept in order to determine how to include sub-variables and sub-weight determination. This method used when a model of educational indicator was defined. The related theories and previous studies were based on the selection of sub-variables and the method of combining sub-variables. For the weight of each variable, we used our opinions and experts' comments to make decisions. It was a traditionally method that analyzed the survey (i.e. exploratory factor analysis) when we had related theories and previous studies to support the model. Additionally, we analyzed the components (i.e. confirmatory factor analysis) when we had related theories and previous studies to support the model. In this study, we had chosen to use empirical definition to develop the empirical definitions by analyzing the confirmatory components.

Therefore, the present study considered how to create and develop educational indicators from attitude of Wiratchai (2002) including of 3 methods; the first method was pragmatic definition based on the decision and experience of researcher in selecting, assigning, determining sub-variable. The second method was the way to use theoretical definition that could be done in two different ways including (a) the way to use theories and research studies based from determining sub-variables, how to combine sub-variables and factor loading of sub-variables, and (b) the way to use related theories and previous studies in selecting sub-variables, selecting the way to combine sub-variables, and the weight of each sub-variable. These were defined by using qualified persons or experts' opinions and comments. The third method was the way to use empirical definition. We set the sub-variables, the way to combine sub-variables with related theories and previous studies and used empirical data to set sub-variables' factor loading. This method was done by using exploratory factor analysis when we could not used strong theories and other previous studies to support the model. In addition, we used confirmatory factor analysis when we had strong related theories and previous studies to support the model. In this study, the we decided to create and develop indicators by using empirical definition and confirmatory factor analysis since there were strong related theories and previous studies to support all steps.

2.1 Participants

The population in this study were 24,326 primary school principals under Office of the Basic Education Commission (Operations Center under Office of the Basic Education Commission, 2016). The sample size was calculated by using ratio between sample unit and number of parameters at 20:1 from attitude of Gold (1980 cited in Wiratchai, 1999). The 33 parameters were retrieved from 5 latent variables, 12 observed variables, and 16 influence lines, respectively. The sample size in the study thus included 660 people.

2.2 Materials

The instrument in the study was questionnaire which there were two phases including (a) The demographic

information check lists included gender, age, school size, education level, and work experience, respectively, and (b) The questions concerning the inspirational leadership behavior and performance of principals under Office of the Basic Education Commission which composed of five levels of rating scale including highest, high, average, low, and lowest, respectively. There were totally 55 questions generated on main-components and sub-components from each main-components.

2.3 Materials and Research Development

The research instruments were developed step by step as follow: (a) synthesized related theories and previous studies to determine the main-components, (b) examined related theories and previous studies to determine the sub-components from each main components, (c) examined operational definitions of each sub-components based on related theories and previous studies in order to set indicators or the main content for each sub-components measurement, (d) created correlation chart to examine logical between main components, each sub-components' operational definitions as well as indicators or the main content for each sub-components repetitive checking measurement. Then, retrieved data was used to create questionnaire, (e) three educational administration experts and two educational measurement as well as educational experts were asked to verify the questions in suitability and correlation between indicators and operational definitions, (f) adjusted questionnaires and tried-out with 30 teachers randomly selected from schools under local administrative organization who were not the participants in this study. The retrieved data was analyzed for alpha coefficient of reliability by using Cronbach method and the criteria were determined at equal or higher than 0.70. The data analysis result showed that, there were 0.975 alpha coefficient of reliability for the entire questionnaire and when generated into each main-factor, the results showed 0.937 visionary, 0.875 trust, 0.932 enthusiasm, and .950 optimistic.

2.4 Data Collection

The data was collected between August-November, 2017 by using multi-stage random sampling to get 660 sample sizes from 24,326 populations. The questionnaires and requests for cooperation documents were sent by mail to Graduate School Mahamakut Buddhist University Isan Campus. About 631 or 95.60% out of questionnaires were returned. When considered Kaiser-Meyer-Olkin (KMO) Test for Sampling Adequacy of each measurement model of the four elements, the result showed 0.911-.937 of sampling adequacy which means the numbers of sample size were adequate for confirmatory factor analysis.

2.5 Data Analysis

The data were analyzed by using computer program to find out (a) frequency and percentage in order to know status of sample size, (b) average and dispersion coefficient for determination of indicators' suitability to select them to be in the model according, (c) Pearson's correlation coefficient to determine levels and direction of relationship and Barlett statistic for determining factors' relationship and KMO (Kaiser-Meyer-Olkin (KMO) Test for Sampling Adequate (d) First Order Confirmatory Factor Analysis and Second Order Confirmatory Factor Analysis was to examine about consistency of model by using Statistical Applications (Statistical Package) and AMOS program.

3. Results

3.1 Correlation Examination in Structural Relationship of Inspirational Leadership Indicators

The models' correlation was examined by the first order confirmatory factor analysis. The models measured were visionary (VIS), trust (TRU), enthusiasm (ENT), and optimistic (OPT), respectively. The second order of confirmatory factor analysis for inspirational leadership models included four main components including visionary (VIS), trust (TRU), enthusiasm (ENT), and optimistic (OPT), respectively. Before the first order confirmatory factor analysis, we examined suitability of indicators which were used in model's measurement as follows:

(a) Average and dispersion coefficient of indicators by considering from equal or higher than 3.00 average and equal or lower than 20% dispersion coefficient (Konkan, 2004). The finding showed 13 indicators of visionary measurement models, 15 indicators of trust measurement models, 14 indicators of enthusiasm measurement models, and 13 indicators of optimistic measurement models, respectively. There average showed between 4.04–4.60 and dispersion coefficient between 11.33 and 18.29.

(b) The results of correlation coefficient showed relationship between indicators in each measurement model. Considering from correlation coefficient showed significantly different from 0 (West et al., 2012). The finding explored that all 55 indicators in the 4 measurement models had Pearson's correlation coefficient between .167–.802 and there was statistically significant positive relationship ($p < .01$).

(c) In Bartlett test of Sphericity, the data analyzed from considering correlation matrix was significantly different from identity matrix at .01 (Tobias and Carlson, 1969). The finding revealed that the measurement models of work ethic, participation, critical thinking, and integrity had Baertlett test of Sphericity were at 3683.142, 7305.627, 6433.220, and 4881.341, respectively, where all models' probability were less than .01 ($p < .01$).

According to the average, dispersion coefficient, Pearson's correlation coefficient, and Bartlett test of Sphericity, the result showed that all 4 models were suitable for the first order confirmatory factor analysis. The findings of models' consistency from the first order confirmatory factor analysis accepted the hypothesis as follows:

(a) There were three sub-components in visionary model namely risk-taker, imaginative, and accepting change, respectively. All of them were consistent with the empirical data considered from the result of relative chi-square (CMIN/DF) at 1.565, root mean square error of approximation (RMSEA) at 0.030, goodness-of-fit index (GFI) at 0.984, adjusted goodness-of-fit index (AGFI) at 0.967, comparative fit index (CFI) at 0.993, and normed fit index (NFI) at 0.982, respectively, where all of them were accepted the hypothesis.

(b) There were three sub-components in trust model namely ability, reliability, and integrity, respectively. All of them were consistent with the empirical data considered from the result of relative chi-square (CMIN/DF) at 1.876, root mean square error of approximation (RMSEA) at 0.037, goodness-of-fit index (GFI) at 0.981, adjusted goodness-of-fit index (AGFI) at 0.955, comparative fit index (CFI) at 0.994, and normed fit index (NFI) at 0.987, respectively, where all of them were accepted the hypothesis.

(c) There were three sub-components in enthusiasm model namely be passionate, curiosity, and self-development, respectively. All of them were consistent with the empirical data considered from the result of relative chi-square (CMIN/DF) at 1.888, root mean square error of approximation (RMSEA) at 0.038, goodness-of-fit index (GFI) at 0.983, adjusted goodness-of-fit index (AGFI) at 0.957, comparative fit index (CFI) at 0.994, and normed fit index (NFI) at 0.988, respectively, where all of them were accepted the hypothesis.

(d) There were three sub-components in optimistic model namely self-confidence, motivation for self, and look positive, respectively. All of them were consistent with the empirical data considered from the result of relative chi-square (CMIN/DF) at 2.021, root mean square error of approximation (RMSEA) at 0.040, goodness-of-fit index (GFI) at 0.982, adjusted goodness-of-fit index (AGFI) at 0.957, comparative fit index (CFI) at 0.992, and normed fit index (NFI) at 0.985, respectively, where all of them were accepted the hypothesis.

(e) The results revealed that all developed models from theories and research studies had consistency with empirical data under the criteria. Hence, the hypothesis was accepted. This meant that working ethic, participation, critical thinking, and integrity were the important factors of structural relationship models which were indicators of effective followship of the teachers under local administrative organization in Thailand. From the results, there were 12 sub-components found in sub-components scale as this following equation:

$$\begin{aligned} \text{VIS1} &= (\text{VI1}+\text{VI2}+\text{VI3}+\text{VI4}) = (0.07+0.08+0.15+0.18) = 0.48 \\ \text{VIS2} &= (\text{VI5}+(\text{IV6}+\text{V7}+\text{V8})) = (0.22-0.02+0.15+0.20) = 0.55 \\ \text{VIS3} &= (\text{VI9}+\text{VI10}+\text{VI11}+\text{VI12}+\text{VI13}) = (0.13+0.12+0.11-0.16+0.06) = 0.58 \\ \text{TRU1} &= (\text{TR14}+\text{TR15}+\text{TR16}) = (0.01+0.05+0.07) = 0.13 \\ \text{TRU2} &= (\text{TR17}+\text{TR18}+\text{TR19}+\text{TR20}+\text{TR21}+\text{TR22}) = (0.01+0.15+0.06+0.02+0.05+0.14) = 0.43 \\ \text{TRU3} &= (\text{TR23}+\text{TR24}+\text{TR25}+\text{TR26}+\text{TR27}+\text{TR28}) = (0.13+0.16+0.16+0.09+0.15+0.02) = 0.71 \\ \text{ENT1} &= (\text{EN29}+\text{EN30}+\text{EN31}+\text{EN32}+\text{EN33}) = (0.14+0.29+0.04+0.17+0.74) = 1.38 \\ \text{ENT2} &= (\text{EN34}+\text{EN35}+\text{EN36}+\text{EN37}) = (0.21+0.17+0.14+0.25) = 0.77 \\ \text{ENT3} &= (\text{EN38}+\text{EN39}+\text{EN40}+\text{EN41}+\text{EN42}) = (0.10+0.11+0.15+0.23+0.10) = 0.69 \\ \text{OPT1} &= (\text{OP43}+\text{OP44}+\text{OP45}+\text{OP46}) = (0.20+0.17+0.25+0.34) = 0.96 \\ \text{OPT2} &= (\text{OP47}+\text{OP48}+\text{OP49}+\text{OP50}) = (0.08+0.17+0.13+0.15) = 0.53 \\ \text{OPT3} &= (\text{OP51}+\text{OP52}+\text{OP53}+\text{OP54}+\text{OP55}) = (0.11+0.11+0.12+0.17+0.04) = 0.55 \end{aligned}$$

From the sub-components scaled that created from four measurement models including three sub-components from visionary model (VIS), three sub-components from trust model (TRU), three sub-components from enthusiasm model (ENT), and three sub-components from optimistic model (OPT), respectively. We determined the model of Inspirational Leadership (INSP) as Figure 2 in order to analyze the second order confirmatory factor analysis in the next step. Before the second order confirmatory factor analysis, we examined between the relationship of all 12 sub-factors' scale to consider about the appropriateness of correlation matrix that were used

in factor analysis and Bartlett's test of Sphericity as well. The results showed that all 12 sub-factors had Pearson's correlation coefficient value at 0.387-0.834, there were positive relationship at .01 ($p < .01$) level of significance. For the Bartlett test of Sphericity, the approximate of Chi-square was 8593.156 which the p-value was less than .01 ($p < .01$). Therefore, all 12 sub-factors were suitable for the further second order confirmatory factor analysis.

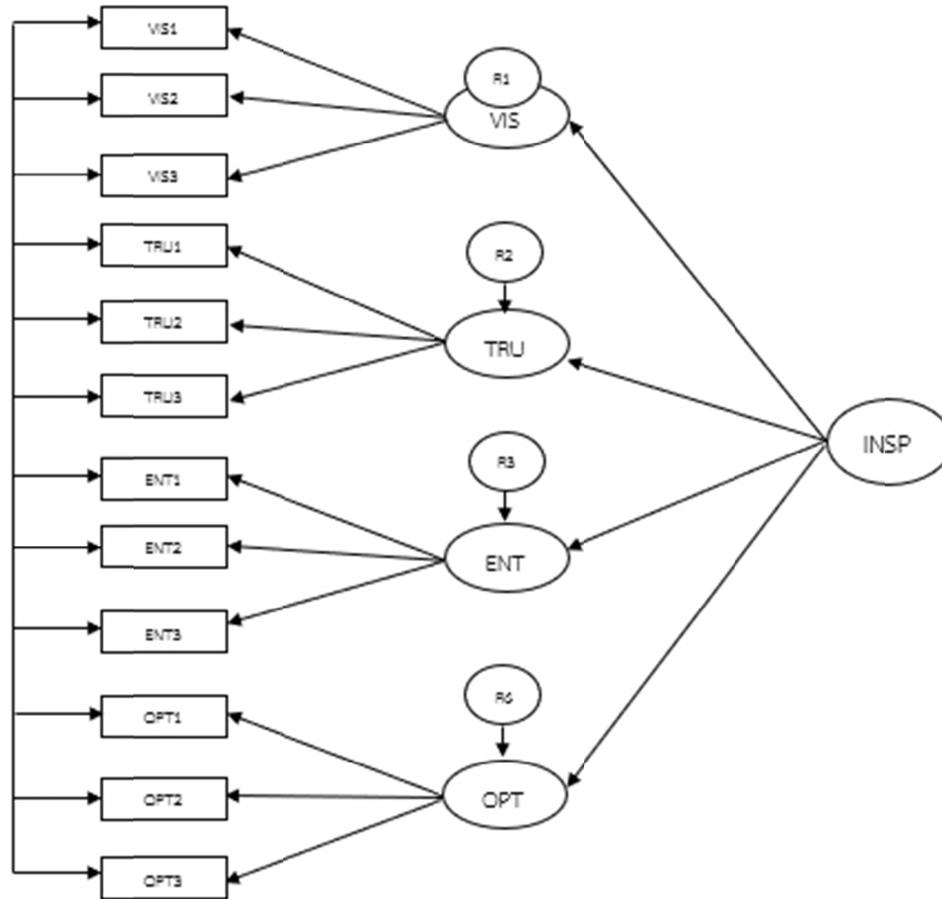


Figure 2. Model for the second order confirmatory factor analysis

Accordingly, the result of the second order confirmatory factor analysis in order to examine the consistency of Inspirational Leadership model (INSP) including visionary (VIS), trust (TRU), enthusiasm (ENT), and optimistic (OPT) showed that the model was consistent with empirical data very well since relative chi-square(CMIN/DF) was 1.785, root mean square error of approximation(RMSEA) was 0.035, goodness-of-fit index(GFI) was 0.987, adjusted goodness-of-fit index(AGFI) was 0.964, comparative fit index(CFI) was 0.997, and normed fit index(NFI) was 0.992 which were all in line with the criteria. The weight value of 4 Inspirational Leadership factors were positive from 0.90-1.47 and significant at .01 level of significance, which were created a scaled of Inspirational Leadership factor as the following equation:

$$\text{INSP} = 1.00 (\text{VIS}) + 0.90 (\text{TRU}) + 1.47 (\text{ENT}) + 1.01 (\text{OPT})$$

3.2 Factor Loading of Main Components, Sub-Components, and Indicators

The results of construct validity or factor loading of main components, sub-components, and indicators revealed that H1 was accepted according to the following perspectives.

- All four main components of inspirational leadership had positive factor loading valued from 0.90-1.47 and statistically significant at .01 level of significance in descending order including of enthusiasm (ENT), optimistic (OPT), visionary (VIS), and trust (TRU). The loading factors were 1.47, 1.01, 1.00, and 0.90, respectively.
- All three sub-components of visionary factor had positive factor loading valued from 0.96–1.01, and

statistically significant at .01 level of significance in descending order as followed; imaginative (VIS2), risk-taker (VIS1), and accepting change (VIS3) which the factor loading valued were 1.01, 1.00, and 0.96, respectively.

(c) All three sub-components of trust factor had positive factor loading valued from 1.00 – 2.13, and statistically significant at .01 level of significance in descending order as followed; reliability (TRU2), integrity (TRU3), and ability (TRU3) which the factor loading values were 2.13, 2.02, and 1.00, respectively.

(d) All three sub-components of enthusiasm factor had positive factor loading valued from 0.73–1.04, and statistically significant at .01 level of significance in descending order as followed; self-development (ENT3), be passionate (ENT1), and curiosity (ENT2) which the factor loading values were 1.04, 1.00, and 0.73, respectively.

(e) All three sub-components of optimistic factor had positive factor loading value from 0.73–1.04, and statistically significant at .01 level of significance in descending order as followed; look positive (OPT3), self-confidence (OPT1), and motivation (OPT2) which the factor loading values were 1.04, 1.00, and 0.73, respectively.

Moreover, it was found that all 55 indicators had positive loading factor valued from 0.74–2.77 and was statistically significant at .01 level of significance. The indicator that had the highest loading factor was “Have expertise in assigned missions.” with 2.77 factor loading value. Also, the indicator with lowest factor loading was “Can be relied on by others in the organization, and Get trust in the duty.” with 0.74 factor loading value, respectively.

4. Discussion

Based on the results of the tests, it was found that the developed model was consistent with the empirical information. The results showed that the factor loading of the main components, sub-components, and indicators had values that meet the criteria setting forth in the research hypothesis. We had reasons to explain in two cases as follows.

(a) In the case of Outside-In look, it was based on the related theories and previous studies that were synthesized to form a model. Considering the related theories and previous studies from Western society, it was also consistent with the expression or behavior of the sample used in the study. This is probably because the related theories and previous studies were generalization. This generalization might occur in one of the worlds. It can spread to other sources of the world. The same world or globalization, the information and communication technology platform are the driving force for the rapid flow of information from one area to another. According to Martin (1990), globalization was the process by which people in the world came together in the same world. In addition, Giddens (1990) gave a glimpse into globalization as a process of social relations with no obstacles by distance or border. According to the principle of innovation, Rogers (1995) argued that change in a particular society due to the adoption of innovation from another society. Moreover, Hall’s view (1974, cited in Wiratchai, 2002) discussed the principle of innovation that the process would lead to acceptance of innovation if it was a conduit to change in organizations or institutions. This would cause the population to decide whether to accept or reject it. It was a combination of several activities since it had a fixed and lasting nature. However, unstable activities and short-lived activities are constantly changing.

In the case of an Inside-Out look, it was based on the empirical data of the sample which were used in this study. It has been developed or influenced by various factors. In Thai society especially the Thai education system, it was expressed or inspire leadership behaviors in the same direction as the related theories and previous studies which were used in this study, for instance, from the National Education Act, (3), The Board of Education and Educational Personnel Act, B.E. 2546 (2003), under the Education and Teacher Education Act B.E. 2547 (2004) 2560-2579 for the development of educational personnel, supervising the compliance with professional standards and ethics as well as the professional development of teachers, and educational manager, as well as educational administrators. In addition, teachers and educational personnel are also encouraged to develop their teaching strategies in a variety of ways such as TEPE Online (Teachers and Educational Personnel Enhancement Based on Mission and Functional Areas as Majors), and encourage school administrators to develop themselves online. As a result, primary school administrators under the Office of the Basic Education Commission have been developing themselves in all areas (Office of the Basic Education Commission, 2017). Based on our findings, it showed that that developed model of structural relationships of inspirational leadership indicators for primary school administrators under the Office of Basic Education Commission was useful model to use in both practical and academic perspectives.

In applying to the development of primary school administrators under the Office of the Basic Education Commission, the characteristics of effective leadership and the conceptual framework for the development in this

study were based on 4 main components, 12 sub-components and 55 indicators, respectively, and consider the order of magnitude of the weight values in each level. In addition, our findings should also be considered, for example, (a) introducing this model of structural relationships, leadership indicators, inspired by this study to examine the consistency with empirical data of other target populations such as secondary school administrators, (b) conducting further study by using other methodologies such as structural equation modeling, research and development or operational research by engaging participatory action research, and (c) promoting qualitative research to define main components, sub-components, and indicators of inspirational leadership for primary school administrators under the Office of the Basic Education Commission in order to make a model of real phenomena in Thai society. Finally, the results in this study could be compared with those developed from other theories and other previous studies either.

5. Conclusion

This present study aimed to examine the consistency of the structural relationship model developed from related theories, previous studies, and empirical information. This study also investigated factor loading of main components, sub-components, and indicators, respectively. The results revealed that the model developed from related theories and previous studies were consistent with empirical information according to the following value: relative Chi-square (CMIN/DF), Root Mean Square Error of Approximation (RMSEA), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Comparative Fit Index (CFI), and Normed Fit Index (NFI), respectively. Main components values ranged between 0.90–1.47, sub-components values ranged from 0.73–2.13, and indicator factor values ranged from 0.74–2.77, respectively.

References

- Baldoni, J. (2010). *Inspirational leadership: 3 attributes leaders need*. Retrieved from <http://www.businessmanagementdaily.com/10775/inspirational-leadership-3-attributes-leaders-need>
- Cousin, J. M. (2015). *14 Inspiring Leadership Principles from Steve Jobs*. Retrieved from <https://www.linkedin.com/pulse/happy-60th-birthday-steve-14-inspiring-leadership-joya-martin>
- Farrell, A. M., & Rudd, J. M. (2009). Factor analysis and Discriminant validity: A brief review of some practical issues. In D. Tojib (Ed.), *ANZMAC 2009 conference proceedings ANZMAC*.
- Forman, D. C. (2013). *8 Principles of Inspirational Leadership*. Retrieved from <http://www.talentmgt.com/articles/eight-principles-of-inspirational-leadership>
- Garrett, J., Frank, J., & Consulting, C. (2005). *Inspirational Leadership - Insight to Action: The Development of the Inspired Leadership Tool*. Report prepared for the Department of Trade and Industry
- Giddens, A. (1990). *The Consequences of Modernity*. Cambridge: Polity.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Jedaman, P. (2017). *Transformational Leadership in the 21st Century: Thailand 4.0*. Retrieved from <http://www.kroobannok.com/83312>
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). Holt, NY: Harcourt College Publishers.
- Kloefkorn, S. (2015). *5 Characteristics of the best and most Inspiring leaders*. Retrieved from <https://www.bizjournals.com/phoenix/blog/business/2015/12/5-characteristics-of-the-best-and-most-inspiring.html>
- Konkan, S. (2004). *A development of quality indications for public*. A thesis for the doctor degree doctor of Education, Department of Test and Measurement, Faculty of Education, Srinakharinwirot University.
- Krishnan, H. (2014). *Five traits of an inspiring leader*. Retrieved from <https://www.linkedin.com/pulse/20140519084320-1443359-5-traits-of-an-inspiring-leader>
- Lattimer, C. (2013). *7 Traits of Inspirational People, and What Leaders Can Learn*. Retrieved from <http://leadchange.org/7-traits-of-inspirational-people-and-what-leaders-can-learn/>
- Martin, A. (1990). *The Globalization Age State and Society Beyond Modernity*. California: Stanford University.
- Maxwell, J. C. (2011). *5 Attributes of Inspirational Leaders*. Retrieved from http://www.johnmaxwell.com/cms/images/uploads/ads/5_Attributes_of_Inspirational_Leaders.pdf
- Newlands, M. (2015). *7 Characteristics of Inspiring Leaders*. Retrieved from

- <https://www.entrepreneur.com/article/252916>
- Office of the Basic Education Commission. (2017). *The importance of the official plan for the fiscal year 2018 of The Office of the Basic Education Commission*. Retrieved from <http://www.obec.go.th/node/81701>
- Office of the National Economic and Social Development Board, Prime Minister's Office. (2015). *National Economic and Social Development Plan Issue 12 (2517-2021)*. Retrieved from <http://www.nesdb.go.th>
- Office of the Permanent Secretary Ministry of Education. (2012). *Strategic management and education Integration*. Bangkok: Ministry of Education.
- Office of the Permanent Secretary Ministry of Education. (2016). *The Education Development Plan of the Ministry of Education Issue 12 (2517-2021)*. Office of Policy and Strategy: Ministry of Education.
- Operations Center under Office of the Basic Education Commission. (2016). *Quantity data of Basic education administration*. Retrieved from <http://www.obec.go.th>
- Roberts, F. (2016). *7 essential traits of inspirational leader*. Retrieved from <https://peopledevelopmentmagazine.com/2014/04/26/7-essential-traits-inspirational-leaders/>
- Rogers, E. M. (1995). *Diffusion of Innovations* (4th ed.). New York: The Free Press.
- Sole, R. D. (2017). *The Importance of Inspiration*. Retrieved from <http://sura-blog.raydelsole.com/2017/07/The-Importance-Of-Inspiration/>
- Strang, S. (2014). *7 Inspiring Leaders and the Traits That Made Them Great*. Retrieved from <https://www.charismanews.com/opinion/43683-7-inspiring-leaders-and-the-traits-that-made-them-great>
- Tacq, J. (1997). *Multivariate Analysis Techniques in Social Science Research: From problem to analysis*. London: SAGE Publications.
- Tobias, S., & Carlson, J. E. (1969). Brief report: Bartlett's test of sphericity and chance findings in factor analysis. *Journal of Multivariate Behavioral Research*, 4(3), 375-377. https://doi.org/10.1207/s15327906mbr0403_8
- Weber, P. (2013). *Becoming an Inspirational Leader*. Retrieved from <http://patricia-weber.com/becoming-inspirational-leader/>
- West, S. G., Taylor, A. B., & Wu, W. (2012). Model fit and model selection in structural equation modeling. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling*. New York: Guilford.
- Wiratchai, N. (1999). *Lisrel Model: Statistical Analysis for Research* (3rd ed.). Bangkok: Chulalongkorn University.
- Wiratchai, N. (2002). *Development of indicators for quality assessment, management and management. Education Area*. Bangkok: Thanaksorn
- Worth, M. (2017). *The importance of inspirational leadership*. Retrieved from <http://marcworth.co.uk/The-Importance-Of-Inspiration-Leadership/>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).