CHAPTER V

CONCLUSIONS, DISCUSSIONS AND RECOMMENDATIONS

Conclusions

In the research, the three objectives were done with three Phases and results were collected in the form of summaries presented below:

Conclusions from the Objectives of the Study

The study covered the main objective -to propose a model to enhance effective change management in higher education institutions, especially in Can Tho University (CTU), Vietnam- with the specific ones: (1) to construct a hypothetical model (Global Model) for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institutions (HEIs), (2) to verify the hypothetical model (Global Model) for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institutions (HEIs), and (3) to propose the model for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institution (HEI), Can Tho University (CTU), Vietnam, in which there were also three sub aims: (I) to study the present state of the administration and the needs for effective change management in CTU, Vietnam, (ii) to construct a CTU model for effective change management, and (iii) to propose the model for enhancing effective management at Can Tho University (CTU), Vietnam. And in the (iii), there were three more sub- aims at (1) judging the CTU change management model, (2) comparing the global and CTU change management models and (3) proposing the CTU change management model to the CTU Rector Board after the research.

In short, the study demonstrated the right tracks to follow towards a valid, reliable and practicable change management model in ESD in HEIs.

Conclusions from the Methodologies of the Study

Based on the fixed objectives mentioned earlier, the methods were carried out under the Phases 1, 2 and 3 orderly. First, in Phase 1 with constructing a hypothetical model (Global Model) for enhancing effective change management in Education for

Sustainable Developments (ESD) in Higher Education Institutions (HEIs), there consisted of (1) doing basic data survey for constructing a global change management model with documentary research and the reviews of the fieldtrips, international conference lecture notes, keynote speakers' interviews, classroom interactions, openended responses from the questionnaires, email discussions and the researcher's international conference oral dissertation presentations, and (2) constructing the tentative and complete global change management model in ESD in HEIs with four main factors, 23 sub-factors and 92 elements, which was strengthened through a 92 item questionnaire in English (linguistically checked by the English experts) to be judged by the international experts and email respondents through "online data collection" with the created website in English at:

Second, in Phase 2 with verifying the hypothetical model (Global Model) for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institutions (HEIs), there was a judgment from 5 (male:4 and female: 1) international experts with the designed criteria:. Two were from Thailand, 1 from Brunei, 1 from Spain and 1 from the U.S.A. for the validity of the model through IOC (0.81), 19 experts (male:14 and female:5) with the designed criteria, 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, for the reliability (Alpha= 0.9624) of the model and 86 email respondents (male: 56 and female: 20) with the designed criteria, from 27 countries worldwide to help judge the model with the practicability. In the end of this part, there was also a comparison of the tentative and complete global effective change management model (ABCD) with the issues of similarities and differences. Finally, the complete global model was considered to be an example to the CTU model created in the following part of the study.

Third, in Phase 3 with proposing the model for enhancing effective change management in Education for Sustainable Developments (ESD) in Higher Education Institution (HEI), Can Tho University (CTU), Vietnam, there appeared the three sub methods namely: in 3.1 with studying the present state of the administration and the needs for change management in CTU, Vietnam, there were of (1) doing data survey

for constructing a CTU change management model with documentary research, and the reviews of the fieldtrips, international conference lecture notes, keynote speakers' interviews, classroom interactions, workshop, meetings, open-ended responses from the questionnaires, email discussions, discussions and the researcher's international conference oral dissertation presentations (2) using SWOT analysis towards CTU present administration and the needs for effective change management with 51 CTU administrators. Then in 3.2 with constructing a CTU model for effective change management, the CTU tentative and complete effective change management model were constructed with the four main factors, 23 sub factors and 92 elements, which helped to create a 92 item questionnaire in Vietnamese (linguistically checked by the Vietnamese experts) to be judged for its validity, reliability and practicability through the website in Vietnamese at

And in 3.3 with judging the model for enhancing effective management in Can Tho University (CTU), Vietnam, CTU model, like in Phase 2, was judged by CTU experts (the criteria designed), including 5 (male: 4 and female: 1) for IOC (0.81) with the validity, 11 (male: 10 and female: 1) with the reliability (Alpha= 0.9624) and a focus group discussion of 6 (all males), then 83 email respondents (male: 58 and female: 25). In this part, an item was added as the comparison between the tentative and complete effective change management model (ABCD) with the issues of similarities and differences, which was also compared with the global change management model ($p \le 0.05$). And then a complete CTU change management model in ESD in HE level would be submitted to the CTU rector board for the implementation in the long run.

In conclusion, the study based upon the right objectives to create suitable methods to lead the research to the needed results.

Conclusions from the Results of the Study

Link to the objective 1 and the method 1, the summarized results were found below: (1) that in the documentary research, the information from Chapter II provides sufficient data to establish the two models: the global and CTU ones in ESD in Heist orderly in the R&D process, (2) that there were 10 international conference addresses, 15 email addresses from internet articles and journals and over 200 personal email users to be arranged and deployed for the online data collection, (3) that there were 17

fieldtrips in both Thailand, Vietnam and Malaysia, 30 summaries of keynote speakers' interviews from the 10 international conferences (in Thailand, Vietnam and Malaysia), 1 classroom interaction with 20 English-majored juniors, 29 responses from the interviews, 11 open-ended responses from the questionnaire, 15 email discussions through the researcher's email address, and 2 oral dissertation presentations at the international conferences in Thailand, (4) that the tentative and complete global change management model in ESD in HEIs were constructed with four main factors, 23 sub-factors and 92 elements, which was strengthened through the 92 item questionnaire in English judged by the international experts (5 for validity and 19 for reliability) and email respondents (86 for practicability) through "online data collection" with the created website in English at:

Parallel with it, it came out with the objective 2 and the method 2, the summarized results of this part were below: (1) the validity of the model through the questionnaire with IOC from the 5 international experts showed that the total of the four factors (ABC&D) was 0.85, (2) the reliability (Alpha= 0.9624) of the model through the questionnaire from the 19 international experts with the total of the Mean of 3.89 (SD= 0.41. And (3) the practicability of the model through the questionnaire from 86 international email respondents revealed the result of the Mean of 3.93 (SD= 0.53), which were proved to be A (Agree) of a strong and applicable model.

And finally, the complete effective change management in ESD in HEIs (Global Model) was finalized below:

The model operates from A, B, and C, which all goes through D for the purpose of suitable development.

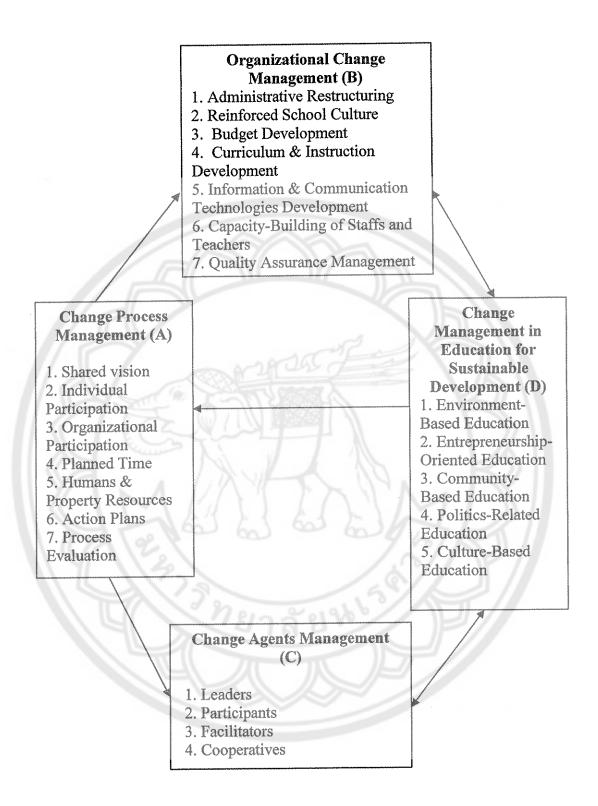


Figure 26 The Complete Global Effective Change Management Model (ABCD) in ESD in HEIs

B

- 1 Administrative restructuring: motivation, leadership, decision -making, and communication (internal & external)
- 2. Reinforced school culture: educational decentralization, research-based management, lifelong study in learning organization, faculty/college merger or new establishments
- 3. Budget development: government budget, school financial sources from services/donations, salary raise and student scholarships
- 4. Curriculum & Instruction development: students needs (market forces objectives), teaching and learning methods, curriculum development and curriculum evaluation
- 5. Information & Communication Technologies development: planning, budgets, professional development and implementation
- Capacity-building of staffs and teachers (human resource development): teaching methods, working skills, administrative techniques and knowledge transfer and management
- 7. Quality assurance management (via a suitable measurement/model, like TQM): students (customers) satisfaction, teaching and learning methods, teamwork reinforcement and continuing improvement

A

- 1. Shared vision: long-term goal, short-tern goal, problems and solutions
- Individual participation: teaching staffs, students, office staffs and administrators
- 3. Organizational participation: school leaders, senior lecturers, school associations and local authorities
- 4. Planned time: entire length, starting time, intervention time and finishing time
- 5. Humans and property resources: man, school assets, budgets from government, school services/donations
- 6. Action plan: entire plan, starting step, processing step and evaluation
- 7. Process evaluation: formative, summative, internal and external

D

- 1. Environment-Based Education (to Global setting): environment-based curriculum/programs, environment-based teaching and learning methods, environment-based research, and school-environment relations
- 2. Entrepreneurship-Oriented Education (to Global setting): entrepreneurship-oriented curriculum/programs; entrepreneurship-oriented teaching and learning methods, entrepreneurship-oriented research, and school-enterprise/business/industry/market relations
- 3. Community-Based Education (to Global setting): community-based curriculum/programs, community-based teaching and learning methods, community-based research, and school-community relations
- 4. Politics-Related Education (to Global setting): Politics-related curriculum/programs, politics-related teaching and learning methods, politics-related research, and school-government relations
- Culture-Based Education (to Global setting): Culture-based curriculum/programs, culture-based teaching and learning methods, culture-based research, and culture- education relations

- 1. Leaders as material and spiritual managers (with shared institutional leadership and governance): rector/president, dean/director/office chief, department head and senior lecturers
- 2. Participants as whole forces: teachings staffs, students, office staff and school administrators.
- 3. Facilitators as dynamic assistants: rector/president board, faculty/college board, department board and senior lecturers
- 4. Cooperatives as enthusiastic supporters: parents, school quality committee, action teams (inside & outside school or foreign ones), and local and foreign organizations

Figure 27 Sub-Factors and Elements of the Complete Global Effective Change Management Model in ESD in HEIs

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Meanwhile, the objective 3 and the method 3 gave out the summarized results presented below: (1) there was a great deal of information from the documentary research of Chapter II, and parts of methods mentioned earlier helping to create a CTU change management model in ESD, (2) there were 5 interviewees of Vietnamese educational experts from the international conference in Vietnam (May 2008), 2 classroom interactions with 45 undergraduates and graduates in CTU, Vietnam, 1 workshop with 25 participants, 1 friendly talk with Deputy Department Head of English Department, School of Education, CTU, Vietnam, 2 meeting observations towards 55 PhD visitors from Faculty of Education, NU, Thailand to CTU, Vietnam, 3 dissertation presentations at the international conferences both in Thailand and Malaysia, 10 open-ended responses from the questionnaire, 14 email discussions, 11 ideas to CTU change management model and 7 ideas to the questionnaire from the Focus Group Discussion, (3) the needs for effective change management in CTU from 51 (male: 44 and female: 7) administrators were collected from SWOT with 33 ideas in the open -ended responses from the questionnaire and 35 ideas from the interviews towards SWOT in CTU, Vietnam. Then CTU change management model in ESD was made tentatively and completely with the four main factors, 23 sub factors and 92 elements. Here in this part, there were two kinds of comparisons. One was the comparison between the tentative and complete CTU model. The other was the work between the global model and CTU one.

The result of this part was the CTU change management model, Vietnam, with its four main factors: Change Process Management (A), Organizational Change Managements (B), Change Agents Management (C) and Change Management in ESD (D), 23 sub-factors and 92 elements created was judged by CTU experts and stakeholders via IOC with 0.82 of the validity, the reliability with the Mean of 4.48 (SD= 0.23) and the practicability with the Mean of 4.34 (SD= 0.36), which were also proved to be A (Agree) of a strong and applicable model. And the comparison between the global model and CTU model was shown with the Mean of 3.89 (SD= 0.41) and of 4.48 (SD= 0.22), which were proved to be A (Agree) of a strong and applicable model and t-test analysis with t= -4.78 and p-value= 0.000 for equal variances assumed, and t: -4.47 and p-value= 0.000 for equal variances not assumed.

Here in this part, there was "slight significance" between the two models because the holistic "framework" of the two models with the main factors and sub factors were similar, but the two models were of some different "elements" from each when the Vietnamese versions was used from the English translation, and the different stakeholders, who got benefits from these at the specific working places, were different, too.

Generally speaking, given the context of Change Management (Management of Change/Managing Change) in education for sustainable development (ESD), especially in educational administration sphere, we all know that it has been introduced worldwide through models based on theories and practices from famous educational experts, educators, professors, school administrators and even scientists. Like other higher education institutions (HEIs) in Vietnam, Can Tho University (CTU) has been on the way to it as well. Yet, its decentralization of educational management from the Vietnam Ministry of Education and Training is just allowed step by step and its management over change implementation is not effective yet. And it is likely that CTU organizational change with participation of change agents really do need new ingredients for its better effectiveness.

After the research, it came out with a CTU change management model. The four factors of the CTU model are Change Process Management (A), Organizational Change Management (B), Change Agents Management (C), and Change Management in Education for Sustainable Development (D), and the sub factors are as follows: Change Process Management (A): 1. Shared missions and visions, 2. Individual Participation, 3. Organizational Participation, 4. Planned Time, 5. Human and Property Resources, 6. Action plans, and 7. Process Evaluation; Organizational Change Management (B): 1. Administrative Restructure, 2. Reinforced School Culture, 3. Budget Development & Spending, 4. Curriculum & Instruction Development, 5. Information & Communication Technologies, 6. Capacity-Building of Staff and Teachers and 7. Quality Assurance Management; Change Agents Management (C): 1. Leaders, 2. Participants, 3. Facilitators, and 4. Cooperatives; and Change Management in Education for Sustainable Development (D): 1. Environment-Based Education, 2. Entrepreneurship- Oriented Education, 3. Community-Based Education, 4. Politics-Related Education, and 5. Cultured-Based Education, which is

the suitable model for the effective change management in CTU, Vietnam in the upcoming time.

The concepts about educational change management put into a NEW model called "Can Tho University Change Management in ESD", valid, reliable and practicable for enhancing effective change management in a HEIs climate have emerged so far since the educational reforms at any levels worldwide were on the move and since globalization touched the educational process. In particular, Can Tho University (CTU), Vietnam needs a new model for developing its change management process so as to fulfill its educational roles in the Vietnamese learning environment and in the lower Mekong Delta regions as well, and puts its step on integrating into the Asian and global education environment. And the model proposed is the right one so that it is CTU, a leading public university that can be likely to play its crucial role in the drive. Meanwhile, it is certain that any educational institution in a country may choose its suitable model to apply, manage and develop change management process for the sake of its educational goals.

The model operates from A, B, and C, which all goes through D for the purpose of suitable development

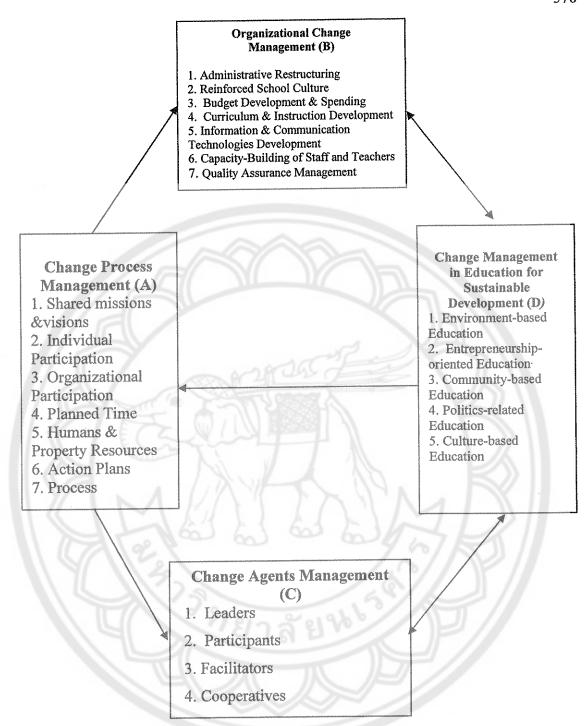


Figure 28 The Complete Effective Change Management Model (ABCD) in ESD in CTU, Vietnam

C

- 1. Leaders as material and spiritual managers (with shared institutional leadership and governance): rector/president, dean/director/office chief, department board and senior lecturers (managed by CTU Communist Party Cells of all levels)
- 2. Participants as whole forces: teachings staff, students, office staff and school administrators
- 3. Facilitators as dynamic assistants: rector/president board, faculty/college board, department board and senior lecturers
- 4. Cooperatives as enthusiastic supporters: parents, school quality committee, action teams (inside & outside school or foreign ones), and local (Can Tho city & the Mekong Delta Provinces) and foreign organizations

B

- 1. Administrative restructuring: motivation, leadership, decision -making, and communication (internal & external)
- 2. Reinforced school culture: educational decentralization, research-based management, lifelong study in learning organization, faculty/college merger or new establishments
- 3. Budget development & spending: government budget, school financial sources from services/donations, salary raise and student scholarship
- 4. Curriculum & Instruction development: students needs (market forces objectives), teaching and learning methods, curriculum development and curriculum evaluation
- 5. Information & Communication Technologies development: planning, budgets, professional development and implementation
- Capacity-building of staff and teachers (human resource development): teaching methods, working skills, administrative techniques and knowledge transfer and management
- 7. Quality assurance management (via a suitable measurement/model, like TQM): students (customers) satisfaction, teaching and learning methods teamwork reinforcement and continuing

D

- 1. Environment-based Education (to Global setting): environment-based curriculum/programs, environment-based teaching and learning methods, environment-based research, and school-environment relations
- 2. Entrepreneurship-oriented Education (to Global setting): entrepreneurship-oriented curriculum/programs; entrepreneurship-oriented teaching and learning methods, entrepreneurship-oriented research, and schoolenterprise/business/industry/market relations
- 3. Community-based Education (to Global setting): community-based curriculum/programs, community-based teaching and learning methods, community-based research, and school-community relations
- 4. Politics-related Education (to Global setting): Politics-related curriculum/programs, politics-related teaching and learning methods, politics-related research, and school-government relations
- 5. Culture-based Education (to Global setting): Culture-based curriculum/programs, culture-based teaching and learning methods, culture-based research, and culture-education relations

A

- 1. Shared missions and visions: long-term goal, short-tern goal, problems and solutions
- 2. Individual participation: teaching staff, students, office staff and administrators
- Organizational participation: school leaders, senior lecturers, school associations, and local authorities (Can Tho City, the Mekong Delta Proivinces)
- 4. Planned time: entire length, starting time, intervention time and finishing time
- 5. Humans and property resources: Man, school assets, budgets from government, and school services/donations
- 6. Action plan: entire plan, starting step, processing step and evaluation
- 7. Process evaluation: formative, summative, internal and external

Figure 29 Sub-Factors and Elements of the Complete Effective Change Management Model (ABCD) in ESD in CTU, Vietnam

In brief, the study illustrated the needy results from the right objectives and the suitable methods, which helped to make the two models of change management in ESD in HEIs strong and applicable. Especially, the CTU, Vietnam change management model was valid, reliable and practicable and would be proposed to be implemented in this venue in the academic year of 2010-2011 (from September, 2010 to May, 2011).

Discussions

Given the context of ideas to talk about this finished dissertation, the following are supposed as main things to take into account. First of all, it is the construction of the model structure (Lisa and Cynthia, 2009, p.70): Global Change Management Model and Can Tho University (CTU) Change Management Model. The structure was created with four main factors: Factor A: Change Process Management, Factor B: Organizational Change Management, Factor C: Change Agents Management, and Factor D: Change Management in Education for Sustainable Development, which seem like a "framework' of a change in HEIs. Factors A and D are fixed whereas Factors B deals with the change in an organization, and Factor C refers to the change agents, actors in the change process (Speck, 1999, p.219). Here in this sense, when a change in an organization happens, it will need a leadership and participants respectively. Also, the sub-factors of Factors B and C will change suitably to it as well.

As for the questionnaire with 92 items, it is seen that the researcher just limited to 4 elements in each sub-factor. Thus, the total came up with 92, which may cover all the issues in one sub factor and main factor, too. In other words, the total of the items might be reduced if the focus just mentions 1 or 2 elements in it. However, as mentioned earlier, the two models created here were regarded as a "framework' of a change process, so the number of items in the questionnaire was fairly long, but feasible and applicable. In short, the structure of the two models was suitable and practical to HEIs in a change in an organization or in leadership. And the questionnaire with 92 items covered all the issues of the four main factors and 23 sub factors of a "framework" of a change management model in ESD in HEIs (Lisa and Cynthia, 2009, p.72).

Second, it is the verification of the two models (Stufflebeam, 2008, p.65) by international and CTU, Vietnam stakeholders through the online ratings. In the *initial sense* of the habitual use of internet, the researcher realized that if any respondent is used to rating the questionnaire via a website designed to use "click" just by using a mouse of a computer, he or she does it very quickly despite a long questionnaire. In the sense of culture, called "internet culture or virtual culture," it was concluded by the researcher that there were two issues about this. One lay in the "cultural aspects" of internet users. Westerners including Americans did this job promptly, whereas in some Asian countries such as Vietnam, Laos, Cambodia, Thailand, Indonesia, Malaysia, and Nepal and so on, email users did not often reply the received mails. The other was "personal interests." That means that an email user thought that if the thing was not his or her interest, then he or she did not need to reply to the email received. Thus, in this situation, keeping "silent" meant "having no ideas to contact."

In conclusion, it should be a great concern for a website designer to bear in mind when creating a website for "online" data collection. The structure of the website must be easy for any respondent to use "click" to any item in a questionnaire or a checklist. And for the researcher, he or she must have a "short training session" to email users, who are not used to this work, in terms of easy techniques on the homepage (the front page). In addition, when the world we are living now is becoming smaller with the introduction of internet, one of the most advanced technologies on earth, internet users, especially email ones might need "a change" in their thinking and actions when using emails to contact in a quick and effective way of communication. And importantly, towards the cross-cultural issue, the Vietnamese often use their weekend time or holiday time to reply their emails while Westerners including Americans and even some Asian people such as Thais, Japanese, Taiwanese, Hong Kongers and South Koreans use their office hours to do this job.

In the sense of the website data collection (Utts and Heckard, 2007, p.444), up to now it has been recognized that designing a website in internet is the fastest way and the most scientific technique to get data by any researcher when he or she needs a larger group of stakeholders in the distant areas. It is proved true anyway. Yet, it must be considered by the researcher that, in the respect of long distance, it should be given more time to respondents, who live in the place where the access to the internet is

limited and the internet link system sometimes does not work properly, or to respondents, who often have "foreign business trips," or to the venues, where there happens with special holidays and traditional festivals as well. Here in this regard, the number of CTU, Vietnam experts in the Focus Group Discussion (just 6 among 11 invited turned in) encountered the summertime (mid May to late August) and the experts as well as top leaders' long foreign business trips. Furthermore, in the respect of "tools" to have data analyzed, the researcher has to think of, before hand, the specific programs designed to get via "online" results after collecting the data.

And *finally*, it is the results of the study in terms of frequency (f), percentage (%), Mean, SD, and t-test with p- value analysis, referring to the quantitative research (Gay, et al., 2006, p.541). It was generally found by the researcher, from the international and Vietnamese scales, that all the respondents took seriously about their questionnaire ratings, model comments and other ideas to the study. They were responsible for their decisions. Yet, it seemed that Westerners including Americans towards the five scales (SD: Strongly Disagree: 1; D: Disagree 2; U: Undecided 3; A: Agree 4, and SA: Strongly Agree 5), many of them often stood in the middle of the scale with U. Maybe, they were more cautious, and then move to D and SD to consider and then to A and SA to give their final choices. Thus, the results were not higher than those from the Asians, who are always looking forward to good hope. Yet, for the results of ratings for *leadership*, they [most of Westerners] put this issue on the top of the rating; for example, the group statistics reached the Mean of 4.02 (SD=0.45), (Boonchom, 1996).

In another aspect, the results with "slight significance" between the two models because of the holistic framework of the main factors and sub factors, but the two models are different from some elements in the models and from the different stakeholders, who get benefits from these at the specific working places.

For the personal views of the researcher, it dealt with the fieldtrips, international conference lecture notes, workshops, observations, classroom interactions, interviews, open-ended responses from the questionnaires and email discussions (Stufflebeam, 2008, p.74). All copes with the qualitative research. The researcher found out that it was a valuable treasure of getting more experiences from meeting with a wide variety of professors, rectors, chancellors directors, lecturers,

administrators, researchers, journalists, writers, and graduates with different nationalities from all over the world. Also, this was a good opportunity in real life to know new cultures, ideas, and even perspectives besides professions of respondents. In another respect, the qualitative research in these forms have helped train the researcher "patience, flexibility, creativity, devotion, studiousness and even risk-taking" on the path to complete his dissertation. What's more, the work of summarizing each event was like "daily jobs" of the researcher to make the arrangements easier and more effective. And more importantly, writing the abstracts and formatting full texts to the international conferences supplied the researcher with more skills of academic paper writing styles with the international requirements and standards, and more experiences in oral presentations and techniques to questions and answers sections prior to the participants worldwide.

To sum up, all the issues mentioned earlier with the all-sided matters contributed to the diversity of the study from the models themselves, tools to collect and analyze data and results to the researcher's personal experiences, which helps make the research unique.

Limitations

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Making full use of the research time (June 2007 – December 2009) in both HEIs: Naresuan University (NU), Thailand and Can Tho University (CTU), Vietnam, the researcher has made an attempt to get it done successfully as planned. However, it has posed some limitations below:

First and foremost, it is the construction of the two models (Lisa and Cynthia, 2009, p. 72) Global and CTU Change Management Model in ESD in HEIs. From the literature review of Chapter II, the researcher found out that there were a wide range of models and practices about educational administration and related issues, created from theories worldwide, but there were few of models about "change management," especially about educational change management in HEIs (Speck, 1999, p. 222) besides a number of theories and blueprint guidance. For the sake of finding the "framework" like "backbone" for educational change management model in HEIs, it took the researcher much of time to thread all selectively, and uniquely grasped and to creatively construct the two models, which were strengthened by the questionnaire of

92 items, designed from the 4 main factors and 23 sub-factors. And in terms of the questionnaire itself, it took the researcher a long time to get it done to fix between the four main factors, sub factors and elements, and then the understandings of the contents of each item towards English and non English native speakers needed to double check from the experts of the English language as well, and so did the questionnaires and other letters of permissions in Vietnamese towards the research from the Vietnamese experts.

Secondly, it is about the verification of the two complete change management models from the responses of the email respondents (stakeholders) worldwide (Utts and Heckard, 2007, p.466). After collecting the websites from international conferences, and from articles and journals addresses through the internet and arranging them into the email lists, the researcher purposively chose the required respondents to send the first emails individually to tell each about his personal data, his objectives to the dissertation and ask their permissions to help evaluate the model and rate the questionnaire via the website in the next mails. Then, the second mails with the linked website were sent. However, in this sense, because of the summertime in America and some countries in Europe and Asia (from mid May to early August), some emails were automatically sent back or no replies were got during that time. And because of personal business trips and family problems, some respondents refused to give help. Then, the researcher used "a reserve list", a second list to continue sending emails to other respondents. Therefore, some "random" email respondents were unavoidable. In another issue, no replies to the emails due to cultural aspects and personal interests more or less slowed down the process of data collection and analysis, too.

In the sense of the website data collection, the website was designed in an easy way to get access to and to use a "click" from a mouse in a personal computer to rate the questionnaire (Section 1: personal data with 6 items, Section 2: 92 items covering 4 main factors and 23 sub factors and Section 3: open-ended reply). Yet, some respondents did not read all the instructions at the homepage. Thus, they just came to Section 1 and exited from this. In addition, some respondents were not used to rating this kind of questionnaire, so they just finished some items from Section 2 and went out. Here the website program did not save the items rated (a big mistake from

the website designer). As a result, some items were not done thoroughly, and the insufficient data were not avoidable as expected.

In the sense of the researcher's viewpoints, it is the reviews of information from fieldtrips, international conference lecture notes, workshops, observations, classroom interactions, interviews, open-needed responses from the questionnaire and email discussions in Thailand and Vietnam as well. In this context, the researcher had to spend the bulk of time taking trips, joining the conferences, workshops, interviewing and lecturing stakeholders, observing the sites and summarizing all the information selected from the special events. And more importantly, writing abstracts and polishing full texts to the conferences took much of time and energy. Indeed, it cost a sum of money as well on each event.

And *finally*, it is about the results of the study in terms of frequency (f), percentage (%), Mean, SD, and t-test with p- value analysis. It took the research a rather long time to get all the results done because of (1) the incomplete website data programs from the website designer's mistake, (2) over checking all the raw data due to the skipped items from the questionnaires through the email responses, and (3) more consultancies from experts in statistics towards t-test analysis owing to "a slight significance" between the two models.

To summarize, all the limitations mentioned above in fact comprised of the valuable lessons and the real experiences to the researcher from creating the models, preparing the tools, collecting and analyzing data from the website to personal experiences in order to make other researches more effective, efficient and successful as well in the long run.

Recommendations

In the light of the findings of this study, the following recommendations would be shared with.

Recommendations for Model Application

Particularly, in the sense of change from the researcher' ideas is anything "new" happening in a HEIs with the change of the working place and agents in it. Simply, change in a HEI may be an establishment of a new school, college or faculty. It may be a program to an implementation of ICT in teaching and learning in an office,

center or department. There probably is an application of a "credit-based" program in a faculty, school or college of a university. Possibly, there would be a new curriculum about "natural environmental issues" to guide students how to protect their school and to make it more beautiful. Thus, the following will be suggested things that the researcher would like to share with.

- 1. Scenario 1 (General application): Both Global and CTU Models are regarded to as a "framework" with four main factors, in which 7 sub factors of Factor A: Change Process Management (Shared vision, Individual Participation, Organizational Participation, Planned Time, Humans & Property Resources, Action Plans and Process Evaluation) and 5 sub factors of Factor D: Change Management in Education for Sustainable Development (Environment-Based Education, Entrepreneurship-Oriented Education, Community-Based Education, Politics-Related Education, and Culture-Based Education) remain "fixed" in any change. When a change is needed, Factors B: Organizational Change Management and C: Change Agents Management will occur interdependently with the change in an organization and the participation of leaders and other stakeholders together.
- 2. Scenario 2 (Specific application): Let us take an example about this. If there is an implementation of ICT in teaching and learning in the department of English in a university. Here there will be a change in Factor B (Organizational Change Management) with the application of ICT in the whole department and in Factor C (Change Agents Management) with the leadership of department board and the contributions of teaching and office staff and students. After all the stakeholders in this venue are fully aware of the change, get to know the whole process (Factor A: Change Process Management) and have curricula (Factor D: Change Management in Education for Sustainable Development) to train and teach teachers, office staff and students, actors in this event, there comes up with the budget support. Then there would be the cooperation from other departments such as from College of ICT, Department of Management and Sciences, Library and so on. All the process will operate in a department (in a small circle) with the support of other venues in a university (in a bigger circle).

Recommendations for Further Research

The topics below will be the future studies, which helps to implement parts of change management in HEIs:

- 1. Implementation of Global Change Management Model in ESD in HEIs in Faculty of Education, Naresuan University, Thailand
- 2. Comparison of Global Change Management Model in ESD in HEIs in Naresuan University, Thailand and Can Tho University Change Management Model, Vietnam
- 3. Impacts of Can Tho University Change Management Model in ESD on Human Resource Development in School of Social Sciences & Humanities, New Establishment at CTU, Vietnam
- 4. Impacts of Can Tho University Change Management Model in ESD on the "Credit-Based Education" Program in Can Tho University, Vietnam
- 5. Implementation of Can Tho University Change Management Model into ICT Teaching and Learning Project in School of Education, Can Tho University, Vietnam
- 6. Implementation of Can Tho University Change Management Model in ESD into Environment-Based Education Curriculum in College of Natural Recourses and Environment, Can Tho University, Vietnam
- 7. Comparison of the Implementation of Can Tho University Change Management Model in ESD on Quality Assessment at Can Tho University and Current Change Management Model at Angiang University in the Mekong Delta Region, Vietnam
- 8. Comparison of the Implementation of Can Tho University Change Management Model in ESD on Budget Development &Budget Spending at Can Tho University and Current Change Management Model at Angiang University in the Mekong Delta Region, Vietnam

To close, from the results of the study, the CTU change management model provides both the researcher and those interested in HE change management with a wide variety of information for future studies, and for the sake of education reforms, school innovations and the like in a changing learning environment.

In general, the researcher hopes that he has just brought all the readers with the successful results of his dissertation during his doctoral time at Faculty of Education, Naresuan University, Thailand, which have ALL implemented the famous sayings: "To exist is to change; to change is to mature and to mature is to go on creating yourself," (Henri Bergson, 1859-1941), and "Good ideas with no ideas on how to implement them are wasted ideas." (Michael Fullan, 1999).

