รูปแบบของอีคิว เอคิว และสิ่งแวดล้อมศึกษาที่มีผลต่อพฤติกรรมสิ่งแวดล้อม

Model of EQ, AQ and Environmental Education Affecting Environmental Behavior

เอกวิน ขุนบุญจันทร์

บทคัดย่อ

วัตุประสงค์ของการวิจัยครังนี้คือการพัฒนารูปแบบความสัมพันธ์เชิงโครงสร้างของ ความฉลาดทางอารมณ์ (อีคิว) ความฉลาดในการแก้ปัญหา (เอคิว) และสิ่งแวดล้อมศึกษาที่มีผลต่อพฤติกรรมทางสิ่งแวดล้อมเพื่อบรรเทาภาวะโลกร้อน ผ่านแรงบันดาลใจในการมีจิตสำนึกสาธารณะ ประชากรเป็นนิสิตระดับปริญญาตรีจำนวน 37,101 คนของมหาวิทยาลัยมหาสารคามในภาคการศึกษาที่2 ปี 2555 ใช้เทคนิคการสุ่มตัวอย่างแบบหลายขั้นตอนในการเก็บรวบรวมกลุ่มตัวอย่างจำนวน 400 คน เครื่องมือวิจัยเป็นแบบสอบถามที่ใช้ในการเก็บรวบรวมข้อมูล และโปรแกรมลิสเรลใช้ในการวิเคราะห์ข้อมูล ผลการวิจัยพบว่าองค์ประกอบ อีคิว เอคิว และสิ่งแวดล้อมศึกษา สามารถอธิบายความแปรปรวนของพฤติกรรมทางสิ่งแวดล้อมเพื่อบรรเทาภาวะโลกร้อนได้ร้อยละ 97.00 โดยผ่านแรงบันดาลใจในการมีจิตสำนึกสาธารณะ และแรงบันดาลใจในการมีจิตสำนึกสาธารณะมีอิทธิสูงสุดด้วยอิทธิพล 0.67 ส่วน อีคิว เอคิว และสิ่งแวดล้อมศึกษา สามารถอธิบายความแปรปรวนของแรงบันดาลใจในการมีจิตสำนึกสาธารณะได้ร้อยละ 85.00 และสิ่งแวดล้อมศึกษา มีอิทธิสูงสุดด้วยอิทธิพล 0.51

คำสำคัญ: รูปแบบ, อีคิว, เอคิว, สิ่งแวดล้อมศึกษา, มีผลต่อ, พฤติกรรมทางสิ่งแวดล้อมเพื่อบรรเทาภาวะโลกร้อน

Abstract

The objective is to develop a structural relationship model Emotional Quotient (EQ), Adversity Quotient (AQ) and Environmental Education (EE) affecting Environmental Behavior for Global Warming Alleviation (BEH) through inspiration of public consciousness (IPC). The populations were 37,101 undergraduate student of Mahasarakham University in second semester of academic year of 2012. The Multi-stage simple random sampling technique was employed to collect the sample for 400 undergraduate students. The research instrument was the questionnaire and it was used for data collecting. LISREL was used for model verification. Results illustrated that the structural model confirmatory factors of AQ, EQ, and EE were able to explain the variation of endogenous factors of IPC to cause BEH with 97.00 percent. IPC was the most effective on BEH with an effect to 0.67. Consequently, EE, EQ, and AQ, were able to explain the variation of IPC with 85.00 percent. EE was the most effective on BEH with an effect 0.51.

Keywords: model, EQ, AQ, environmental education, affecting, environmental behavior for global warming alleviation

Introduction

It is worldwide knowledgeable that climate change is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. However, human activities, primarily the burning of fossil fuels and clearing of forests, have intensified the natural greenhouse effect, causing global warming. It impacts to environmental quality deprivation and natural resources demolition that is subsequent to global warming. Nevertheless, the deforestation is claimed as the key component for global warming and consequence is fossil fuel burning (IPCC, 2011; National Research Council of USA, 2010; United States National Academy of Sciences, 2008).

Emotional quotient (EQ), also called emotional intelligence quotient, is a measurement of a person's ability to monitor his or her emotions, to cope with pressures and difficulty, and to control his or her thoughts and actions. EQ is the ability to evaluate and concern situations and relationships with other peoples. The style of EQ test varies according to each model, but most involve some form of problem solving, hypothetical scenarios, or self-reported data. EQ test emphasizes deeply on problem solving designed to measure test takers' ability to detect, comprehend, and control emotions within themselves and others. High scores indicate high awareness of general social norms. One of the most commonly used ability tests is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), which contains a total of 122 questions. Measurements of people's EQs are used in many situations. The idea is very accepted in the business world, where many businesses use EQ tests to help their employees determine and measure their emotional responses to different situations. Most such tests are administered with the idea that this factor can be modified or increased. EQ is innate ability and learned behavior. EQ tests are often used in business to identify strengths and weaknesses in employees so that these employees can learn skills to improve certain aspects of their EQ. EQ might affect his or her performance in relationship with others including communication skills and other social skills (Goleman, 1995; Mayer, Salovey, & Caruso, 2000; Bar-On, 2007; Bar-On, 2010).

Adversity Quotient (AQ) is an ability to resolve the problems and thrash about obscurity with aim to find a method to adjust the disaster to be an occasion with powerful mind. AQ will support anyone to be a courageous person with patience and try hard without giving up, as a result normally, the person with this characteristic frequently success (Stoltz, 1997; Seligman, 2002; Peterson &Seligman, 2004).

AQ is the most rationally sturdy and generally used way in the world for evaluating and strengthening human suppleness. Moreover, person who has good AQ will be an optimist. The original component of human success is technique to handle with how people respond to to the difficulty of life. There was powering evidence on our live responsiveness to difficult object of hassles, annoyances, and obstructions are the most scaring debacles that involve a superficial role in all human effort (Stoltz, 1997; Seligman, 2002; Peterson &Seligman, 2004; Seligman, 2004).

Environmental Education (EE) is vital for promoting sustainable development through developing the people

capacity to attend to environment and development issues. Especially it should be implemented via all education system whether formal, informal, non-formal and lifelong education in order to raise awareness, to change attitude, to cultivate the consciousness, to take responsibility and to practice skill for accomplish better environmental behavior with inspiration of public mind or public consciousness. The principles of EE is consistent to Sustainable Development (SD) in terms of increasing environmental knowledge and understanding, changing people's attitudes and awareness, to have appropriate value and skill to take responsible for environmental conservation behavior based on inspiration of public mind and for effective public participation in decision-making. Moreover, to meet effectiveness of EE and SD should deal with the dynamics of both the physical/biological and socio-economic environment and human (which may include spiritual) development, should be integrated in all disciplines with effective means of communication (WCED, 1987; Thiengkamol, 2011e).

Thiengkamol revealed from a variety of researches on inspiration of public consciousness or public mind, she pointed out that it might occur from one' insight with or without any action or it might occur from one's impression on role model, event, environment and media perception. It is dissimilar from motivation because inspiration needs no rewards. Inspiration of public consciousness or public mind, especially, for natural resources and environment conservation, one doesn't receive any incentive, respect or gratefulness for one's act for natural resources and environment conservation (Thiengkamol, 2009a; Thiengkamol, 2011f; Thiengkamol, 2011i; Thiengkamol, 2011j; Thiengkamol, 2012c, Thiengkamol, 2012d; Thiengkamol, 2012e). She and her colleagues also found the similar research results that point out that the Inspiration of public consciousness or public mind is play important roles to affect environmental behaviors (Donkonchum et al., 2012a; Gonggool et al., 2012b; Morrasri et al, 2012b; Ruboon et al., 2012a; Pimdee et al., 2012a; Udonboon et al., 2012b; Waewthaisong et al., 2012a).

EQ and AQ are important psychological factors that affect to human behavior. EE is also significant factor influencing to environmental behavior for global warming alleviation through inspiration of public consciousness including person as role model, impressive event, impressive environment, and media perception (Thiengkamol, 2012f; Thiengkamol, 2012g; Thiengkamol, 2012h).

Therefore, this research was designed to study by covering all factors relating as mentioned above, it would be able to develop a model of environmental behaviors for global warming alleviation that are affected by EQ, AQ and EE through inspiration of public consciousness.

Objective

The objective was to propose a structural model of EQ, AQ and EE affecting to environmental behavior for global warming alleviation through inspiration of public consciousness.

Conceptual Framework

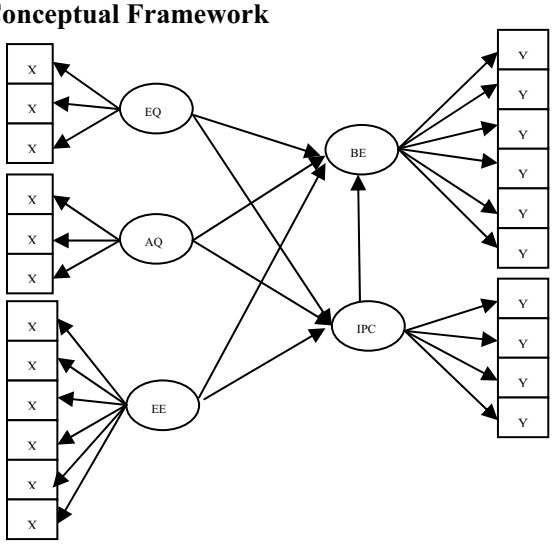


Figure 1 Conceptual Framework

Methodology

Population and Sample

The populations were 37,101 undergraduate students of the second semester in academic year 2012 of Mahasarakham University in Northeastern region of Thailand. The simple random sampling technique was employed to collect the sample for 400 students from Mahasarakham University by using Multi-stage random sampling technique.

Research Tool

The research instrument was the questionnaire and it was used for data collection. The questionnaire consisted of 10 items of demographic characteristics and 100 questions with 5 rating scales of EQ, AQ , EE, IPC, and BEH. The content and structural validity were determined with Item Objective Congruent (IOC) by 5 experts in the aspects of psychology, social science and social research methodology (Rovinelli & Hambleton, 1977). The reliability was done by collecting the sample group from 50 students undergraduate students of Rajabhat Mahasarakham University which is nearby Mahasarakham University. The reliability was determined with Cronbach's Alpha (Cronbach, 1951). The reliability of EQ, AQ, EE, IPC, and BEH, and total questionnaire were 0.919, 0.770, 0.972, 0.977, 0.964 and 0.970 respectively.

Data Collection

The questionnaire was used for data collecting from Mahasarakham University during
the second semester in academic year 2012.

Statistical Analysis

The descriptive statistics used were frequency, percentage, mean and standard deviation. The inferential statistics used was LISREL by considering on Chi-Square value differs from zero with no statistical significant at 0.05 level or Chi-Square/df value with lesser or equal to 5, P-value with no statistical significant at 0.05 level and RMSEA (Root Mean Square Error Approximation) value with lesser than 0.05 including index level of model congruent value, GFI (Goodness of Fit Index) and index level of model congruent value, AGFI (Adjust Goodness of Fit Index) between 0.90-1.00.

Result

1. Results of confirmatory factors of exogenous variables

1.1 Confirmatory factors analysis of exogenous variables of Emotional Quotienal (EQ)

Confirmatory Factor Analysis of Exogenous Variables of Emotional Quotient (EQ) affecting to Environmental

Behaviors for Global Warming Alleviation (BEH) was revealed as the followings.

Confirmatory factors of EQ had Bartlett's test of Sphericity of 185.539 statistically significant level of 0.01, and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA of 0.593. This indicated that components of EQ aspect had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in Figure 2 and table 1.

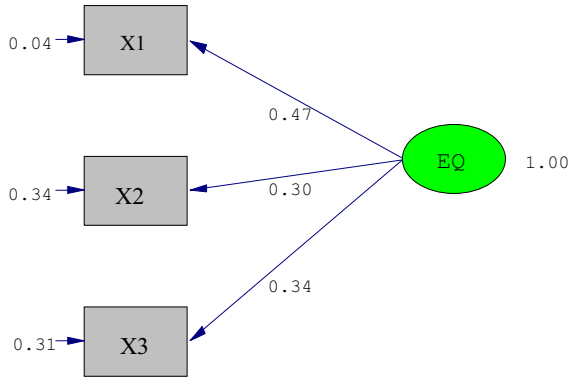


Figure 2 Confirmatory factors of Emotional Quotient

Table 1

Results of Analysis of Confirmatory factors of Emotional Quotient

Components of Emotional Quotient	**Weight**	**SE**	**t**	R^2
X1 Emotional Realization	0.47	0.04	10.61**	0.86
X2 Emotional Control	0.30	0.04	7.39**	0.20
X3 Performance and Decision Making	0.34	0.04	8.12**	0.27
Chi-square = 0.00 df = 0 P = 1.00000				
GFI =1.00 AGFI =1.00 RMSEA = 0.000 RMR =0.000				

** Statistically significant level of .01

From Figure 1 and table 1, results of analysis of confirmatory factors of Emotional Quotient (EQ) from 3 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust Goodness of Fit Index (AGFI) equaled to 1.00, 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.000 (RMSEA < 0.05) and 3) Chi- Square value had no statistically significant at level of 0.01 and divided by degree of freedom was lesser than or equaled to 5.00 ($\chi^2/df \leq 5.00$).

Considering on loading weight of observed variables in model, it was revealed that observed variables had loading weight with 0.30 to 0.47 and had covariate to model of Emotional Quotient (EQ) with 20.00 to 86.00 percent.

1.2 Results of confirmatory factors analysis of exogenous variable of Adersity Quotient (AQ)

Confirmatory Factor Analysis of Exogenous Variables of Adversity Quotient (AQ) affecting to Environmental Behaviors for Global Warming Alleviation (BEH) was revealed as the followings.

Confirmatory factors of AQ had Bartlett's test of Sphericity of 339.969 statistically significant level of 0.01, and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA of 0.694. This indicated that components of AQ aspect had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in figure 3 and table 2.

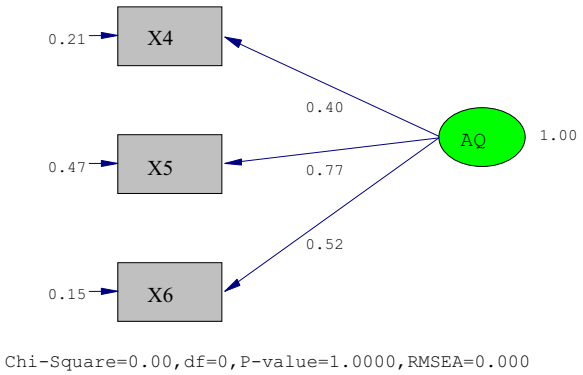


Figure 3 Confirmatory factors Adversity Quotient

Table 2

Results of analysis of confirmatory factors of Adversity Quotient

Components Adversity Quotient	Weigh t	SE	t	R^2
X4 Personal Challenge	0.40	0.03	13.14**	0.44
X5 Family Challenge	0.77	0.05	14.75**	0.56
X6 Social Challenge	0.52	0.03	15.85**	0.65
Chi-square = 0.00 df = 0 P = 1.00000				
GFI =1.00 AGFI =1.00 RMSEA = 0.000 RMR =0.000				

** Statistically significant level of .01

From figure 2 and table 2, results of analysis of confirmatory factors of Adversity Quotient (AQ) from 3 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust Goodness of Fit Index (AGFI) equaled to 1.00, 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.000 (RMSEA < 0.05) and 3) Chi- Square value had no statistically significant at level of 0.01 and divided by degree of freedom was lesser than or equaled to 5.00 ($\chi^2/df \leq 5.00$).

Considering on loading weight of observed variables in model, it was revealed that observed variables had loading weight with 0.40 to 0.77 and had covariate to model of Adversity Quotient (AQ) with 44.00 to 65.00 percent.

1.3 Confirmatory factors analysis of exogenous variables of Environmental Education (EE)

Confirmatory Factor Analysis of Exogenous Variables of Environmental Education (EE) affecting to Environmental Behaviors for Global Warming Alleviation (BEH) was revealed as the followings.

Confirmatory factors of EE had Bartlett's test of Sphericity of 2115.466 statistically significant level (p< .01) and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA) of 0.860. This indicated that components of EE aspect had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in figure 4 and table 3.

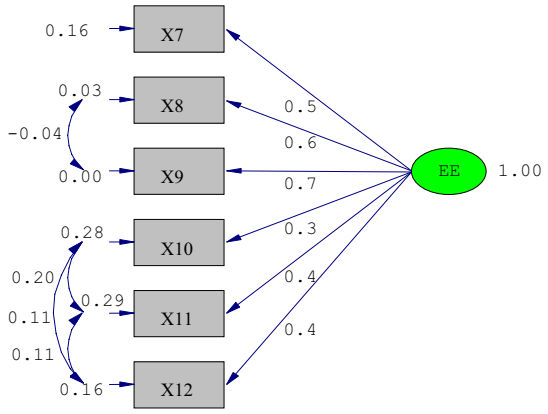


Figure 4 Confirmatory factors of Environmental Education

Table 3

Results of analysis of confirmatory factors of Environmental Education

Components of Environmental Education	Weight	SE	t	R^2
X7 Knowledge and Understanding	0.59	0.030	19.38**	0.68
X8 Environmental Awareness	0.62	0.026	24.14**	0.93
X9 Environmental Attitude	0.78	0.030	25.70**	0.99
X10 Environmental Skill	0.36	0.030	12.11**	0.31
X11 Environmental Participation	0.41	0.031	13.13**	0.36
X12 Environmental Evaluation	0.44	0.026	16.76**	0.54
Chi-square = 7.83 df = 5 P = 0.16603				
GFI = 0.99 AGFI = 0.97 RMSEA = 0.038 RMR =0.0032				

** Statistically significant level of .01

From Figure 3 and table 3, results of analysis of confirmatory factors of EE from 5 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 0.99 and Adjust Goodness of Fit Index (AGFI) equaled to 0.97, 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.041 (RMSEA < 0.05) and 3) Chi- Square value had no statistically significant at level of 0.01 and divided by degree of freedom was lesser than or equaled to 5 ($\chi^2/df \leq 5.00$).

Considering on loading weight of 6 observed variables in model, it was revealed that observed variables had loading weight with 0.36 to 0.78 and had covariate to model of Environmental Education with 31.00 to 99.00 percent.

2. Results of confirmatory factors of endogenous variable

Results of Confirmatory Factors Analysis of Endogenous Variables of Inspiration of Public Consciousness influencing to Environmental Conservation Behaviors was revealed as followings.

2.1 Confirmatory factors analysis of endogenous variables of inspiration of public consciousness for environmental conservation (IPC)

Confirmatory Factors Analysis of Endogenous Variables of Inspiration of Inspiration of Public Consciousness for Environmental Conservation (IPC) to Environmental Behaviors for Global Warming Alleviation (BEH) was revealed as the followings.

Confirmatory Factors of Inspiration of Inspiration of Public Consciousness for Environmental Conservation (IPC) had Bartlett's test of Sphericity of 1280.480 statistically significant level ($p< 0.01$) and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA) of 0.846. This indicated that components Inspiration of Inspiration of Public Consciousness for Environmental Conservation (IPC) aspect had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in figure 5 and table 4.

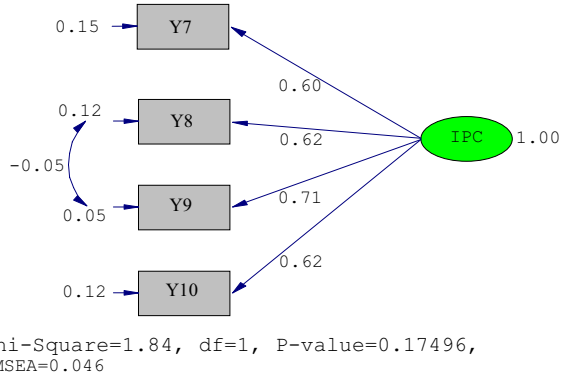


Figure 5 Confirmatory factor of Inspiration of Public Consciousness for Environmental Conservation

Table 4

Results of analysis of confirmatory factors of public consciousness for environmental conservation

Confirmatory factors of Public Consciousness for Environmental Conservation	Weight	SE	t	R^2
Y7 Person as Role Model	0.60	0.029	20.39**	0.70
Y8 Impressive Event	0.62	0.030	21.04**	0.76
Y9 Impressive Environment	0.71	0.029	24.80**	0.92
Y10 Media Receiving	0.62	0.028	21.69**	0.76
Chi-square = 1.84 df = 1 P = 0.17496				
GFI = 1.00 AGFI = 0.98 RMSEA = 0.046 RMR = .0030				

** Statistically significant level of .01

From Figure 4 and table 4, results of analysis of confirmatory factors of IPC from 4 observed variables was revealed that the model was congruent to empirical data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust Goodness of Fit Index (AGFI) equaled to 0.98, 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.046 (RMSEA < 0.05), and 3) Chi- Square value had no statistically significant at level of .01 and divided by degree of freedom was lesser than or equaled to 5.00 ($\chi^2/df \leq 5.00$).

Considering on loading weight of 4 observed variables in model, it was revealed that observed variables had loading weight with 0.60 to 0.71 and had covariate to model of Inspiration of Public Consciousness for Environmental Conservation (IPC) with 70.00 to 92.00 percent.

2.2 Confirmatory factors analysis of endogenous variables of environmental behaviors for global warming alleviation (BEH)

Confirmatory Factors of Environmental Behaviors for Global Warming Alleviation had Bartlett's test of Sphericity of 1409.304 statistically significant level ($p< 0.01$) and Kaiser–Mayer–Olkin Measure of Sampling Adequacy/MSA) of 0.833. This indicated that components of BEH aspect had proper relationship at good level and it can be used for analysis of confirmatory factors as shown in Figure 6 and table 5.

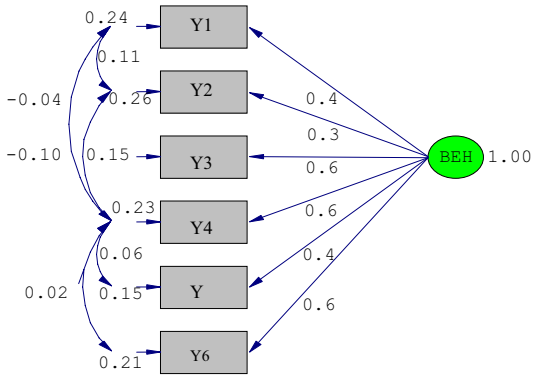


Figure 6 Confirmatory factors of Environmental Behaviors for Global Warming Alleviation

Table 5

Results of analysis of confirmatory factors of environmental behaviors for global warming alleviation

Confirmatory factors of Environmental Behaviors for Global Warming Alleviation	**Weight**	**SE**	**t**	R^2
Y1 Consumption Behavior	0.44	0.031	14.21**	0.45
Y2 Energy Conservation Behavior	0.39	0.031	12.70**	0.37
Y3 Recycling Behavior	0.63	0.031	19.89**	0.73
Y4 Waste Management Behavior	0.61	0.036	16.78**	0.62
Y5 Travelling Behavior	0.49	0.028	17.52**	0.61
Y6 Knowledge Transferring for Environmental Conservation	0.60	0.0.8	18.00**	0.63
Chi-square = 4.94 df = 4 P = 0.29356				
GFI = 1.00 AGFI = 0.98 RMSEA = 0.024 RMR = 0.0055				

** Statistically significant level of .01

From Figure 6 and table 5, results of analysis of confirmatory factors of Environmental Behaviors for Global Warming Alleviation from 6 observed variables was revealed that the model was congruent to empirical

data by considering from 1) Goodness of Fit Index (GFI) equaled to 1.00 and Adjust Goodness of Fit Index (AGFI) equaled to 98, 2) Root Mean Square Error of Approximation (RMSEA) equaled to 0.000 (RMSEA < 0.05) and 3) Chi- Square value had no statistically significant at level of 0.01 and divided by degree of freedom was lesser than or equaled to 5.00 ($\chi^2/df \leq 5.00$).

Considering on loading weight of 6 observed variables in model, it was revealed that observed variables had loading weight with 0.39 to 0.63 and had covariate to model of Environmental Behaviors for Global Warming Alleviation (BEH) with 37.00 to 73.00 percent.

3. Results of effect among variables in model in terms of direct effect

1) Confirmatory factors of Emotional Quotient (EQ) had direct effect to Inspiration of Public Consciousness for Environmental Conservation (IPC) and Environmental Behaviors for Global Warm 0.26 and 0.29. Moreover, model Emotional Quotient (EQ), had indirect effect to Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.17.

2) Confirmatory factors of Adversity Quotient (AQ) had direct effect to Inspiration of Public Consciousness for Environmental Conservation (IPC) and Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.29 and 0.30. Moreover, confirmatory factors in aspect of Adversity Quotient (AQ) had indirect effect to Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.19.

3) Confirmatory factors of Environmental Education (EE) had direct effect to Inspiration of Public Consciousness for Environmental Conservation (IPC) and Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.51 and 0.46. Moreover, confirmatory factors in aspect of Environmental Education (EE) had indirect effect to Behaviors for Global Warming Alleviation (BEH) with no statistically significant at level of 0.01 with effect of 0.34.

4) Confirmatory factors of Inspiration of Public Consciousness for Environmental Conservation (IPC) had direct effect Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.67.

5) Considering on structural model confirmatory factors of Adversity Quotient (AQ), oEmotional Quotient (EQ), and Environmental Education (EE) were able to explain the variation of endogenous factors of Inspiration of Public Consciousness for Environmental Conservation (IPC) to caused Environmental Behaviors for Global Warming Alleviation (BEH) with 97.00 percent as following in Equation (1).

BEH = 0.30*AQ+0.29*EQ +0.46*EE+ 0.67 *IPC..(1)

($R^2 = 0.97$)

Equation (1) factors that had the most effect to Environmental Behaviors for Global Warming Alleviation (BEH) was Inspiration of Public Consciousness (IPC) with effect of 0.67 and subsequences were Environmental Education (EE), Adversity Quotient (AQ) and Emotional Quotient (EQ) with effect of 0.46, 0.30, and 0.29 respectively. These

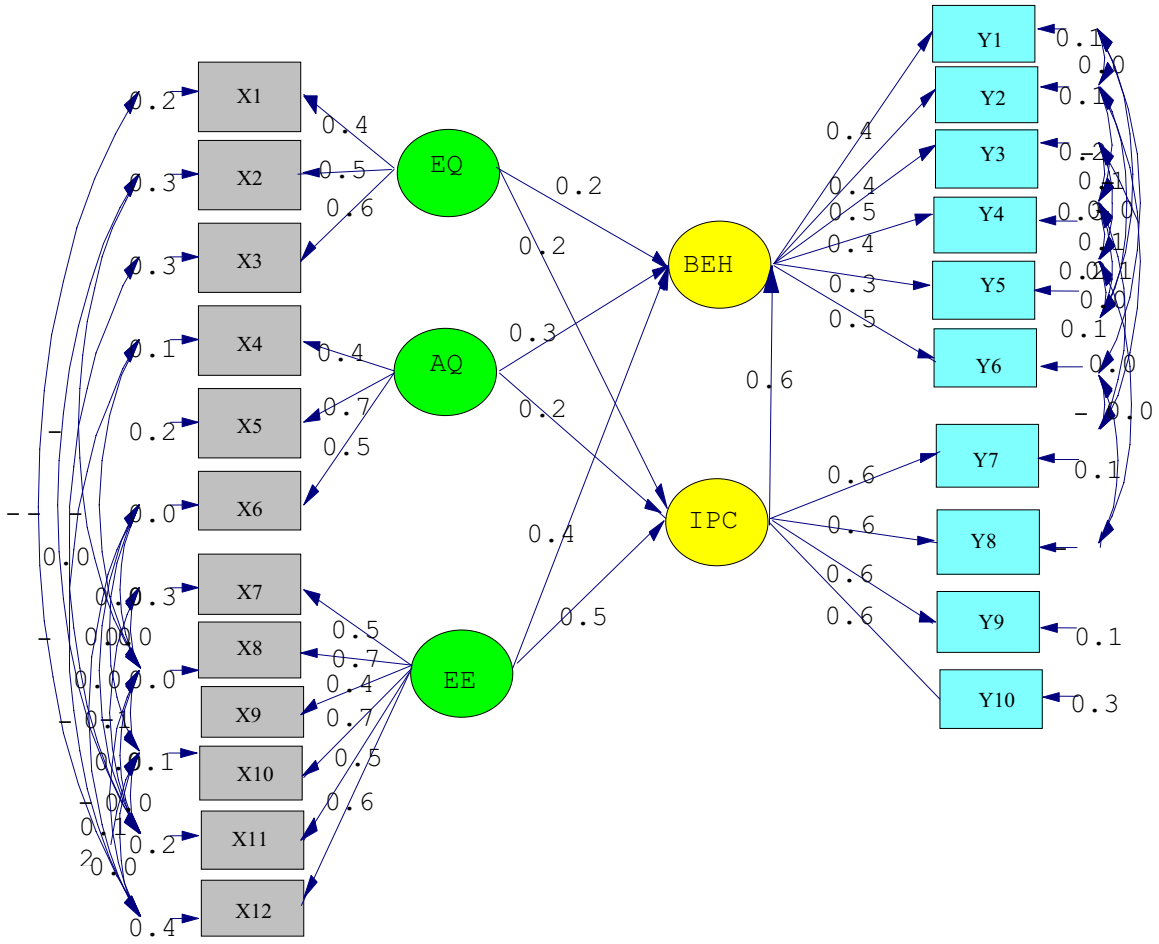
were able to explain the variation of Environmental Behaviors for Global Warming Alleviation (BEH) with 97.00 percent.

Consequently, confirmatory factors of Environmental Education (EE), Emotional Quotient (EQ), and Adversity Quotient (AQ), were able to explain the variation of confirmatory factors of Inspiration of Public Consciousness for Environmental Conservation (IPC) with 85.00 percent. Therefore, the equation can be written as following Equation (2).

IPC = 0.51*EE0.29*AQ + 0.26*EQ ……..……(2)

(R^2 = 0.85)

Equation (2) factors that had the most effect to Inspiration of Public Consciousness for Environmental Conservation (IPC) was Environmental Education (EE) with effect of 0.51, subsequences were Adversity Quotient (AQ) and Emotional Quotient (EQ), with effect of 0.29 and 0.26. These were able to explain the variation of Inspiration of Public Consciousness for Environmental Conservation (IPC) with 85.00 percent.



Chi-Square=279.969, df=179, P-value=0.18634,RMSEA=0.005

Figure 6 Model of Direct and Indirect Effect of EQ, AQ and EE through IPC Affecting BEH

Discussion

The results was revealed that confirmatory factors of Intelligence Emotional Quotient (EQ) had direct effect to Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.29, and had indirect effect to

Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.17. Furthermore, Emotional Quotient (EQ) had direct effect to Inspiration of Public Consciousness (IPC) with statistically significant at level of 0.01 with effect of 0.26 (Thiengkamol, 2011i; Thiengkamol, 2011j; Thiengkamol, 2012c; Thiengkamol, 2012d; Thiengkamol, 2012e; Donkonchum et al., 2012a; Gonggool et al., 2012b; Morrasri et al, 2012b; Ruboon et al., 2012a; Udonboon et al., 2012b).

Therefore, it is evidently that Emotional Quotient (EQ) composing of Emotional Realization (X1), Emotional Control (X2) and Performance and Decision Making (X3) affecting to Environmental Behavior for Global Warming Alleviation (BEH) through Inspiration of Public Consciousness (IPC) composing of Person as Role Model (Y7), Impressive Event (Y8), Impressive Environment (Y9), and Media Receiving (Y10), therefore the results of this study are harmonious to various studies of Thiengkamol and her colleagues.

Concurrently, the results was revealed that confirmatory factors of Adversity Quotient (AQ) had direct effect to Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.30, and had indirect effect to Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.19. Furthermore, Adversity Quotient (AQ) had direct effect to Inspiration of Public Consciousness (IPC) with statistically significant at level of 0.01 with effect of 0.29.

Therefore, it is clearly seen that Adversity Quotient (AQ) composing of Personal Challenge (X4), Family Challenge (X5) and Social Challenge (X6) affecting to Environmental Behavior for Global Warming Alleviation (BEH) through Inspiration of Public Consciousness (IPC) composing of Person as Role Model (Y7), Impressive Event (Y8), Impressive Environment (Y9), and Media Receiving (Y10), therefore the results of this study are harmonious to various studies of Thiengkamol and her colleagues.

The exogenous factors of Emotional Quotient (EQ), Adversity Quotient (AQ) and Environmental Education (EE) were able to explain the variation of endogenous factors of Inspiration of Public Consciousness (IPC) to caused Environmental Behaviors for Global Warming Alleviation (BEH) with 97.00 percent (Thiengkamol, 2011i; Thiengkamol, 2011j; Thiengkamol, 2012c; Thiengkamol, 2012d; Thiengkamol, 2012e; Thiengkamol, 2013a; Donkonchum et al., 2012a; Gonggool et al., 2012b; Morrasri et al., 2012b; Pimdee et al., 2012a; Ruboon et al., 2012a; Udonboon et al., 2012b).

Moreover, Environmental Education (EE) had direct effect to Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.46, and had indirect effect to Environmental Behaviors for Global Warming Alleviation (BEH) with statistically significant at level of 0.01 with effect of 0.34. Furthermore, Environmental Education (EE) had direct effect to Inspiration of Public Consciousness (IPC) with statistically significant at level of 0.01 with effect of 0.51.

Therefore, it is clearly seen that Environmental Education (EE) composing of Knowledge and

Understanding (X7), Environmental Awareness (X8), Environmental Attitude (X9), Environmental Skill (X10), Environmental Participation (X11), and Environmental Evaluation (X12) affecting to Environmental Behavior for Global Warming Alleviation (BEH) through Inspiration of Public Consciousness (IPC) composing of Person as Role Model (Y7), Impressive Event (Y8), Impressive Environment (Y9), and Media Receiving (Y10), therefore the results of this study are harmonious to various studies of Thiengkamol and her colleagues (Thiengkamol, 2011i; Thiengkamol, 2011j; Thiengkamol, 2012c; Thiengkamol, 2012d; Thiengkamol, 2012e; Donkonchum et al., 2012a; Gonggool et al., 2012b; Morrasri et al, 2012b; Ruboon et al., 2012a; Udonboon et al., 2012b).

The model of EQ, AQ and EE affecting to BEH through IPC was verified the proposed model was fitted with all observe variables according to criteria of Chi-Square value differs from zero with no statistical significant at 0.05 level or Chi-Square/df value with lesser or equal to 5, P-value with no statistical significant at 0.05 level and RMSEA (Root Mean Square Error Approximation) value with lesser than 0.05 including index level of model congruent value, GFI (Goodness of Fit Index) and index level of model congruent value, AGFI (Adjust Goodness of Fit Index) between 0.90-1.00.

Therefore, it might be concluded that EQ, AQ and EE play very important roles to create the environmental behavior of consumption behavior, energy conservation, waste management, travelling behavior, recycling behavior, and knowledge transferring and supporting for environmental conservation, therefore Four Nobel Truths should be reintroduced again in the school. However, EQ and AQ are significant factors for undergraduate students to have environmental conservation behavior for global warming alleviation through public consciousness to meet sustainable development. These results were congruent to concepts proposed by Thiengkamol (2009a, 2009b, 2011e, 2011f).

References

Bar-On, R. (2010). Emotional intelligence: An integral part of positive psychology. *South African Journal of Psychology, 40*(1), 54-62.

Bar-On, R. (2007). The Bar-On model of emotional intelligence: A valid, robust and applicable EI model. *Organisations and People, 14*(1), 27-34.

Donkonchum, S., Thiengkamol, N. & Thiengkamol, C. (2012a). Causal relationship model of environmental conservation behavior integrated with LCA knowledge. *European Journal of Social Sciences*, *3*3(1), 5-13.

Goleman, D. (1995). Emotional intelligence. New York: Bantam Books.

Gonggool, D., Thiengkamol, N. & Thiengkamol, C. (2012b). Development of environmental education volunteer model through inspiration of public consciousness for sustainable development. *European Journal of Social Sciences*, *3*2(1), 150-160.

IPCC. (2011). *IPCC introduces new climate change' definition.* Retrieved from: http://www.thegwpf.org/ipcc-introduces-new-climate-change-definition/

Mayer, J. D., Salovey, P. & Caruso, D. R. (2000). Handbook of human intelligence (2nd Edition). New York: Cambridge.

Morrasri, P., Thiengkamol, N. & Thiengkamol, T. (2012b). Causal relationship model of little green child with environmental behavior. *European Journal of Social Sciences*, *34*(2), 177-189.

National Research Council of USA. (2010). *Advancing the science of climate change*. Washington, D.C.: The National Academies Press.

Pimdee, P., Thiengkamol, N. & Thiengkamol, T. (2012a). Causal relationship model of electrical energy conservation. *European Journal of Social Sciences*, *3*2(3), 306-315.

Ruboon, O., Thiengkamol, N., Thiengkamol, T. & Kurokodt, J. (2012a). Model of environmental education teacher with inspiration of environmental conservation for global warming alleviation. *European Journal of Social Sciences*, *31*(1), 92-102.

Peterson, C. & Seligman, M.E.P. (2004). *Character strengths and virtues a handbook and classification.* Washington, D.C.: APA Press and Oxford University Press.

Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment.* New York: Free Press.

Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification.* Washington, D.C.: APA Press and Oxford University Press.

Stoltz, P. G. (1997). Adversity quotient: Turning obstacles into opportunities. U.S.A: John Wiley & Son, Inc.

Thiengkamol, N. (2009a). *The reat philosopher: The scientist only know but intuitioner is Lord Buddha.* Bangkok: Prachya Publication.

Thiengkamol, N. (2009b). *The happiness and the genius can be created before born.* Bangkok: Prachya Publication.

Thiengkamol, N. (2011e). *Environment and development book 1* (4th Edition). Bangkok: Chulalongkorn University Press.

Thiengkamol, N. (2011f). *Nurture children to be doctors*. Bangkok: INTELLUALS.

Thiengkamol, N. (2011i). Development of model of environmental education and inspiration of public consciousness influencing to global warming alleviation. *European Journal of Social Sciences*, *25*(4), 506-514.

Thiengkamol, N. (2011j). Model of psychological state affecting to global warming alleviation. *Canadian Social Science, 7*(6), 89-95.

Thiengkamol, N. (2012c). Model of psychological trait affecting to global warming alleviation. *European Journal of Social Sciences*, *30*(3), 484-492.

Thiengkamol, N. (2012d). Model of psychological factors affecting to global warming alleviation. *International Proceedings of Economic Development and Research, 44*(1), 6-12.

Thiengkamol, N. (2012e). Causal relationship model of environmental education. *Mediterranean Journal of Social Sciences*, *3*(11), 11-18.

Thiengkamol, N. (2012f). Causal relationship model of environmental education and psychological trait. *Mediterranean Journal of Social Sciences*, *3*(11), 263-272.

Thiengkamol, N. (2012g). Causal relationship model of four noble truths. *Mediterranean Journal of Social Sciences, 3*(11), 319-326.

Thiengkamol, N. (2012h). Model of environmental education and psychological factors affecting to global warming alleviation. *Mediterranean Journal of Social Sciences*, *3*(11), 427-436.

Udonboon, C. Thiengkamol, N. & Thiengkamol, C. (2012b). Causal relationship model of water conservation behavior. *Mediterranean Journal of Social Sciences*, *3*(11), 591-604.

United States National Academy of Sciences. (2008). *Understanding and Responding to Climate Change.* Retrieved from http://americasclimatechoices.org/climate_change_2008_final.pdf

Waewthaisong, S., Thiengkamol, N. & Thiengkamol, C. (2012a). Causal relation model of environmental traveling behavior . *European Journal of Social Sciences*, *33*(1), 184-195.

World Commission on Environment and Development. (1987). *Our common future*. Oxford: Oxford University Press.