

THE VALIDATION OF A CAUSAL MODEL OF TEACHER SPIRITUALITY

การตรวจสอบความตรงโมเดลเชิงสาเหตุของจิตวิญญาณความเป็นครู

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Somprasong Senarat^{1*} Benjamaporn Senarat¹ Pisit Pinitakul²

สมประสงค์ เสนารัตน์^{1*} เบญจมาภรณ์ เสนารัตน์¹ พิสิฐ พิณิจสกุล²

* Corresponding author E-mail: er2_somprasong@outlook.com

Abstract

This study purposed to validate of a causal model of teacher spirituality of high school students in service area of Roi-Et Rajabhat University. The samples were 1,025 high school students in service area of Roi-Et Rajabhat University which were selected by two-stage random sampling. Research instrument was a questionnaire. The variables consisted of one endogenous latent variables: teacher spirituality; and two exogenous latent variables: emotional quotient, and volunteer mind. Findings revealed that the causal model of teacher spirituality of high school students in service area of Roi-Et Rajabhat University showed model fit to empirical data (Chi-square = 76.737, df = 63, p-value = 0.115, CFI = 0.999, TLI = 0.998, RMSEA = 0.015, SRMR = 0.020 and chi-square/df = 1.218). Moreover, the variables in model could explain the variance of teacher spirituality at 49.20 percent. When considering direct effect, it found that emotional quotient and volunteer mind affected on teacher spirituality and emotional quotient affected to volunteer mind which was significantly at the level of .01. In addition, when considering indirect effect, it found that emotional quotient affected on teacher spirituality indirectly through volunteer mind which was statistically significance at .01

Keywords: Emotional Quotient, Volunteer Mind, Teacher Spirituality, Structural Equation Model

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อตรวจสอบความตรงโมเดลเชิงสาเหตุปัจจัยที่ส่งผลต่อจิตวิญญาณความเป็นครูของนักเรียนชั้นมัธยมศึกษาตอนปลายในเขตพื้นที่บริการมหาวิทยาลัยราชภัฏร้อยเอ็ด ตัวอย่าง คือ นักเรียนชั้น

¹Assist. Prof. Dr., Department of Educational Research and Evaluation, Roi Et Rajabhat University

²Lecturer Department of English Education, Roi Et Rajabhat University

มัธยมศึกษาตอนปลายในเขตพื้นที่บริการมหาวิทยาลัยราชภัฏร้อยเอ็ด จำนวน 1,025 คน ได้มาโดยการสุ่มแบบสองขั้นตอน เครื่องมือที่ใช้ คือ แบบสอบถาม ตัวแปรที่ใช้ในการวิจัย ประกอบด้วย ตัวแปรภายในแฝง 1 ตัวแปร คือ จิตวิญญาณความเป็นครู และตัวแปรภายนอกแฝง 2 ตัวแปร คือ ความฉลาดทางอารมณ์ และจิตอาสา ผลการวิจัย พบว่า โมเดลเชิงสาเหตุปัจจัยที่ส่งผลต่อจิตวิญญาณความเป็นครูของนักเรียนชั้นมัธยมศึกษาตอนปลายในเขตพื้นที่บริการมหาวิทยาลัยราชภัฏร้อยเอ็ดมีความสอดคล้องกับข้อมูลเชิงประจักษ์ ($\chi^2 = 76.737$, $df = 63$, $p\text{-value} = 0.115$, $CFI = 0.999$, $TLI = 0.998$, $RMSEA = 0.015$, $SRMR = 0.020$ และ $\chi^2/df = 1.218$) ทั้งนี้ ตัวแปรในโมเดลสามารถอธิบายความแปรปรวนของจิตวิญญาณความเป็นครูได้ร้อยละ 49.20 และเมื่อพิจารณาขนาดอิทธิพลทางตรง พบว่า ความฉลาดทางอารมณ์และจิตอาสาส่งผลต่อจิตวิญญาณความเป็นครู อย่างมีนัยสำคัญทางสถิติที่ระดับ .01 และความฉลาดทางอารมณ์ส่งผลต่อจิตอาสา อย่างมีนัยสำคัญทางสถิติที่ระดับ .01 นอกจากนี้ยังพบว่า ความฉลาดทางอารมณ์ส่งผลต่อจิตวิญญาณความเป็นครูในทางอ้อมผ่านจิตอาสา อย่างมีนัยสำคัญทางสถิติที่ระดับ .01

คำสำคัญ: ความฉลาดทางอารมณ์ จิตอาสา จิตวิญญาณความเป็นครู โมเดลสมการโครงสร้าง

Introduction

Social development relies on education as proceed movement (Ngourungsi, 2016, p.17; Siridhrungsri, 2014, p.6) by the most significant person in the process of educational development and learning development as ‘a teacher’: which a quality teacher is the main factor for developing education and quality of students in classroom (Aaronsen, Barrow & Sander, 2007, p.95; Kaplan & Owings, 2001, p.70; Rivkin Hanushek, & Kain, 2005, p.449; Rockoff, 2004, p.251; Wannasri, 2009, p.1). That is, a significant characteristic of a quality teacher involves teacher spirituality (Chalakhbang, 2016, p.126; Siridhrungsri, 2014, p.11) because teacher spirituality consists of friendliness, care, attention, understanding, acceptance, and patient on the students which teachers have to dedicate their personal time for them (Pajak & Blaise, 1989, p.304). Teachers with teacher spirituality will result in themselves on thinking development and necessary teaching skills including moral, virtue, and more responsibility as well as flexibility and understanding changes. Teachers view students on their prestige, potential, motivation on showing more leadership, and they are happy and proud to be a teacher which is accepted and trusted by viewers (Chalakhbang, 2016, p.126). This behavior assists teachers to be more effective ones (Pajak & Blaise, 1989, p.304) so that teacher spirituality is a significant characteristic for a quality teacher.

Teacher spirituality according to Buddhism is Kalayanamitr or friendship (Payutto, 2008, p.108) refers to knowledge resources and model, and education has emphasized much on Kalayanamitr (Payutto, 2003, p.91) due to external factors which help encourage thinking or so-called ‘Yonisonamassakarn’ (Payutto, 2003, pp.89-91). This reflects that teacher spirituality could be developed by the method of fostering the Teacher spirituality according to Buddhism is

Kalayanamitr or friendship (Payutto, 2008, p.108) refers to knowledge resources and model, and education has emphasized much on Kalayanamitr (Payutto, 2003, p.91) due to external factors which help encourage thinking or so-called 'Yonisonamassakarn' (Payutto, 2003, pp.89-91). This reflects that teacher spirituality could be developed by the method of fostering the teacher spirituality beforehand. After that, it should support teacher duty following the principles that focusses on learning management by experience of case study as well as providing motivation and pride in career and exchanging various teaching techniques and coaching and mentoring method (Darbavasu, 2017, p.5).

Producing teacher graduates following the announcement of Ministry of Education involves Thai Qualifications Framework for Higher Education which specifies the characteristics of the graduates including 21st century skills and teacher spirituality (The Higher Education Committee, 2019, p. 2-3). Therefore, the teacher institute requires the process of admitting students teacher according to the features specified by the Ministry of Education. Moreover, the institute manages learning and support students teacher for the whole time studying in the courses. In addition, research revealed that the factors affecting teacher spirituality consist of self- awareness, dare to change, gaining faith and trust, knowing values, giving inspiration and support, willing seriously, self-pride, being a good role, being givers, helping others, being a model in health, faith, sacrifice, and pride (Sungraksa, 2011, p.25). Factors affecting volunteering include emotional quotient (Nonthachot, 2014, p.77; Pewpet, Luangangoon, & Kumpol, 2012, p.340), social responsibility, motivation for social activities, self-value, self-regulation (Nonthachot, 2014, p. 77), self-efficacy (Nonthachot, 2014, p.77; Wongpitak, 2013, p. 68), self-esteem, volunteer mind, social support (Wongpitak, 2013, p.69).

By reviewing conceptual theories and related literature, the researcher who involves the process of producing teacher graduates was interested in studying causal factors of teacher spirituality of high school students in service area of Roi-Et Rajabhat University. The results of this study will be used as a part of student admission in faculty of education, learning management supporting teacher spirituality for students teacher as well as a model for learning management for administrators, teachers, or those who are interested in teacher spirituality.

Purpose

To validate a causal model of teacher spirituality of high school students in service area of Roi-Et Rajabhat University

Hypothesis

A causal model of teacher spirituality among high school students in service area of Roi Et Rajabhat University is related to empirical data.

Research Framework

The researcher reviewed documents and related studies of teacher spirituality as follows.

a) Factors affecting teacher spirituality are emotional quotient and volunteering (Nonthachot, 2014, p. 77; Pewpet et al., 2012, p. 340; Sungraksa 2011, p. 25; Wongpitak, 2013, p. 68-69), and factor affecting emotional quotient is volunteering. (Nonthachot, 2014, p. 77; Pewpet et al., 2012, p. 340).

b) Teacher spirituality refers to characteristics associating good teacher behavior by following Buddhism's Kalyamitta-dhamma: qualities of a good friend. It comprises of 7 components: Piyo means lovable or endearing, Garu is esteemable or respectable or venerable, Bhavaniyo refers to adorable or cultured, Vatta is being a counselor, Vacanakkhamo means being a patient listener, Gambhiranca katham kata refers to being able to deliver deep discourses or to treat profound subjects, and No cattthane niyojaye is never exhorting groundlessly or not leading or spurring on to a useless end (Payutto, 1989, p. 204; 2003, p. 89-91; 2008, p. 108; 2016, p. 280).

c) Emotional quotient mean ability to be aware of own feelings and others' feelings in order to being able to manage and control own feelings. This is an inspiration for successful relationship with others. The five observed variables were self-awareness, self-regulation, self-motivation, empathy, and social skills (Golaman. 1998, p. 47).

d) Volunteer mind refer to mind for helping others and giving for others such as giving stuffs, giving money, helping physically and mentally. This is self-sacrifice and time management controlled by mind without troubling oneself. The three observed variables are helping others, Prosocial behavior, and commitment to develop (Sriboriboon, 2007, p. 142; Wajee, 2016, p.18; Wongyai, 2011, p.234).

Notation: ts = teacher spirituality; ts1 = piyo; ts2 = garu; ts3 = bhavaniyo; ts4 = vatta ca; ts5 = vacanakkhamo; ts6 = gambhiranca katham katta; ts7 = no cattthane niyojaye; eq = emotional quotient; eq1 = self-awareness; eq2 = self-regulation; eq3 = self-motivation; eq4 = empathy; eq5 = social skills; vm = volunteer mind; vm1 = helping others; vm2 = giving to society; vm3 = intention to social development.

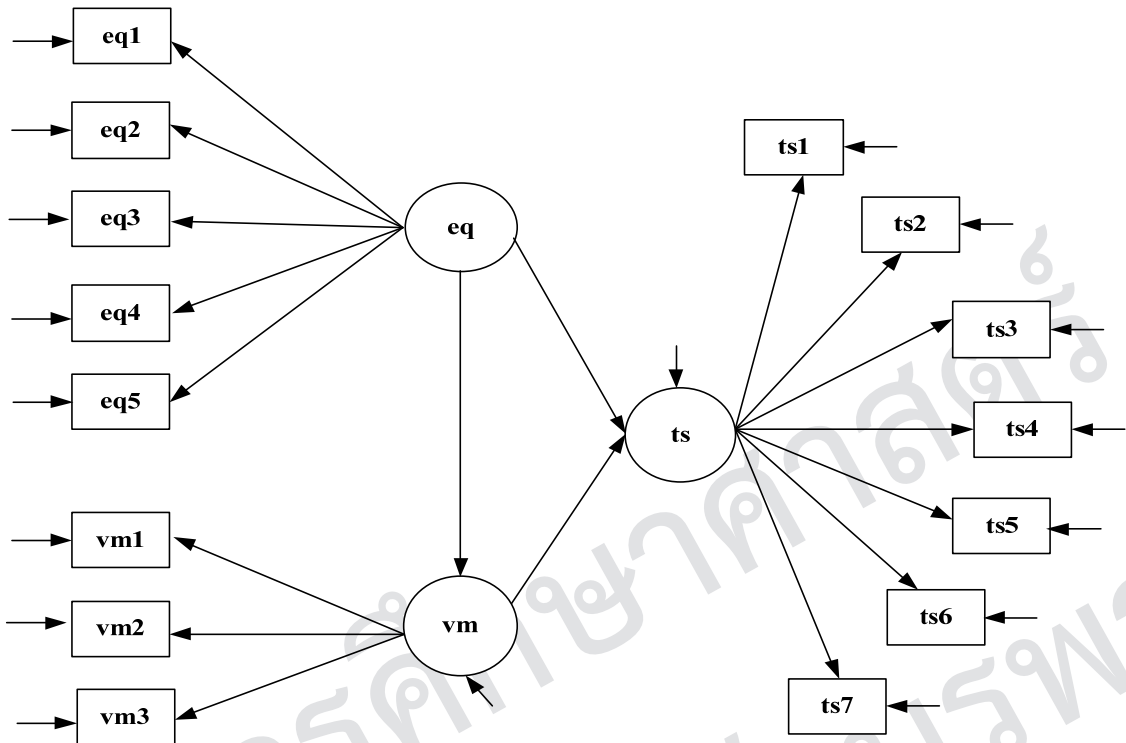


Figure 1. The Research Framework

Methodology

This research study investigated causal relationship which aimed to develop and validate relationship of a causal model of teacher spirituality in high school students as follows.

a) Population and Samples

a-1) Population in the study included 36,641 high school students in service area of Roi Et Rajabhat University in academic year of 2018 in Thailand.

a-2) Samples in this study were high school students in service area of Roi Et Rajabhat University in academic year of 2018 calculated sample size by G*Power3.1 program with effect size $w = 0.3$, α err prob = 0.05, power (1- β err prob) = 0.80, $df = 87$. Results of estimation showed that non-centrality parameter $\lambda = 53.9100000$, critical $\chi^2 = 223.1602$, total sample size = 599, actual power = 0.9003551. To specify sample size, Hair et al. (2014, p. 572-574) proposed that the bigger size of the samples leads to more effective. Generally, there are 15 samples for one parameter which was applied to estimate in this study. Further, he also suggested method for specify the samples in analyzing structural equation modeling by considering the model size. For instance, it should be over 100 samples for a model with less than 5 latent variables. It also should be more

than 150 samples for a model with less than 7 latent variables. The samplings over 300 are for the model with over 7 latent variables. For samplings of 500 participants, it requires the model with a great number of variables. Therefore, the sample size in this study which are more than 720 is appropriate for parameter with 48 value. According to the above suggestion, the minimal sample size is statistically acceptable which make data related to the parameters. Therefore, the researcher should increase the samples more than calculated in order to prevent mistakes such as missing data (Senarat, 2518, p. 76). Moreover, an analysis of structural equation model requires more parameter estimation after analysis, so the samples for answering a questionnaire were 1,050 which were chosen by two-stage random sampling method. Schools were divided by its sizes as extra-large, large, and medium. Stratified random sampling was carried out to divide schools as strata and sampling unit which were 20% of each school size. Results showed 8 extra-large schools, 12 large schools, 16 medium school size which were totally 36 schools. Then, the students were randomized by simple random sampling method which were 300 students from extra-large schools, 500 students from large schools, and 250 students from medium schools. Finally, 1,025 questionnaires were responded. Therefore, the researcher specified the sample size of this study with 1,025 participants, which was considered appropriate size for the study as well as using in structural equation model.

b) Research Instrument

The instrument used in this study was Emotional Quotient, Volunteer Mind, and Teacher Spirituality (EQVMTS) questionnaire which was conducted by reviewing literature and data from the focus group activities of lecturers in faculty of education, school administrators, teachers in basic education schools, teacher students. The questions involved opinions and authentic situation from Matthayom 6th students who participated in the project of 'development student quality for studying in majors of faculty of education with the process of coaching and mentoring'. The EQVMTS questionnaire was 5 Likert-scales with 3 aspects of questions including emotional quotient measured by 5 observed variables, volunteer mind measured by 3 observed variables, and teacher spirituality measured by 7 observed variables. The EQVMTS questionnaire was validated its content validity by 5 experts on educational measurement and psychology. It found content validity index (IOC) at 0.80-1.00. It was carried out to pilot with 100 high school students and analyzed data by Jamovi program (The jamovi project, 2019) It found that emotional quotient questionnaire had item total correlation 0.312 to 0.663, Cronbach's (α) = 0.889, and McDonald's (ω) = 0.898. volunteer mind questionnaire showed item total correlation 0.361 to 0.694, Cronbach's (α) = 0.933, and

McDonald's (ω) = 0.936; teacher spirituality questionnaire had item total correlation 0.325 to 0.702, Cronbach's (α) = 0.920, and McDonald's (ω) = 0.929.

(c) Data Analysis

There were 1,025 samples answered the EQVMTS questionnaire.

c-1) Descriptive statistics and normality test

Table 1 shows information of 1,025 samples by variables. It found that mean scores were between 3.42 to 3.90, standard deviation at 0.517 to 0.692, coefficient of variation (CV) at 0.150 and 0.184, range at 1.00 to 5.00, skewness at -0.132 to -0.04, and kurtosis at -0.262 to 0.186. Moreover, Wiratchai (1999, p. 15; Hair et al., 2014, pp.70-72) proposed criteria for considering normality distribution by skewness which is $zskewness = skewness/\sqrt{6/n}$ and kurtosis $= kurtosis/\sqrt{24/n}$ from zkurtosis. Estimates were compare to Z scores in the table at specific α . In other words, if zskewness and zkurtosis are between -1.96 to 1.96, it means data shows normality distribution. Normality distribution from the samples revealed that zskewness and zkurtosis were between -1.96 to 1.96 in all variables in Table 1 showing no problem of normality in the samples.

Table 1. Descriptive Statistics of the Samples by Variables

Construct/Item	Mean	Std.	CV	Range	Skewness ($\sqrt{6/n}=0.077$)	Kurtosis ($\sqrt{24/n}=0.153$)
Emotional quotient						
Self-awareness	3.591	0.540	0.150	2.00 - 5.00	-0.045	0.116
Self-regulation	3.421	0.576	0.168	1.80 - 5.00	-0.118	-0.048
Self-motivation	3.679	0.549	0.150	2.00 - 5.00	-0.109	-0.002
Empathy	3.758	0.658	0.175	1.00 - 5.00	-0.077	-0.065
Social skills	3.819	0.663	0.174	1.00 - 5.00	-0.130	-0.262
Volunteer mind						
Helping others	3.864	0.582	0.150	1.00 - 5.00	-0.086	-0.077
Giving to society	3.811	0.649	0.170	1.30 - 5.00	-0.117	-0.107
Intention to social development	3.768	0.633	0.176	1.00 - 5.00	-0.098	-0.105
Teacher Spirituality						
Piyo	3.803	0.648	0.171	1.57 - 5.00	-0.132	-0.124
Garu	3.900	0.517	0.133	2.20 - 5.00	-0.059	-0.121
Vatta ca	3.761	0.692	0.184	1.00 - 5.00	-0.111	-0.010
Bhavaniyo	3.487	0.583	0.167	1.20 - 5.00	-0.118	0.186
Vacanakkhamo	3.478	0.607	0.174	1.95 - 5.00	-0.050	-0.101
Gambhiranca katham katta	3.638	0.647	0.178	1.00 - 5.00	-0.076	-0.191
No catthane niyojaye	3.740	0.602	0.161	2.00 - 5.00	-0.074	-0.003

c-2) Non-response bias

Non-response bias is related to the questionnaire that is not answered. It compares mean scores of those who quickly response and those who response late. The result table 2. shows no differences between these two groups. This represents no problem of non-response bias.

Table 2. Mean Scores Differences of Early and Late Responses by Independent Samples t-test

construct	t	df	p	Mean difference	SE difference
Emotional quotient	0.7113*	1022	0.477	0.02154	0.0303
Volunteer mind	-0.0730*	1022	0.942	-0.00298	0.0408
Teacher Spirituality	0.5948*	1022	0.552	0.01909	0.0321

* $p < .05$

c-3) Confirmatory factor analysis was employed to analyze the EQVMTS questionnaire results. Findings showed that confirmatory factor analysis of latent variables in 3 models revealed measurement model of teacher spirituality, measurement model of emotional quotient, and measurement model of volunteer mind. This model is overall fit relating to empirical data as Chi-square = 76.737 df = 63, p-value = 0.115, CFI = 0.999, TLI = 0.998, RMSEA = 0.015, SRMR = 0.020 and chi-square/df = 1.218. Moreover, construct validity was carried out with significant indicators including convergent validity and discriminant validity (Hair et al., 2014, p. 631).

c-3.1) Convergent validity

The first criterion of construct validity is convergent validity which was assessed by means of: (a) average variance extracted (AVE). With regard to factor loadings, it is recommended to use standardized loadings; (b) composite reliability (CR) and (c) factor loadings (Hair et al. 2014, pp. 631-633).

c-3.1.1) Average Variance Extracted (AVE)

The last criterion of convergent validity could be verified from the average variance extracted (AVE) measurement for each construct. The AVE value describes the variant or diversity of the manifest variables that the latent construct can have possesses (Hair et al., 2014, p. 619; MUKMININ et al., 2018, p. 88). Hair et al (2014, p. 632) recommended a minimum of 0.5 AVE for a good convergent validity. As a result, all AVE estimates were higher than 0.50 as showed in Table 3.

Table 3. Average Variance Extracted (AVE) Values of the Questionnaires

Construct	Average Variance Extracted (AVE)
Emotional quotient	0.549
Volunteer mind	0.817
Teacher Spirituality	0.571

c-3.1.2) Factor loadings and Composite reliability

The first and second criterions of convergent validity were factor loadings and composite reliability (CR). For construct validity, Hair et al (2014, p. 632) recommended that individual standardized factor loadings (regression weights) should be at least 0.50 and preferably 0.70 or higher, and 0.70 is considered the minimum threshold for composite reliability. The higher CR value means the higher construct contribution of the measurement model. (Hair et al., 2014, p. 619; MUKMININ et al., 2018, p. 88). As a result, all standardized factor loading estimates were higher than 0.50, and all CR estimates were greater than 0.70 as showed in Table 4.

Table 4. Item Factor Loading and Composite Reliability of the EQVMTS Questionnaires

Construct	Item	Factor Loading	S.E.	Composite Reliability
Emotional quotient	Self-awareness	0.668**	0.023	0.856
	Self-regulation	0.558**	0.027	
	Self-motivation	0.728**	0.020	
	Empathy	0.821**	0.020	
	Social skills	0.886**	0.018	
	mean	0.732		
Volunteer mind	Helping others	0.995**	0.015	0.930
	Giving to society	0.777**	0.017	
	Intention to social development	0.926**	0.017	
	mean	0.900		
Teacher Spirituality	Piyo	0.716**	0.017	0.902
	Garu	0.721**	0.017	
	Vatta ca	0.795**	0.013	
	Bhavaniyo	0.771**	0.015	
	Vacanakkhamo	0.627**	0.021	
	Gambhiranca katham katta	0.846**	0.011	
	No catthane niyojaye	0.793**	0.013	
mean	0.752			

** p < .01

c-3.2) Discriminant Validity

The last criterion of construct validity is discriminant validity. The conservative approach for establishing discriminant validity compares the AVE estimates for each factor with the squared interconstruct correlations associated with that factor (Hair et al., 2014, p. 633). Moreover, Brown (2006, p. 131) and Harrington (2009, pp. 6-7) recommended that correlations between constructs of

0.80 or higher indicate poor discriminant validity. All AVE estimates from Table 2 were greater than the corresponding interconstruct squared correlation estimates in Table 5 (above the diagonal), and all factor loadings in Table 3 (under the diagonal) were less than 0.80. Therefore, this test indicates there are no problems with discriminant validity for the measurement model.

c-4) An analysis of a causal relationship model by computer program included index of consistency which chi-square was not statistically significant ($p > 0.05$): root mean square error of approximation: RMSEA $< .05$ Tucker Lewis index: TLI: comparative fit Index: CFI > 0.97 : standardized root mean square residuals: SRMR < 0.05 and normed chi-square 2:1 or less (chi-square: df ratios on the order of 2:1 or less) (Hair, et. al, 2014, pp. 578-580; Schermelleh-Engel, Moosbrugger & Müller, 2003, p. 52;).

Table 5. Construct Correlation Matrix (Standardized)

Construct	Emotional quotient	Volunteer mind	Teacher Spirituality
Emotional quotient	1.000**	0.350**	0.398**
Volunteer mind	0.621**	1.000**	0.386**
Teacher Spirituality	0.631**	0.592**	1.000**

** $p < .01$

Research Results

Validity of a causal model of teacher spirituality in high school students in service area of Roi-Et Rajabhat University after model modification in the part of measurement error revealed that a causal model of teacher spirituality in high school students in service area of Roi-Et Rajabhat University was related consistently to empirical data. The statistical criteria indicated as follows: chi-square = 76.737, df = 63, p-value = 0.115, CFI = 0.999, TLI = 0.998, RMSEA = 0.015, SRMR = 0.020, and chi-square/df = 1.218 and coefficient of determination (R^2) of volunteer mind and teacher spirituality were 0.351 and 0.492 respectively. This revealed that emotional quotient described variance of volunteer mind at 35.10%, and emotional quotient through volunteer mind described teacher spirituality at 49.20%. When considering effect size, it showed that emotional quotient had direct effect on volunteer mind and teacher spirituality on statistically significance as 0.01 with factor loadings at 0.381 and 0.592 respectively. Moreover, volunteer mind showed direct effect on teacher spirituality at 0.405, and emotional quotient had indirect effect on teacher spirituality statistically at 0.01 and factor loading at 0.226 which data analysis was showed in Table 6 and Figure 2.

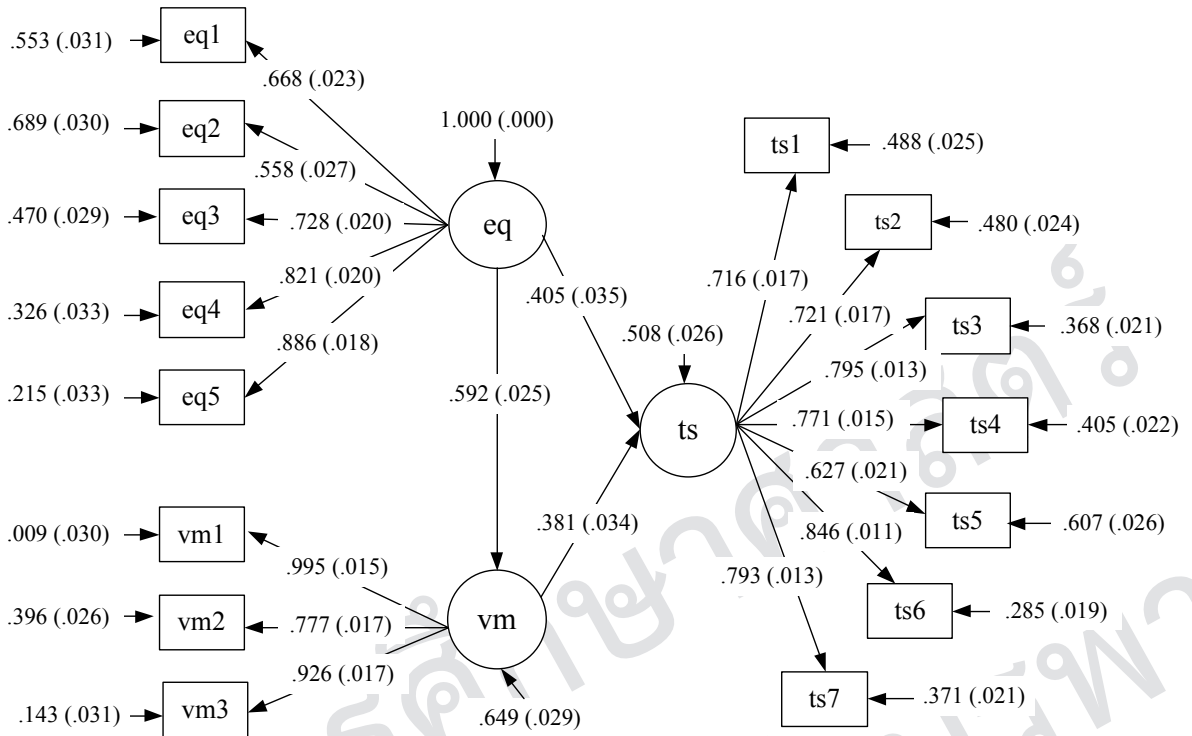


Figure 2 The Causal Relationship Model of Teacher Spirituality

Table 6. Analysis of the Causal Model of Teacher Spirituality

Independence variable	Coefficient effect of independence variable to dependence variable of the model					
	dependence variable					
	Volunteer mind			Teacher Spirituality		
	TE	IE	DE	TE	IE	DE
Emotional Quotient	0.592** (.025)	-	0.592** (.025)	0.631** (.024)	0.226** (.022)	0.405** (.035)
Volunteer mind	-	-	-	0.381** (.034)	-	0.381** (.034)

Chi-square = 76.737, df = 63, p-value = 0.115, CFI = 0.999, TLI = 0.998, RMSEA = 0.015, SRMR = 0.020
 Chi-square/df = 1.218

**** p < .01 Values in parentheses represent standard error

Discussion

Results from analyzing a causal model of teacher spirituality in high school students in service area of Roi-Et Rajabhat University illustrated that it was related to empirical data which structural equation model was according to the hypothesis. Variables of emotional quotient showed

direct effect on service mind variables. Besides, emotional quotient indirectly affected on teacher spirituality statistically significant at 0.01 followed the hypothesis which could be described as followed.

a) This study selected variables for developing the causal relationship model of teacher spirituality according to the concepts of Phra Brahmagunabhom in '*Buddhadhamma of Teacher Education*' (Payutto, 2008, p.108), Dawn of education for sustain development (Payutto, 2003, pp. 89-91) about teacher spirituality which was Eastern philosophy and studied documents and related research about factors affecting teacher spirituality. These involved emotional quotient, volunteer mind (Sungraksa, 2011, p.25), and factors affecting volunteer mind which is emotional quotient (Nonthachot, 2014, p.17; Pewpet et al., 2012, p.340; Wongpitak, 2013, p.68), and they developed the model to be relevant to empirical data.

b) Research instrument construction was administrated by examining components of teacher spirituality from the notion of Payutto (2016, p. 204), Emotional Quotient from Goleman (1998, p.47), and Volunteer mind from Wongyai (2011, p.234) and Wajee (2016, p.18) for the scopes of conducting questions and developing research instrument. Content validity of the questions was validated by experts in psychology and assessment. It revealed that all questions had index of congruence related to the criteria which referred that the instrument showed content validity (Senarat. 2018, p.118). For analyzing the model quality with confirmatory factor analysis before using in structural equation model, the findings found that 3 models were related to empirical data. This indicated that the instrument used in this study consisted of construct validity (Brown, 2006, p. 2-5; Senarat. 2018, p.114). In addition, data collection was carried out with appropriate and sufficient sample size as well as proper sampling method for statistics to analyze data (Hair, et. al, 2014, p. 572-574) This developed the model to be relevant with the empirical data. However, results of analyzing reliability showed that factor loadings in Table. 4 was between 0.558 to 0.995, and 3 observed variables had factor loadings below 0.7 which described low reliability (Nunnally, 1978, p. 245-246; Shyu, Li & Tang,. 2013, p.13.). Moreover, further use should be improved the quality by developing more questions and getting rid of low quality questions.

c) Findings of a causal relationship model of teacher spirituality of high school students in service area of Roi Et Rajabhat University showed coefficient discrimination (R^2) in volunteer mind and teacher spirituality at 0.351 and 0.492 respectively. This refers that emotional quotient described variance of teacher spirituality at 35.10%, and emotional quotient with volunteer mind described variance of teacher spirituality at 49.20%. This revealed that there are other variables that could describe variance of volunteer mind and teacher spirituality.

d) Emotional quotient had direct effect on teacher spirituality according to the study of Sungraksa (2011, p. 25), and emotional quotient directly influence volunteer mind statistically significant at 0.01 which is related to the studies of Pewpet et al, (2012, p. 340) and Nonthachot (2014, p. 77). Moreover, emotional quotient indirectly affected on teacher spirituality through volunteer mind significantly at 0.01. This means that emotional quotient was the significant factor for teacher spirituality. Besides, it found high factor loading for emotional quotient which were social skills, empathy, self-awareness, self-motivation, and self-regulation respectively. Self-regulation was less significant whereas the most significant one was social competency rather than personal competency. Thus, the development on teacher spirituality should emphasize on social competency rather than personal competency.

e) Volunteer mind had direct effect on teacher spirituality significantly at 0.01 which is relevant to the study of Sungraksa (2011, p.25). It showed high factor loading of volunteer mind which included intention to social development, helping others, and giving to society respectively. It found that these observed variables were all high factor loading. Therefore, teacher spirituality development should focus on all factors of volunteer mind.

Conclusion

This study purposed to validate a causal model of teacher spirituality of high school students in service area of Roi-Et Rajabhat University. It found that

- a) A causal model of teacher spirituality in high school students was related consistently to empirical data
- b) Emotional quotient and volunteer mind influence directly on teacher spirituality
- c) Emotional quotient indirectly influence on teacher spirituality

Recommendation

Teachers are most important in the process of educational development and learning development. A good and quality teacher requires high teacher spirituality. Findings revealed that emotional quotient and volunteer mind directly influenced on teacher spirituality, and emotional quotient had an indirect influence on teacher spirituality through volunteer mind statistically significant. Those who involve in the education process should arrange a training or support teachers or teacher students to develop emotional quotient and volunteer mind regularly. Also, those who involve in university admission for the faculty of education should focus on emotional quotient and volunteer mind as criteria to choose students for the institute.

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