

A Confirmatory Factor Analysis Model of Servant Leader of School Director Under the Office of the Vocational Education Commission in Thailand

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Abstract – This research aims to develop and examine the Goodness-of-Fit Index of Confirmatory Factor Analysis (CFA) in servant leader of school director under the Office of the Vocational Education Commission (OVEC). The result is based on the empirical data. The sample group consisted of 247 school directors under the OVEC. The samples were taken using Multi - Stage Sampling randomized technique. Research instrument was questionnaire which had 0.80 - 1.00 for item objective congruence, discriminative power with 0.46 - .80 , and reliability of .95. The data analysed by Confirmatory Factor Analysis (CFA). The study shows the servant leader of school director under the OVEC consists of six factors: Appreciating of Others, Developing Others, Developing Community, moral Expressions, Supporting Leadership, and Using Leadership Together. The results of examination of the Goodness-of-Fit Index of Confirmatory Factor Analysis (CFA) found the model fit indexes based on the empirical data were $\chi^2=280.89$; $df=252$; $P\text{-value}=0.10204$; $Relative\ Fit\ Index=1.11$; $RMSEA=0.022$; $NFI=0.98$; $RMR=0.016$; $SRMR=0.041$; $GFI=0.92$; $AGFI=0.89$; $NIF=0.98$; $IFI=1.00$; $CFI=1.00$; $CN=252.56$. The factor loadings of six factors were from 0.73 – 0.94 and factor loadings of indicators were from -0.39 – 0.57.

Keywords – servant leader, Appreciating of Others, Developing Others, Developing Community, moral Expressions, Supporting Leadership, and Using Leadership Together.

1. Introduction

Servant leader is from English word “Servant Leadership”. In this research, the word “servant leader” is generally used. It found that servant leader is accepted to be an efficient tool to get the organization and society strong. Servant leader is center or model of people in the organization. The people will follow the servant leader automatically. It is not necessary to force or control them to serve. Servant leader is good model in morality and service mind. As servant leader is good model and kind, the followers or the people in the organization will have good relationship. Therefore, working atmosphere in the organization will be nice and support team working, participation in making decisions based on morality, to pay attention to other people and support other people to improve themselves [1]. Hence, it is necessary to develop the leader to be servant leader. There are many researches, which studied for servant leader. Each researcher defined qualification of servant leader differently. Some researchers defined the meaning from many documents synthesis and then defined special qualification in their researches. Some researchers remain the concept or definition of experts or academician, who defined the meaning or qualification of servant leader for study; such as Thompson [2], who studied school director of public school and servant leadership. This research studied ten factors of servant leader, which are being good listener, sympathy, maintenance, awareness, cogency, concept, vision, taking care, human development, and community development. Additionally, the research studied six factors of servant leader, which is concept of Laub[3]; the six factors consist of appreciating of the others, developing others, developing community, moral expressions, supporting leadership, and using leadership together.

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It found that definitions of specific qualification of servant leader are different. For example, the leader in basic educational school, leader at vocational school, and leader in university can be different. In the research, it studied the special qualification of servant leader of school director under the Office of the Vocational Education Commission. The research will specify the special factors of servant leader of school director in the same direction by confirmatory factor model analysis servant leader of school director under the Office of the Vocational Education Commission.

2. Objective

This research aims to develop and examine the Goodness-of-Fit Index of Confirmatory Factor Analysis (CFA) in servant leader of school director under the Office of the Vocational Education Commission (OVEC).

3. Conceptual Framework

The research studied servant leader from the concept of Laub [4], who specified that servant leader is the leader who has service mind, vision and goal, as well as understanding and guideline of work. Moreover, servant leader is good model who supports and develops the followers and the organization more than himself. Qualification of servant leader from concept of Laub consists of six factors; appreciating of others, developing the others, developing community, moral expressions, supporting leadership, and using leadership together [3].

4. Research Framework

4.1 Populations and sample group

Populations are 426 school directors under the Office of the Vocational Education Commission.

Sample groups are 247 school directors under the Office of the Vocational Education Commission. The sample groups are from multi stage random sampling.

4.2 Variables

The variables used to study is servant leader, consist of 1) appreciating of the others, 2) developing others, 3) developing community, 4) moral expressions, 5) supporting leadership, and 6) using leadership together.

5. Research Instrument

The instrument used in the research is questionnaire with five rating scales, divided into two sections. The first section is about general information of the respondents, and the second section is about qualification of a servant leader; consist of six factors 1) appreciating of the others, 2) developing others, 3) developing community, 4) moral expressions, 5) supporting leadership, and 6) using leadership. Research instrument was questionnaire which had 0.80 - 1.00 for item objective congruence, discriminative power with 0.46 - .80, and reliability)Cronbach's Alpha Coefficient) of .95.

6. Data Collection

The questionnaires were sent through post to the respondents. Then, the questionnaires were examined by added numbering on the questionnaires paper, which were specified. The questionnaires were examined whether they were completely answered and how many questionnaires were returned. The returned completed questionnaires are 98.80 % of all sent questionnaires.

7. Data Analysis

The research analyzed mean, standard division and second order confirmatory factor Analysis, in order to examine the item objective congruence and Goodness-of-Fit Index.

8. Research Result

The results of the data analysis show the following:

Servant leader of school director under the Office of the Vocational Education Commission consist of six main factors: appreciating of the others with three indicators, developing others with four indicators, developing community with four indicators, moral expressions with five indicators, supporting leadership with five indicators, and using leadership with five indicators. The result of the examination of the Goodness-of-Fit Index of Confirmatory Factor Analysis (CFA) found the model fit indexes based on the empirical data were $\chi^2=280.89$; $df=252$; $P\text{-value}=0.10204$; $Relative\ \chi^2=1.11$; $RMSEA=0.022$; $NFI=0.98$; $RMR=0.016$; $SRMR=0.041$; $GFI=0.92$; $AGFI=0.89$; $NIF=0.98$; $IFI=1.00$; $CFI=1.00$; $CN=252.56$ The detail of data analysis result are showed in Table 1.

Table 1. Result of second confirmatory factor model analysis of servant leader of school director under the OVEC

servant leader	\bar{x}	S.D.	Factor Loading	Standardize Error	t	R ²
Appreciating of Others	4.56	0.505	0.73	0.07	10.15	0.53
X1 Respect for others' opinion	4.38	0.675	0.53	-	-	0.63
X2 Respect for others' decision	4.60	0.588	0.39	0.05	8.43	0.44
X3 Understanding of the others	4.71	0.545	0.47	0.04	11.14	0.75
Developing Others	4.61	0.486	0.74	0.08	9.73	0.55
X4 Developing ability of the others	4.66	0.575	0.41	-	-	0.51
X5 Developing personalities of the others	4.58	0.557	0.44	0.04	11.79	0.62
X6 Developing working skills of the others	4.66	0.546	0.47	0.04	12.65	0.72
X7 Developing minds of the others	4.56	0.608	0.49	0.04	12.06	0.66
Developing Community	4.38	0.516	0.88	0.08	11.28	0.77
X8 Making reliability and faith for community	4.50	0.583	0.42	-	-	0.53
X9 Solving problems and conflicts	4.14	0.710	0.51	0.05	10.13	0.53
X10 Making attitude of mind participation	4.40	0.690	0.57	0.06	10.35	0.67
X11 Supporting community and team	4.47	0.629	0.46	0.04	10.86	0.55
Moral Expressions	4.46	0.502	0.94	0.08	12.12	0.88
X12 Supporting morality of the others	4.55	0.602	0.44	-	-	0.53
X13 Accepting opinion of the others with morality	4.37	0.611	0.47	0.04	11.99	0.61
X14 Being good model continuously	4.34	0.616	0.48	0.04	11.86	0.60
X15 Honoring the others	4.57	0.572	0.47	0.04	12.63	0.67
X16 Sacrificing for the others	4.44	0.746	0.46	0.05	9.31	0.37
Supporting Leadership	4.38	0.555	0.90	0.07	12.18	0.81
X17 Making the others hopeful	4.40	0.654	0.48	-	-	0.56
X18 Positive thinking	4.52	0.649	0.48	0.04	11.82	0.55
X19 Motivation	4.19	0.716	0.52	0.05	11.69	0.54
X20 Performance of risk management	4.47	0.655	0.50	0.04	12.21	0.59
X21 Making good personnel	4.31	0.734	0.56	0.05	12.10	0.58
Using Leadership Together	4.60	0.476	0.91	0.08	11.74	0.82
X22 Trusting and honoring colleagues	4.43	0.652	0.47	-	-	0.53
X23 Making proud of honoring others	4.62	0.563	0.45	0.04	12.07	0.65
X24 Being willful to develop the others to be leader in the future	4.65	0.564	0.43	0.04	11.73	0.60
X25 Being good leader and follower	4.63	0.576	0.46	0.04	11.28	0.64
X26 Supporting the personnel's working	4.66	0.531	0.43	0.04	12.28	0.65

$\chi^2=280.89$; $df=252$; $P\text{-value}=0.10204$; Relative $\chi^2=1.11$; $RMSEA=0.022$; $NFI=0.98$; $RMR=0.016$; $SRMR=0.041$; $GFI=0.92$; $AGFI=0.89$; $NIF=0.98$; $IFI=1.00$; $CFI=1.00$; $CN=252.56$

The results of the second confirmatory factor analysis model of servant leader of school director under the Office of the Vocational Education Commission in Thailand found that the factor loadings of six factors were from 0.73 – 0.94, the reliability was at 0.53 – 0.88. Moral expression has highest reliability and factor loadings of indicators were from 0.47 – 0.41, the reliability was at 0.75 – 0.44 . Developing others has factor loadings of indicators from 0.39 – 0.53, the reliability was at 0.72 – 0.62 . Developing community has factor loadings of indicators from 0.42 – 0.57, the reliability was at 0.53 – 0.67. Moral expression has factor loadings of indicators from 0.44 – 0.48, the reliability was at 0.37 – 0.67. Supporting leadership has factor loadings of indicators from 0.48 – 0.56, the reliability was at 0.54 – 0.59. Using leadership together has factor loadings of indicators from 0.43 – 0.47, the reliability was at 0.53 – 0.65. The result of the analysis can be showed as figure 1.

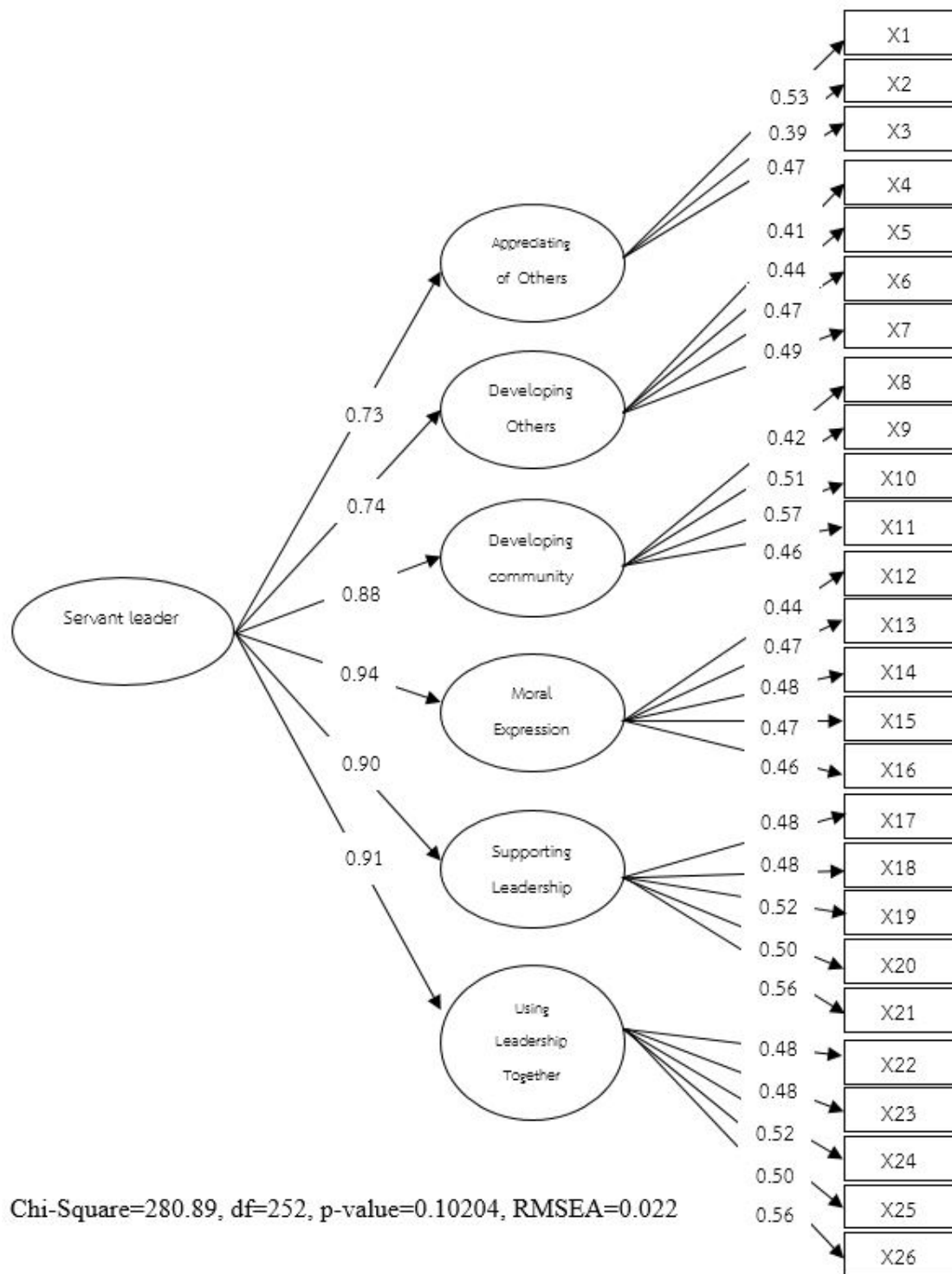


Figure 1. Results of the second confirmatory factor model analysis of servant leader of school director under the OVEC

9. Conclusion and Discussion

The research of confirmatory factor model analysis servant leader of school director under the OVEC found that servant leader of school director under the Office of the Vocational Education Commission consist of six factors. The results of the examining the Goodness-of-Fit Index of Confirmatory Factor Analysis (CFA) found the model fit indexes based on the empirical data were $\chi^2=280.89$; $df=252$; $P\text{-value}=0.10204$; Relative $\chi^2=1.11$; $RMSEA=0.022$; $NFI=0.98$; $RMR=0.016$; $SRMR=0.041$; $GFI=0.92$; $AGFI=0.89$; $NIF=0.98$; $IFI=1.00$; $CFI=1.00$; $CN=252.56$ The factor of indicators were from -0.39 – 0.57 . The reliability was a $0.88 - 0.53$

The researcher specified the indicator of the six factors from many researches. Then, there was analysis of content accuracy by experts in order to examine the reliability of the instrument, and finally found the acceptable. It was ensured before collecting information that variable in each factor can be exactly measured. This is consistent with indicator development process of Nonglak Wiratchai [5], who specified that there must be searching and examining the document strictly in order to specify effective indicators. After collecting information, that information must be analyzed in order to measure accuracy or the variable, or indicators used to measure the variable. There must be consideration of factor loading in the matrix LX or LY. Factor loading must be high and have statistical significance, t-value is more than 1.96 [6] Moreover, there must be Construct Reliability: CR and Average Variance Extracted: AVE [7] The reliability of latent variable should be more than 0.60 ($CR > 0.60$) and mean of variance of latent variable should be more than 0.50 ($AVE > 0.50$) The analysis result of factor Appreciating of Others, CR is at 0.97 and AVE is at 0.88 . The analysis result of the factor Developing others, CR is at 0.97 and AVE is at 0.88 . The analysis result of factor Developing Community, CR is at 0.96 and AVE is at 0.87 . The analysis result of factor Moral Expression, CR is at 0.97 and AVE is at 0.87 . The analysis result of factor Supporting Leadership, CR is at 0.97 and AVE is at 0.88 . The analysis result of factor Using Leadership Together, CR is at 0.97 and AVE is at 0.87 It showed that all factors passed the criteria. To design this research, there was specification of sample used in the research by probability. Then, the sample groups are from multi stage random sampling. Hence, it is able to reflect the Goodness-of-Fit Index of Confirmatory Factor Analysis (CFA).

This research showed that the servant-leader of school director under the OVEC consists of six factors : Appreciating of the Others, Developing the Others, Creating a Community Society, Expressions

of Moral, Promoting Leadership, and Using Leadership. Which means the style of leadership is very important for school director concerned with Thite and Simmons [8] stated that an empirical examination of project leadership style in educational project in Australia environment displayed that more successful managers exhibit significantly more of transformational leadership characteristics. Similarly, Janet Wagude and Ann Ndiritu [9] said that the Intellectual stimulation is one of the manifestations of transformational leadership. Intellectual stimulation is the aspect of leadership by which the leader encourages teams' ingenuity, creativity and innovative thinking, urging them to keenly question the status quo in order to make discoveries. This is related with Howell, J. M., & Avolio, B. J. [10] who said that transactional measures of leadership, including contingent reward and management by exception, were each negatively related to business-unit performance. Causal relationships between the transformational-leadership behaviors and unit performance were moderated by the level of support for innovation in the business unit. Also Tony Bush [11] stated that there is great interest in educational leadership in the early part of the 21st century. This is because of the widespread belief that the quality of leadership makes a significant difference to school and student outcomes. Another reason that supports my result were the developmental issues in servant leadership, such as the challenges facing empirical investigation and measurement, and the changes that are occurring in current thinking about the servant leadership approach. [12] The results produced five servant leadership factors—altruistic calling, emotional healing, persuasive mapping, wisdom, and organizational stewardship—with significant relations to transformational leadership, leader-member exchange, extra effort, satisfaction, and organizational effectiveness. Strong factor structures and good performance in all validity criteria indicate that the instrument offers useful for future research [13] The current developmental stage of the servant leadership movement is explored in order to provide some useful signposts for future research directions [14]

Also Brien N. Smith, Ray V. Montagno, Tatiana N. Kuzmenko suggested that servant leadership leads to a spiritual generative culture, while transformational leadership leads to an empowered dynamic culture. The paper also addresses contextual factors which might make one or the other models more appropriate for organizational objectives. [15] and Robert F. Russell found that the servant leadership theory and extrapolate applications of the values in leadership literature lead to three aspects of

servant leadership: trust; appreciation of others; and empowerment. Leader values may be the underlying factors that separate servant leaders from all other leadership types [16].

Consistent with Myra L. Farling, A. Gregory Stone, Bruce E. Winston [17] found that a model of servant leadership based on the variables of vision, influence, credibility, trust, and service identified in the academic and popular press literature.

References

- [1]. Wong, P. T., Davey, D., & Church, F. B. (2007). Best practices in servant leadership. *Servant Leadership Research Roundtable, School of Global Leadership and Entrepreneurship, Regent University*.
- [2]. Thompson, C. H. (2005). *The public school superintendent and servant leadership* (Doctoral dissertation, Edgewood College, Madison).
- [3]. Laub, J. (2003). From paternalism to the servant organization: Expanding the Organizational Leadership Assessment (OLA) model. In *Proceedings of the Servant Leadership Research Roundtable*.
- [4]. Laub, J. (2004, August). Defining servant leadership: A recommended typology for servant leadership studies. In *Proceedings of the Servant Leadership Research Roundtable*.
- [5]. Nonglak Wiratchai.(1999). Lisrel Model: Statistical for research. Bangkok: Chulalongkorn University.
- [6]. Diamantopoulos, A., Siguaw, J. A., & Siguaw, J. A. (2000). *Introducing LISREL: A guide for the uninitiated*. Sage.
- [7]. Supamat Angsuchot, Somthawin Wijitwan, and Ratchaneekun Pinyopanuwat.(2009). *Statistical for Social science and Behavioral science : Technique for using Lisrel Program*. 2ed. Bangkok : Charoenmunkong Publishing.
- [8]. Parinya Meesuk. (2016). Analysis of Structural integrity of selected variable indicators related to vocational education. *Journal of Industrial Education* 15(2). p. 86-93.
- [9]. M Thite, P Simmons.(2012). Project leadership style. *Project management journal*, 56-80.
- [10]. Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of applied psychology*, 78(6), 891.
- [11]. Bush, T. (2007). Educational leadership and management: Theory, policy and practice. *South African journal of education*, 27(3), 391-406.
- [12]. Gregory Stone, A., Russell, R. F., & Patterson, K. (2004). Transformational versus servant leadership: A difference in leader focus. *Leadership & Organization Development Journal*, 25(4), 349-361.
- [13]. Barbuto Jr, J. E., & Wheeler, D. W. (2006). Scale development and construct clarification of servant leadership. *Group & Organization Management*, 31(3), 300-326.
- [14]. Sendjaya, S., & Sarros, J. C. (2002). Servant leadership: Its origin, development, and application in organizations. *Journal of Leadership & Organizational Studies*, 9(2), 57-64.
- [15]. Smith, B. N., Montagno, R. V., & Kuzmenko, T. N. (2004). Transformational and servant leadership: Content and contextual comparisons. *Journal of Leadership & Organizational Studies*, 10(4), 80-91.
- [16]. Russell, R. F. (2001). The role of values in servant leadership. *Leadership & Organization Development Journal*, 22(2), 76-84.
- [17]. Farling, M. L., Stone, A. G., & Winston, B. E. (1999). Servant leadership: Setting the stage for empirical research. *Journal of Leadership Studies*, 6(1-2), 49-72.