CHAPTER III

RESEARCH METHODOLOGY

This part of the study aimed at presenting the procedures based upon the research objectives and the research steps as well. It was designed as "Research and Development" (R&D) process with the following phases, and a flowchart of each phase was first presented as a guide to the whole research process.
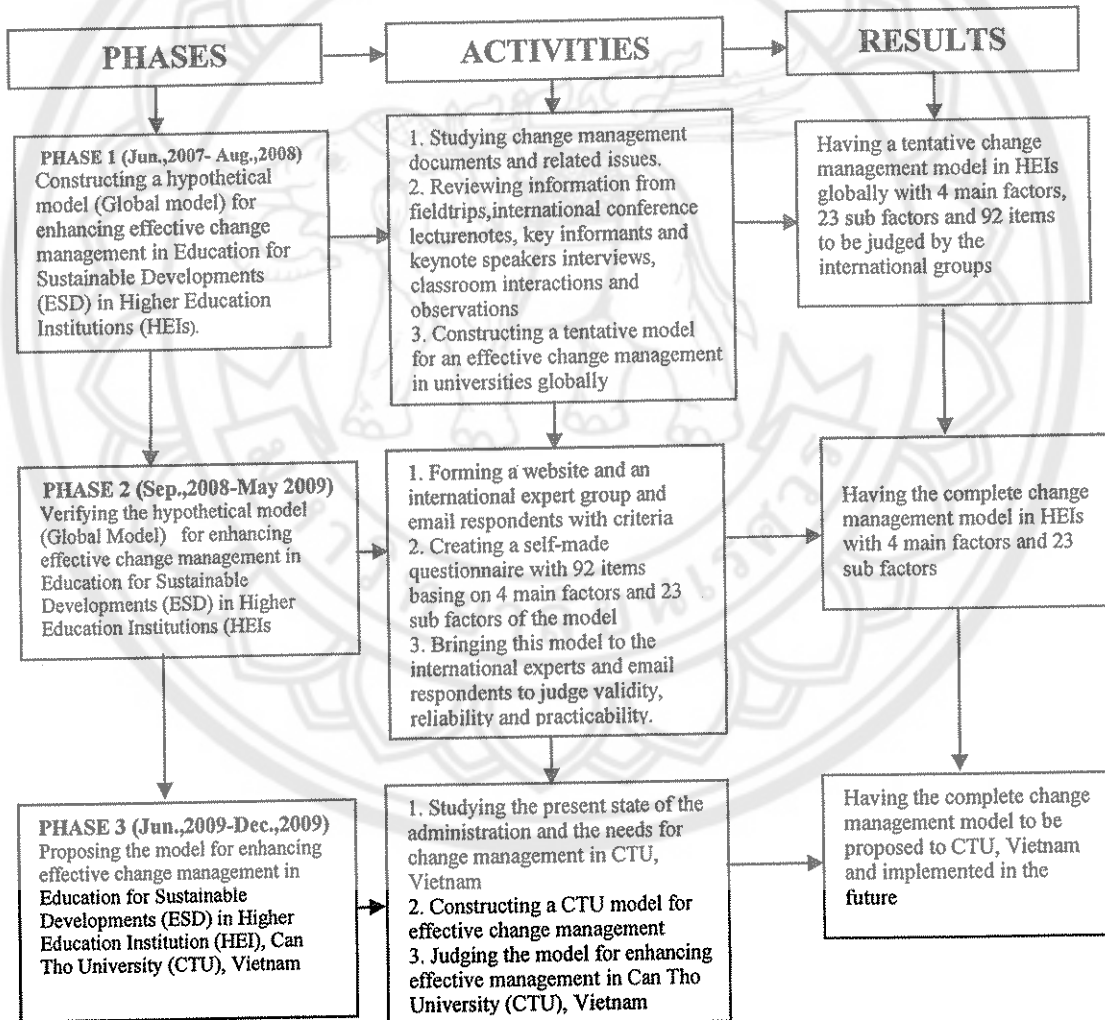
Flowchart of Research Process

PHASES	ACTIVITIES	RESULTS
PHASE 1 (Jun.,2007- Aug.,2008) Constructing a hypothetical model (Global model) for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institutions (HEIs).	1. Studying change management documents and related issues. 2. Reviewing information from fieldtrips, international conference lecturenotes, key informants and keynote speakers interviews, classroom interactions and observations 3. Constructing a tentative model for an effective change management in universities globally	Having a tentative change management model in HEIs globally with 4 main factors, 23 sub factors and 92 items to be judged by the international groups
PHASE 2 (Sep.,2008-May 2009) Verifying the hypothetical model (Global Model) for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institutions (HEIs	1. Forming a website and an international expert group and email respondents with criteria 2. Creating a self-made questionnaire with 92 items basing on 4 main factors and 23 sub factors of the model 3. Bringing this model to the international experts and email respondents to judge validity, reliability and practicability.	Having the complete change management model in HEIs with 4 main factors and 23 sub factors
PHASE 3 (Jun.,2009-Dec.,2009) Proposing the model for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institution (HEI), Can Tho University (CTU), Vietnam	1. Studying the present state of the administration and the needs for change management in CTU, Vietnam 2. Constructing a CTU model for effective change management 3. Judging the model for enhancing effective management in Can Tho University (CTU), Vietnam	Having the complete change management model to be proposed to CTU, Vietnam and implemented in the future

Figure 8 Flowchart of Research Process

Phase 1: Constructing a Hypothetical Model (Global Model) to Enhance Effective Change Management in Education for Sustainable Development (ESD) in Higher Education Institutions (HEIs)

With a view to fining out a model for effective change management in HE level globally, the author had the following things done.

1.1 Basic Data Survey for Constructing a Global Change Management Model

These would be the fundamental materials needed for building up a new global change management model in ESD in HEIs.

1.1.1 Documentary research

The literature and related research of Chapter II: Reforms in Educational Administration of HEIs due to Globalization and Internationalization, New Paradigms in Change Management, Change Management Strategies and Techniques Used in HEIs, Change Implementation with Forces, Important Factors Enlacing Effective Change Management in HEIs, Change Management in Education for Sustainable Development (ESD) and Contexts of HEIs in Vietnam towards Can Tho University (CTU) Administration Practices of Change management, provided with useful information to build up change management models. That means that, from a documentary research about higher education settings internationally from theories, models and practices about change management, change management implementation and change processes, the researcher tailored a global model for change management in HEIs, which was the basic fundamentals for creating, first, a global model and CTU one in Vietnam, with its factors, sub factors and elements in change management in ESD as well later.

1.1.2 Reviews of the fieldtrips

There were overall reviews of the selected events for this part of the study.

Firstly, for the fieldtrips to HEIs, these were to study about the university development, its administration, ICT innovation, teaching and learning development and international conference attendance and presentations displayed below:

a. Sample: There were 17 higher education institutions in Thailand, Vietnam and Malaysia.

b. Research instruments: Data were collected from the selected documents and observation forms with key lecturers at these places. And the digital camera was used to take photos as well.

c. Data collection: Descriptive reports on these venues were written down in the dissertation in terms of summaries, and the photos were shown out, too.

d. Data analysis: There were descriptive reports with specific information individually about the college, university or center development, its administration, ICT teaching and learning, international cooperation or unique things of each venue.

Secondly, for the international conference lecture notes, these were the conferences held both in Thailand and Vietnam as well, where the researcher joined as both a participant and a presenter. Here are the specifies:

a. Sample: There were 30 keynote speakers' summaries from the 10 international conferences in Thailand, Vietnam and Malaysia.

b. Research instruments: Data were gathered from lectures, and observation forms. And a digital camera was used to take photos as well.

c. Data collection: There was a descriptive report in terms of the summaries of the keynote lectures from the international speakers. And the photos were shown out, too

d. Data analysis: Written reports as description were done with specific issues.

Thirdly, for the keynote speakers' and dissertation advisory members' interviews, there would be interviews including international keynote speakers, participants and higher education institutions lecturers, too in this part of the study.

a. Sample: There were 35 interviewees from the fieldtrips, international conferences, workshops, observations, and classroom interactions.

b. Research instruments: With the interview forms, there were descriptive reports in terms of the selected summaries of the fieldtrips, international

conferences, workshop, observations, and classroom interactions. And a digital camera was used to take photos.

c. Data collection: Data were collected from the interview forms at any selected event. And the photos were shown out as well. In addition, there was a sample of the interview forms.

d. Data analysis: Data were collected from the interview forms in the form of descriptive reports at any selected event.

Fourthly, for the classroom interaction, it was presented as follows:

a. Sample: There were 20 English-majored juniors in Faculty of Education, NU, Thailand, about Vietnamese Higher Education System in late February, 2008.

b. Research instruments: Data were collected from the observation and interview forms from the researcher's lectures and students' questions. There were Questions and Answers session. And a digital camera was used to take photos, too.

c. Data collection: With the observation and interview forms, there was a descriptive report in terms of the summaries of what the researcher lectured and of what students queried. And a photo was displayed in this part as well. In addition, there was a sample of the interview forms.

d. Data analysis: A written report as description was done with specific issues about HEIs in Vietnam, Thailand and other places in the world.

Fifthly, for the feedbacks from participants towards the two oral dissertation presentations at the two international conferences, the following would cover these.

a. Sample: There were 30 joining the sessions each.

b. Research instruments: Responses with direct feedbacks towards needed literature, the research title, questions, objectives and methods, and research process as well. And a digital camera was used to take photos of the selected events.

c. Data collection: Responses with comments, ideas, suggestions and even advice were collected. And the photos were shown out, too. In addition, there was a sample of the interview forms.

d. Data analysis: Written reports were done to modify and help to . finalize the research title, questions, objectives and methods, and research process as well.

To close, all the information presented earlier was considered to be basic issues, which helped to set up a global change management model with all needy factors and elements in it.

1.2 Constructing a Global Change Management Model in ESD in HEIs

The following would be the models resulting from the theories, models and practices in the global scale in HE level posed in the previous part of the study.

1.2.1 A tentative global change management model: In this part, the study would present: (1) the model factor construction with the "frame" of 4 main factors, 23 sub-factors and 92 items, and (2) the detailed model factor description with: *Change Process, Organizational Change, Change Agents, and Change in Education for Sustainable Development.*

1.2.2 A complete global change management model: In this part, the study would present: (1) the final model factor construction with 4 main factors, 23 sub- factors and 92 elements, and (2) the final model factor description in details with: *Change Process Management (A), Organizational Change Management (B), Change Agents Management (C), and Change Management in Education for Sustainable Development (ESD) (D).*

1.2.3 Comparison of the tentative and complete global change management model in ESD in HEIs

1) Similar factors, sub factors and elements

2) Different factors, sub factors and elements

From now on, a complete global change management model in ESD in HEIs was finalized, and it would be verified by experts in the next part of the study.

Phase 2: Verifying the Hypothetical Model (Global Model) to Enhance Effective Change Management in Education for Sustainable Developments (ESD) in Higher Education Institutions (HEIs)

In order to get the model verified, the following would pose the steps of this part of the study.

2.1 Sample:

Getting the complete global change management model to enhance effective change management in ESD in HEIs before hand from Phase 1, the researcher sent it to 86 international email respondents to help to respond to the website rating for the practicability at: (Appendix O, p.523)

In fact, for the practicability towards the model in terms of the questionnaire, there were 86 (56 males and 30 females) international email respondents (criteria designed below) from Asia & Pacific regions: 51 (24 from Thailand, 6 from Vietnam, 5 from China, 4 from Pakistan, 3 from the Philippines, 3 from India, 2 from Singapore, 1 from Brunei, 1 from Indonesia, 1 from Japan and 1 from Cambodia), and Europe: 14 (5 from England, 2 from Greece, 2 from Germany, 1 from Belgium, 1 from Spain, 1 from the Netherlands, 1 from Estonia, and 1 from Portugal), Americas & Canada: 9 (5 from America, 3 from Canada and 1 from Mexico), Australia : 2, Africa: 7 (5 from Nigeria, 1 from Ghana and 1 from Namibia) and Middle-East with 3 from Israel, in the educational administration field and related majors, joining a website questionnaire rating and email discussions towards the complete change management model.

The criteria towards the email respondents were set up as follows:

1. the professor, administrator, dean, deputy dean, department head, department deputy head, director , deputy director, researcher, journalist or current MA and PhD student, who has been working, researching or studying in the higher education level,

2. the professor, administrator, dean, deputy dean, department head, department deputy head, director , deputy director , researcher, journalist, or current MA and PhD student, who has known about educational administration, especially about change management and its related issues for about 5 years, and

3. the professor, educator, administrator, dean, deputy dean, department head, department deputy head, director , deputy director , researcher, journalist or current MA and PhD student, who has had a lot of experiences of working, teaching, or consulting in this field for the above 1 and 2 items.

2.2 Research instruments:

The specific tools towards the verification of the model would be done with the procedures below:

2.2.1 A questionnaire with 92 items created from 4 main factors, 23 sub factors and elements of the complete model would be judged through the rating scale of 5 levels: Strongly Disagree (SD:1), Disagree (D:2), Undecided (U:3), Agree (A:4) and Strongly Agree (SA:5).

The questionnaire analysis would be counted on Mean and SD.

2.2.2 In the IOC for the validity towards the model, the 5 international experts (4 males and 1 female) with the criteria designed below, from Asia & Pacific regions: 3 (2 from Thailand, 1 from Brunei) and Europe 1 from Spain and 1 from the U.S.A, were invited to join the rating via the website in English as follows: and email feedbacks were used.

The criteria towards the experts were set up as follows:

1. the president/rector/chancellor, professor, administrator or director, who has been working in the higher education level,

2. the president/rector/chancellor, professor, administrator or director, who has known about educational administration, especially about change management and its related issues for about 5 years, and

3. the president/rector/chancellor, educator, professor, administrator or director, who has had a lot of experiences of working, teaching, or counseling in this field for the above 1 and 2 items.

The IOC analysis equivalently from 0.80 to 1 would be counted on this instrument.

2.2.3 In the reliability towards the model in terms of the five –scaled questionnaire (Strongly Disagree (SD:1), Disagree (D:2), Undecided (U:3), Agree (A:4) and Strongly Agree (SA:5), there were 19 international experts (14 males and 5 females) with the criteria designed below, from Asia & Pacific regions: 9 (4 from

Thailand, 3 from China, 1 from Brunei and 1 from Vietnam, and Europe: 4 (1 from Spain, 1 from England, 1 from Greece and 1 from Belgium), Americas & Canada: 5 from America and Africa 1 from Nigeria, in the educational administration fields, change management, school innovation, ICT teaching and learning and related majors, joining a website questionnaire rating and email discussions towards the complete change management model via the website in English as follows:

The criteria towards the experts were set up as follows:

1. the president/rector/chancellor professor, administrator or director, who has been working in the higher education level,

2. the president/rector/chancellor, professor, administrator or director, who has known about educational administration, especially about change management and its related issues for about 5 years, and

3. the president/rector/chancellor, educator, professor, administrator or director, who has had a lot of experiences of working, teaching, or counseling in this field for the above 1 and 2 items.

The reliability analysis would be counted on Alpha (α) = *0.9624.*

2.3 Data collection: Data were collected with comments, ideas and suggestions from the international experts through two sets of self-made questionnaires of 92 items modified from IOC, reliability, practicability, open-ended responses (Section 3) in the questionnaires and email feedbacks. And there were also charts, figures and table for data analysis in the next step. In addition, there was a sample of IOC ratings.

2.4 Data analysis: Comments, ideas and suggestions of the international experts and email respondents, and from the so-called "long distance seminar" (email discussions), and open-ended responses from the questionnaires were written in terms of descriptive reports. And the answers towards the questionnaire were counted on Mean and Standard Deviation (SD) as well. In this part, Mean was counted on the following criteria (Boonchom, 1996).

2.4.1 4.51 – 5.00 : Strongly Agree (SA)

2.4.2 3.51 – 4.50 :Agree (A)

2.4.3 2.51 – 3.50: Undecided (U)

2.4.4 1.51 – 2.50: Disagree (D)

2.4.5 1.00 – 1.50: Strongly Disagree (SD)

At the end of this part, there were the detailed results from the verification of the model from the experts and email respondents worldwide. And it was the model that was likely to be the "framework," which was main ingredients of CTU model, Vietnam later.

Phase 3: Proposing the Model to Enhance Effective Change Management in Education for Sustainable Developments (ESD) to Higher Education Institution (HEI), Can Tho University (CTU), Vietnam

In order to propose a suitable and practicable change management model to the CTU Rector board, the researcher had to deal with the following activities.

3.1 Studying the Present State of the Administration and the Needs for Effective Change Management in CTU, Vietnam

3.1.1 Data Survey for Constructing a CTU Change Management Model These would be the necessary information helping to set up a CTU change management model in ESD of this study.

1) Documentary research

First, there was information from the literature and related research of Chapter II : Reforms in Educational Administration of HEIs, due to Globalization and Internationalization, New Paradigms in Change Management, Change Management Strategies and Techniques Used in HEIs, Change Implementation with Forces, Important Factors Enlacing Effective Change Management in HEIs, Change Management in Education for Sustainable Development (ESD) and Contexts of HEIs in Vietnam towards Can Tho University (CTU) Administration Practices of Change management, which helped create a CTU Change Management Model. Second, the information and the results from Phases 1 and 2 were fairly sufficient for the researcher to create a tentative CTU change management model in HE level and a final one later, with its factors, sub factors and elements in change management in ESD after referring to the results of the global change management model in ESD in HEIs worldwide in the parts mentioned earlier.

2) Reviews of the fieldtrips

There displayed overall and selected venues of the special events.

Firstly, in terms of the fieldtrips to HIEs, these were to study about the university development, its administration, ICT innovation, and teaching and learning development and international conference attendance.

a. Sample: There were 4 higher education institutions in Vietnam, namely HCM (Ho Chi Minh) Vietnam National University and HCMC (Ho Chi Minh City) University of Education in May, 2008 and Kiengiang Community College (KCC) and An Giang University (AGU) in July, 2008, mentioned in the part 1.1.2, Chapter III, p.179. And Universiti Sains Malaysia (USM), Penang, Malaysia, was also visited in November, 2009.

b. Research instruments: Data were collected from the selected documents, and observations at these places. And a digital camera was used to take photos.

c. Data collection: Descriptive reports on these venues were written down in the dissertation in terms of summaries. And the photos were shown out as well.

d. Data analysis: There were descriptive reports with specific information individually about the university development, its administration, ICT teaching and learning, international cooperation or unique things of each venue.

Secondly, in terms of the international conference interviews, there was one international conference in Ho Chi Minh, City, Vietnam

a. Sample: There were the interview summaries of 5 keynote speakers from 75 participants in the 2nd International Conference "Comparative Education: Vietnamese Education in the Globalization Context," HCMC University of Education, on May 23 2008.

b. Research instruments: Data were collected from the observation and interview forms at this place. And a digital camera was used to take photos.

c. Data collection: A descriptive report on this venue was written down in the dissertation in terms of summaries. A photo was displayed for this event. In addition, there was a sample of the interview forms.

d. Data analysis: There was a descriptive report with specific information about the summaries of the speakers' keynotes.

Thirdly, in terms of the workshop at CTU Center for Foreign Languages (CFL), there was one held in May, 2008.

a. Sample: There were 25 lecturers of English from CTU CFL and Department of English, School of Education, CTU, Vietnam

b. Research instruments: Data were collected from the selected documents, and observation forms at this place. And a digital camera was used to take photos.

c. Data collection: A descriptive report on the workshop was written down in the dissertation in terms of a summary. And a photo was shown as well. In addition, there was a sample of the interview forms.

d. Data analysis: There was a descriptive report with specific information about the summary of the speakers' keynotes and from the participants.

Fourthly, in terms of the classroom interactions, there were two about Global Teaching and Learning System in March, 2009, and Global Higher Education in July 2009 in CTU, Vietnam.

a. Sample: There were 47 English-majored seniors of Department of English, and MA students of Chemistry, School of Education, CTU, Vietnam.

b. Research instruments: Data were collected from the selected documents, observation and interview forms with the students at this place. There were Questions and Answers sessions. And a digital camera was used to take photos in this event.

c. Data collection: A descriptive report on the event was written down in the dissertation in terms of a summary. And the photos were shown out as well. In addition, there was a sample of the interview forms.

d. Data analysis: There was a descriptive report with specific information about the summary of the researcher's lecture and the students' questions.

Fifthly, in terms of the friendly talk with colleague, there would be a talk in a very warm atmosphere.

a. Sample: A Deputy Department Head of Department of English, School of Education, CTU, Vietnam joined this event.

b. Research instruments: Data were collected from the interview forms at the event. And a camera was used to take photos.

c. Data collection: With the interview form, there was a descriptive report in terms of the summary of the talk about teaching and learning English worldwide. And a photo was displayed, too. In addition, there was a sample of the interview froms as well.

d. Data analysis: A descriptive report on that occasion was written down in the shape of a summary.

Sixthly, in terms of the meetings with foreign counterparts in CTU, Vietnam, there were one on February 27, 2009 and the other on May 28, 2009.

a. Sample: There were 33 PhD students of Educational Administration and 25 of Educational Research and Evaluation and Educational Technology from Faculty of Education, NU, Thailand to visit CTU, Vietnam on the occasions.

b. Research instruments: Data were collected from observation forms at this place. And a digital camera was used to take photos.

c. Data collection: Lectures from the CTU speaker and questions from the foreign visitors in descriptive reports were written down in the dissertation in terms of summaries. There were Questions and Answers session on this event. And the photos were shown as well.

d. Data analysis: There were descriptive reports with specific information about the summaries of the speaker's lectures and from the participants' questions.

Seventhly, in terms of the feedbacks from participants towards the three oral presentation of the dissertation at the international conferences, the following are:

a. Sample: There were 30 joining the sessions each (in Thailand and Malaysia).

b. Research instruments: Responses with direct feedbacks towards the research process, especially to the models with factors, sub factors and elements, the implementation of the models and the roles of HEIs stakeholders, were received. A digital camera was used to take photos.

c. Data collection: Responses with comments, ideas, and suggestions from the participants and even advice were collected. And the photos were displayed as well. In addition, there was a sample of the observation forms.

d. Data analysis: Written reports were done to strengthen the factors and sub factors of the models and suitable implementations in real venues.

To end, all the above mentioned information was added to create a CTU Change Management Model in HE level with its factors, sub factors and elements as well.

3.1.2 The Needs for Effective Change Management in CTU, Vietnam

It should be necessary to know the needs for more effective change management in CTU, Vietnam from its current administrations, which helped to add to a better CTU change management model later. Thus, the following would be the procedures.

a. Sample: There were 51 (47 males and 4 females) CTU respondents (deputy rector, administrators, deans, deputy deans, directors, deputy directors, administrative office chiefs and leaders of Communist Party members and of HCM (Ho Chi Minh) Youth League. That means that only leaders of each group joined the research via SWOT analysis.

b. Research instruments: There was a self-made questionnaire with 27 items, an open-ended section in the questionnaire and interview forms with SWOT ideas individually.

c. Data collection: The questionnaire and the ideas from an open-ended section in the questionnaire and interviews were collected. And there was a sample of the interview forms as well.

d. Data analysis: The results from the questionnaire were counted on SWOT analysis with frequency (f) and percentage (%). And a descriptive report about the open -ended responses and interviews was written down in the form of a summary.

3.2 Constructing a CTU Model for Effective Change Management

For the sake of finding out a suitable model based on the current change management performance on site, the author created a model called "CTU change management model" from the data resulted from Phases 1 and 2.

First, there was a careful judgment from the results of the items 3.1 and 3.2 in Phase 3, which was the foundation to help construct a model. Second, there was also a reference towards the global change model judged by the experts from Phase 2. And finally, a CTU model was constructed.

3.2.1 A tentative CTU change management model: In this part, the study would present (1) the model factor construction with the "frame" of 4 main factors, 23 sub-factors and 92 elements, and (2) the detailed model factor description with: *Change Process Management (A), Organizational Change Management (B), Change Agents Management (C), and Change Management in Education for Sustainable Development (D).*

3.2.2 A complete CTU change management model: In this part, the study would present (1) the final model factor construction with 4 main factors, 23 sub- factors and 92 elements, and the final model factor description in details with: *Change Process Management (A), Organizational Change Management (B), Change Agents Management (C), and Change Management in Education for Sustainable Development (D).*

Like the global change management model, a CTU change management model was of the similar factors, sub-factors and elements, but in some elements in sub factors, there were some changes suitable to Vietnamese HEIs, school cultural aspects and Vietnamese linguistics as well.

3.2.3 Comparison of the tentative and complete CTU change management model in ESD in HEI level

1) Similar factors, sub factors and elements

2) Different factors, sub factors and elements

From now on, a complete CTU change management model in ESD in HE level was finalized, and it would be verified by experts in the next part of the study.

3.3 Proposing the CTU Model to Enhance Effective Change Management to Can Tho University (CTU), Vietnam

In order to have a complete CTU change management model judged, the following activities would be done.

3.3.1 Judging the CTU Model for Enhancing Effective Change Management in Can Tho University (CTU), Vietnam

1) Sample:

Getting the complete CTU change model in ESD to enhance its effective change management in ESD before hand from 3.2 Phase 3, the researcher sent it to 83 (58 males and 25 females) CTU email respondents responded to the website rating for the practicability at: the website in Vietnamese as follows: (Appendix O, p.524)

In fact, for the practicability toward the model through the questionnaire, 83 email respondents from CTU and surroundings to judge the model through an online rating of 5 levels of the rating scale: (Strongly Disagree (SD:1), Disagree (D:2), Undecided (U:3), Agree (A:4) and Strongly Agree (SA:5), of the 92 item questionnaire at in Vietnamese.

The criteria towards the respondents were set up as follows:

1. the rector, professor, director, deputy director, dean, deputy dean, department head, department deputy head, administrative office chiefs, administrative office deputy chiefs, First and Second Secretary General of Communist Party or of Ho Chi Minh Youth League, alumni, local representative, parents, war veterans representative, or Chairman of Teachers' Union, who has been working in Can Tho University and at the surrounding workplaces of the Mekong Delta Provinces, Vietnam for about 5 years,

2. the rector, professor, director, deputy director, dean, deputy dean, department head, department deputy head, administrative office chiefs, administrative office deputy chiefs, First and Second Secretary General of Communist Party or of Ho Chi Minh Youth League, alumni, local representative, parents, war veterans representative, or Chairman of Teachers' Union, who has known about educational administration, especially about change management and its related issues in Can Tho University, Vietnam for about 5 years, and

3. the rector, professor, director, deputy director, dean, deputy dean, department head, department deputy head, administrative office chiefs, administrative office deputy chiefs, First and Second Secretary General of Communist Party or of Ho Chi Minh Youth League, alumni, local representative, parents, war veterans representative, or Chairman of Teachers' Union, who has known about educational administration, especially about change management and its related issues in Can Tho University, Vietnam who has had a lot of experiences of working, teaching, or counseling in this field in Can Tho University, Vietnam for the above 1 and 2 items.

2) Research instruments:

The specific tools towards the judgment of the model would be done with the procedures displayed below:

a. A questionnaire with 92 items created from the 4 main factors, 23 sub factors and elements of the complete model would be judged through the rating scale of 5 levels: (Strongly Disagree (SD:1), Disagree (D:2), Undecided (U:3), Agree (A:4) and Strongly Agree (SA:5).

The questionnaire analysis would be counted on Mean and SD.

b. In the IOC for the validity towards the model, the 5 (4 males and 1 female) CTU experts with the criteria designed below, were invited to join the rating via the website in Vietnamese as follows: and email feedbacks were used.

The criteria towards the experts were set up as follows:

1. the rector, professor, director, administrator or expert, who has been working in Can Tho University, Vietnam for about 5 years,

2. the rector, professor, director, administrator or expert, who has known about educational administration, especially about change management and its related issues in Can Tho University, Vietnam for about 5 years, and

3. the rector, educator, professor, director, administrator or expert, who has had a lot of experiences of working, teaching, or counseling in this field in Can Tho University, Vietnam for the above 1 and 2 items.

The IOC analysis equivalents from 0.80 to 1 would be counted on this instrument.

c. In the reliability toward the model through the five-scaled questionnaire (Strongly Disagree (SD: 1), Disagree (D: 2), Undecided (U: 3), Agree (A: 4) and Strongly Agree (SA: 5), the researcher invited 11 experts (10 males and 1 female) from CTU, Vietnam to judge the model through the questionnaire via the website in Vietnamese as follows: and attend a Focus Group Discussion.

The criteria towards the experts were set up as follows:

1. the rector, professor, director, dean, administrator, expert, First Secretary General of Communist Party or of Ho Chi Minh Youth League, who has been working in Can Tho University, Vietnam for about 5 years,

2. the rector, professor, director, dean, administrator, expert, First Secretary General of Communist Party or of Ho Chi Minh Youth League, who has known about educational administration, especially about change management and its related issues in Can Tho University, Vietnam for about 5 years, and

3. the rector, educator, professor, director, administrator or expert, dean, administrator, expert, First Secretary General of Communist Party or of Ho Chi Minh Youth League, who has had a lot of experiences of working, teaching, or counseling in this field in Can Tho University, Vietnam for the above 1 and 2 items.

The reliability analysis would be counted on Alpha (α) = *0.9624*.

3) Data collection: Besides the data collection from the IOC, the model was judged by CTU experts through a Focus Group Discussion as follows:

a. Sample: 6 CTU experts (all males) joined that event.

b. Research instruments: A rating scale (5 levels: Strongly Disagree (SD: 1), Disagree (D: 2), Undecided (U: 3), Agree (A: 4) and Strongly Agree (SA: 5) questionnaire with 92 items, open-ended questions, observation and interviews forms; and summaries (ideas before and after the discussion) and consensus were used to collect data. And a digital camera was used to take photos, too.

c. Data collection: Results from the questionnaire, interviews, open-ended questions, comments, consensus, ideas and advice were collected. And a photo was shown out as well. In addition, there was a sample of a focus group discussion form as well.

d. Data analysis: A descriptive report was summarized, and a consensus from the focus group was also written down in the dissertation.

4) Data analysis: The results of this part of the study from the questionnaires were analyzed with frequency (f), percentage (%), Mean and Standard Deviation (SD), and there were a descriptive report to sort out open-ended responses, and the email discussions into the summaries. In this sense, the results of IOC, reliability, practicability and focus group discussion from CTU experts were calculated, and Mean was also counted on the following criteria (Boonchom, 1996):

4.1) 4.51 – 5. 00: Strongly Agree   (SA)

4.2) 3.51 – 4.50 : Agree   (A)

4.3) 2.51 – 3.50: Undecided   (U)

4.4) 1.51 – 2.50: Disagree   (D)

4.5) 1.00 – 1.50: Strongly Disagree   (SD)

All of these steps resulted in a CTU change management model in ESD in HE level with convincing findings. And it would be proposed to the CTU board after this study is finished.

3.3.2 Comparing Global Change Management Model in ESD in HEIs and Can Tho University Change Management Model

In order to have some thing similar and different from the two complete models: global and CTU ones, the following steps would be done.

1) Sample: There were 10 experts (5 internationals and 5 CTU, Vietnam) for IOC rating for validity, 19 internationals and 11 CTU, Vietnam for reliability, and 86 email internationals and 83 CTU, Vietnam for practicability to the two models: global and CTU ones.

2) Research instruments: Charts, figures, tables and t-tests with group statistics and independent samples tests were used to collect data.

3) Data collection: The results from charts and t-tests in terms of figures and tables would be collected.

4) Data analysis: There were descriptive reports of comparisons in terms of summaries about frequency (f), percentage (%), Mean, SD, t-test for Equality of Means, and Sig. (2-tailed) or p-value= ≤ 0.05.

From this comparison, it was likely to offer a clear picture about the similarities and differences between the two models, especially the CTU change management one, which would be proposed to implement in CTU, Vietnam after the study.

3.3.3 Proposing the CTU Change Management Model to CTU Rector Board

The finial procedure of this study would deal with submitting the complete CTU Change management Model to the CTU Rector board for the implementation of the model in the real learning HE climate.

1) Model Factors

2) Model sub- factors and elements